

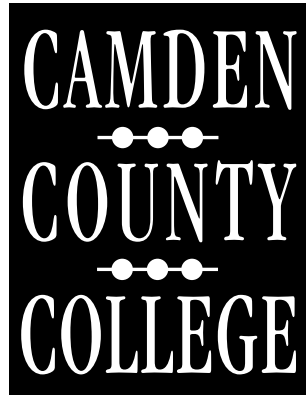


2018 ACADEMIC PROGRAM GUIDE

50TH ANNIVERSARY

CAMDEN
COUNTY
COLLEGE

camden county
Making It Better. Together.



2018 Academic Program Guide

Mission:

Camden County College is committed to the success of a diverse student body through collaborative engagement that provides high quality, accessible and affordable education. The College is responsive to the needs of the community through continuous enhancement of its programs and services.

Vision:

Camden County College will be a gateway to opportunities for students to achieve their full potential and to meet their academic and career goals.

Goals:

To accomplish its mission, Camden County College will continually assess institutional improvement through the evaluation of the following goals:

1. Provide accessible and affordable educational opportunities
2. Foster student success through high-quality learning experiences and support services.
3. Respond to the needs of the regional labor force, collaborative partners and community members.
4. Develop and manage institutional resources focused on supporting student success and organizational effectiveness.

Values:

- Academic excellence
- Accountability
- Goal attainment
- Integrity
- Respect for individuals
- Student-centered (focused) decision making
- Student learning

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Accreditations

Camden County College is accredited by:
The Middle States Commission on Higher Education
3624 Market Street
Philadelphia, PA 19104
(267) 284-5000.

The New Jersey Commission on Higher Education
20 West State Street, CN 542, Trenton NJ 08625-0542
Phone: (856) 292-4310

The College is approved for veterans training by:

The State Approving Agency of the New Jersey Department
of Military and Veteran's Affairs
Eggert Crossing Road, CN 340, Trenton, NJ 08625-0340
Phone: (856) 530-6863 | Fax: (856) 530-6970

It is a member of the American Association of Community and
Junior Colleges and the New Jersey Council of County Colleges.

In addition to institutional accreditation, the following programs are accredited by their respective bodies:

The Addictions Counseling Program is accredited by:
The Addictions Professional Certification Board
of New Jersey, Inc.
4 Cornwall Drive, Suite 103
East Brunswick, New Jersey 08816
Phone: (732) 390-5900

The Dental Assisting and Dental Hygiene
programs are accredited by:
The Commission on Dental Accreditation
of the American Dental Association
211 E. Chicago Avenue, Chicago IL 60611-2678
Phone: (312) 440-2719

The Radiology Course in the Dental Assisting
Program is accredited by:
New Jersey Department of Environmental Protection
Bureau of Radiological Health
PO Box 415, Trenton, New Jersey 08625-0415
Phone: (609) 984-5890
www.state.nj.us/dep/rpp/index.htm

The Dietetic Technology Program is accredited by:
The Commission on Accreditation of Dietetics Education
120 South Riverside Plaza, Suite 200
Chicago, Illinois 60606-6995
Phone: (800) 877-1600

The Health Information Technology program is accredited by:
The Commission on Accreditation for Health Informatics and
Information Management Education (CAHIIM)
in cooperation with the American Health Information
Management Association (AHIMA)
233 N. Michigan Avenue, Suite 2150
Chicago, Illinois 60601-5800
Phone: (312) 233-1100 | www.ahima.org

The Medical Coding Certificate Program is accredited by:
The Approval Committee for Certificate Programs (ACCP)
a joint committee established by AHIMA and AHDI
to approve Coding Certificate Programs
233 N. Michigan Avenue, 21st floor
Chicago, Illinois 60601-5800
Phone: (312) 233-1100 | www.ahima.org

The Cooperative Nursing Program with
Our Lady of Lourdes School of Nursing is accredited by:
The National League of Nursing Accrediting Commission
3343 Peachtree Road NE, Suite 500
Atlanta, Georgia 30326
Phone: (404) 975-5000 | Fax: (404) 975-5020
www.nlnac.org

The Commission on Accreditation of
Allied Health Education Programs (CAAHEP)
1361 Park Street, Clearwater, FL 33756
www.caahep.org
And approved by:
The NJ Board of Nursing (NJBON)
PO Box 45010, Newark, NJ 07101
Phone: (973) 504-6430

The Medical Laboratory Technology Program is accredited by:
The National Accrediting Agency for Clinical Laboratory Sciences
5600 N. River Road, Suite 670
Rosemont, IL 60018-5119
Phone: (847) 939-3597

The Respiratory Therapy Program is accredited by:
Committee on Accreditation for Respiratory Care (CoARC)
1248 Harwood Road, Bedford, TX 76021-4244
Phone: (817) 283-2835.

Rutgers University (School of Health Related Programs),
Camden County College's co-partner in this program is accredit-
ed by the Commission on Higher Education of the Middle States
Association of Colleges and Secondary Schools.

The Veterinary Technology Program is accredited by:
The Committee on Veterinary Technician Education and
Activities (CVTEA) of the American Veterinary Medical
Association (AVMA)
1931 North Meacham Road, Suite 100
Schaumburg IL 60173-8070
Phone: (908) 925-80709

The Practical Nursing Program is approved by:
The NJ Board of Nursing (NJBON)
PO Box 45010, Newark, NJ 07101
Phone: (973) 504-6430

The Massage Therapy Program is accredited by:
The Massage, Bodywork and Somatic Therapy
Examining Committee under the authority
of the New Jersey Board of Nursing
New Jersey Board of Nursing
PO Box 45010, Newark, NJ 07101
Phone: (973) 504-6430

ABMP
Associated Massage and Bodywork Professionals
P.O. Box 740879, Arvada, CO 80006-0879

AMTA
American Massage Therapy Association
500 Davis Street, Suite 900, Evanston, IL 60201-4695

AHHA
American Holistic Health Association
PO Box 17400, Anaheim, CA 92817

YA
Yoga Alliance
1701 Clarendon Boulevard, Suite 110, Arlington, VA 22209

The General Motors Automotive Service Educational
Program (GM-ASEP), the Apprentice Program and the
Toyota T-TEN Programs are all certified by the
National Automotive Technicians Education Foundation (NATEF)
101 Blue Seal Drive, Suite 101, Leesburg, Virginia 20175
Phone: (703) 669-6650

Commission on Opticianry Accreditation (COA)
PO Box 592, Canton, NY 13617
Phone: (703) 468-0566

The Ophthalmic Medical Technician Program is accredited by
Commission on Accreditation of
Ophthalmic Medical Programs (CoA-OMP)
2025 Woodlane Drive, St. Paul, MN 55125
Phone: (651) 731-7237
CoA-OMP@jchapo.org

Academic Program

Camden County College's academic program includes Associate degree programs that are designed to prepare for transfer for a Bachelor's degree, or provide the necessary skills to enter the workforce with a specialized set of skills. The College also offers a variety of vocational skill based programs, including academic certificates, certificates of achievement, as well as specialized short term specialized programs.

Transfer programs (AA, AS, AFA Degrees) are designed to provide students with the foundation general education courses as well as specific academic program courses required to complete baccalaureate programs of study upon transfer to colleges and universities. Career programs (AAS Degrees) provide educational experiences in the applied arts and sciences and are designed to prepare career-oriented students for job entry at the completion of the program.

Camden County College offers a number of certificate programs that fall within two categories: Academic Certificates (CT) and Certificates of Achievement (CA, CPS). Certificate programs provide training for specialized occupations. The certificate programs are discipline-intensive and most certificate courses can be applied to a corresponding associate degree program.

The Camden County Career Institute (CCCI) offers short-term training provided by industry experts. These programs are designed to prepare students to enter the workforce in an in-demand occupation. Many of these courses can be applied to a Camden County College associate degree and/or certificate program.

General Education

Camden County College is committed to promoting intellectual development, aesthetic appreciation and cultural awareness. To that end, degree programs include a general education component. This component, offering choices among a variety of courses, focuses on reading analytically, communicating ideas clearly and solving essential mathematical problems. It is designed to ensure that students develop a broad base of knowledge and become proficient in the application of skills. At Camden County College, students

have the opportunity to develop analytical, creative and ethical thinking; scientific and quantitative reasoning; technological competencies; historical consciousness; cultural awareness, and sensitivity to the world around them.

Graduation Requirements

To graduate from Camden County College with an Associate Degree, Certificate (CT), or Certificate of Achievement (CA) the following requirements must be satisfied.

1. Students must satisfactorily complete all courses and credits in an approved curriculum. Credit requirements vary by program. Developmental/ ESL courses do not count toward graduation requirements.
2. Earn a cumulative grade point average of 2.0 or higher in courses taken at Camden County College.
3. Degree seeking (AA, AS, AAS, AFA) students must complete a minimum of 30 of the required credits at Camden County College. Certificate (CT) students and Certificate of Achievement (CA) must complete at least half the required credits at the College.

Getting Started

- **Apply for Admission**
apply.camdencc.edu. Select "Create Your Account" and then "Apply to Camden County College."
- **Placement Test and Exemptions**
Placement testing schedules, sample tests, preparation materials and exemptions are provided on the Testing Center website www.camdencc.edu/testing.
- **Academic Advising**
Academic Advisors are available to help you determine your academic and career goals. Advisors will discuss your placement results, review requirements for specific academic programs, and help you create an academic plan. Visit www.camdencc.edu/advisement for additional information.
- **Additional Information**
Visit www.camdencc.edu/registration/sixsteps for additional information regarding Financial Aid, Registration, and Payment.

Policy on Non-Discrimination in Educational Programs

Camden County College complies with Title VII of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination in Employment Act of 1967 and New Jersey's Law Against Discrimination. These laws prohibit discrimination on the basis of race, creed, color, national origin, nationality, ancestry, age, marital status, affectional or sexual orientation, sex, familial status, domestic partnership status, disability and handicap. Decisions on admission, recruitment, financial aid programs, access to course offerings, or other aspects of its educational programs or activities, including vocational programs and vocational opportunities, are not made on the basis of any of these factors. Inquiries regarding these laws may be directed to the Dean of Students Office, Taft 236, Camden County College, P.O. Box 200, Blackwood, NJ 08012, (856) 227-7200, extension 4371; jtenuto@camdencc.edu or to the Executive Director of Human Resources, Camden County College, PO Box 200, Blackwood, NJ 08012, (856) 227-7200, ext 4221.

Understanding Placement

Academic Skills English Courses and Placement Flowchart

Workforce Track	Academic Track			Accelerated Track	College Level
ENG-005 Pathways to Reading & Writing PLA.ENG-PRW Read Score: 20-31 ¹ Essay Score: 0-1	Reading Courses ENG-012 Reading Skills II PLA.ENG-R2 Read Score: 32-59	ENG-002 Reading Skills II Express PLA.ENG-R2E Read Score: 60-64	ENG-013 Reading Skills III PLA.ENG-R3 Read Score: 65-82	ENG-046 Reading and Writing III Accelerated PLA.ENG-RW3A Read Score: 79-82 + Essay Score: 5	ENG-101 English Comp I PLA.ENG-CLE Essay: 6-8 <i>or</i> SAT Critical Reading 540 or higher
	Writing Courses ENG-012 Writing Skills II PLA.ENG-W2 Essay Score: 2-3 ²	ENG-012 Writing Skills III PLA.ENG-W3 Essay Score: 4-5 ³			
	<i>Placement Boosts</i>		<i>Essay Score: 3</i> <i>Read Score: 65-120</i> <i>S Skills: 84-120</i> <i>PLA.ENG.W3</i>		<i>Essay Score: 5</i> <i>Read Score: 83-120</i> <i>PLA.ENG-CLE</i>

1 – Students with a reading score below 32 and an essay score of 0-1 are placed in ENG-005; they must pass Pathways to Reading and Writing and retest to potentially proceed in the sequence.

2 – Students with an essay score of 3 and a reading score of 65-120 will be given the Sentence Skills test; those scoring 84-120 will be placed in ENG-023.

3 – Students with an essay score of 5 and a reading score of 83-120 will be placed in ENG-101; students with an essay score of 6-8 will automatically be placed in ENG-101 regardless of their reading score.

The Academic Skills English Department offers developmental courses designed to help students prepare for reading and writing in college-level courses. Placement into the various levels is determined by scores on the Accuplacer placement test. Students who test into any of the developmental levels must successfully complete the Level III courses to be eligible to register for English Composition.

DEPARTMENT CONTACTS ACADEMIC SKILLS ENGLISH:

Andrea Wilson, Secretary, (856) 227-7200, ext. 4271
 Elisabeth Bass, Department Chair, ebass@camdencc.edu

DEPARTMENT CONTACTS ACADEMIC SKILLS MATH:

Kristin McKenna, Secretary, (856) 227-7200, ext. 4410
 Sandi Tannen, Department Chair, stannen@camdencc.edu

Academic Skills Math Courses and Placement Flowchart

PreAlgebra Traditional	*	Elementary Algebra Traditional	*	College Level Math
MTH-011 PLA.MTH-FUN		MTH-029 PLA.MTH-EAT D or higher in MTH-011 P in MTH-016		PLA.MTH-CLM D or higher in MTH-029 P in MTH-035
PreAlgebra Express		Elementary Algebra Express		
MTH-016 PLA.MTH-MFE RV in MTH-011		MTH-035 PLA.MTH-EAE RV in MTH-029		
PreAlgebra Express and Elementary Algebra Express are four-day courses that provide eligible students with the opportunity to demonstrate mastery of the material in an accelerated format.				

The Academic Skills Math Department offers developmental math courses designed to help students prepare for college-level math, science and business courses. Placement into the various levels is determined by scores on the Accuplacer placement test. Students who test into any of the developmental levels must successfully complete Elementary Algebra or Elementary Algebra Express to be eligible to register for any college-level math course.

NOTE: Basic computation is a fundamental objective of these courses. Therefore, the use of calculators is prohibited in all Academic Skills Math courses.

English as a Second Language (ESL) Course Sequence & ESL Accuplacer Placement Flowchart

Introduction to ESL—Continuing Education Courses ¹		ESL Level 1		ESL Level 2		ESL Level 3		EAP—Bridge Course to College Level		College Level	
English for Daily Life & Work: Reading & Writing Courses	*	ESL Writing & Grammar Courses	ESL Writing & Grammar 1 ESL-061 PLA.ESL-WG1	*	ESL Writing & Grammar 2 ESL-062 PLA.ESL-WG2	*	ESL Writing & Grammar 3 ESL-063 PLA.ESL-WG3	*	English for Academic Purposes ESL-094 PLA.ESL-EAP	*	English Composition ENG-101 ^{2,3} & Other College-level courses
	*	ESL Reading & Vocabulary Courses	ESL Reading & Vocabulary 1 ESL-071 PLA.ESL-RV1	*	ESL Reading & Vocabulary 2 ESL-072 PLA.ESL-RV2	*	ESL Reading & Vocabulary 3 ESL-073 PLA.ESL-RV3	*		*	
English for Daily Life & Work: Listening & Speaking Courses	*	ESL Listening & Speaking Courses	ESL Listening & Speaking 1 ESL-081 PLA.ESL-LS1	*	ESL Listening & Speaking 2 ESL-082 PLA.ESL-LS2	*	ESL Listening & Speaking 3 ESL-083 PLA.ESL-LS3	*	No Listening & Speaking Courses Required		

1 – Continuing Education ESL courses are offered through the Continuing Education Department in conjunction with the ESL Department. These are NOT ESL credit courses.

2 – ENG-101 is NOT part of the ESL Course Sequence.

3 – Students must either complete ESL-094 or place into ENG-101 based on the ESL Accuplacer Placement Test.

The ESL Department at Camden County College provides English language training to both United States residents who are non-native speakers of English and students from all over the world. The ESL Department provides non-native speakers of English with the linguistic and cultural skills necessary for academic achievement, integration into American society, and success in the workplace.

The curriculum of the ESL Department focuses on three major linguistic areas:

- **Academic:** Assist students who are preparing for college study in the U.S.
- **Functional:** Provide career skills for individuals in the work force
- **Cultural:** Provide English skills for those who need to adapt to the American society

DEPARTMENT CONTACTS:

Department Secretary, Andrea Wilson,
(856) 227-7200, ext. 4271

Department Chair, Stephen McCoy
smccoy@camdenc.edu

Programs

Associate in Art (AA)

Associate in Science (AS)

Associate in Fine Art (AFA)

Associate in Applied Science (AAS)

Certificates (CA, CT, CPS)

Career & Technical Institute (CTI)



Liberal Arts and Science: Applied & Fine Arts Option

APA.AA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	ART-165	Color: Theory and Practice	3
ART-123	Basic Drawing I (AFA)	3	SPE-102	Public Speaking	3
ART-166	Two Dimensional Design (AFA)	3	.....	Language General Education Elective ¹	3
HIS-111	Western Civilization I or		.....	Laboratory Science General Education Elective ²	4
HIS-101	World Civilization I	3	.....	Social Science General Education Elective	3
MTH....	Mathematics General Education Elective	3			16
HPE....	Health & Exercise Science Elective	1	Second Semester		
		16	MTH....	Mathematics General Education Elective or	
Second Semester			.....	Science General Education Elective ²	3/4
ENG-102	English Composition II	3	.....	Language General Education Elective ¹	3
ART-124	Basic Drawing II (AFA) or		.....	Social Science General Education Elective	3
ART-134	Life Drawing I	3	.....	Humanities General Education Elective ³	
ART-167	Three Dimensional Design (AFA)	3	.....	(not a History or Language course)	3
HIS-112	Western Civilization II or		.....	Diversity General Education Elective	3
HIS-102	World Civilization II or				15/16
HIS-103	World Civilization III	3	Total Minimum Credits		
.....	Technology General Education Elective	3			62
		15			

¹ Students must take six credits of one language. See Course Descriptions for requisites on placement.

² The following laboratory science courses are recommended for non-science majors: CHM-150, BIO-106, BIO-140, CHM-140, PHY-103

³ Recommend ART-111 or ART-112

PROGRAM DESCRIPTION

This program is designed to provide students with the standard core foundations classes in the visual arts while also enabling them to complete many of the required general education courses they would need in working towards completing a Bachelor of Arts (BA) degree. This program is designed for transfer. Upon completion of the program, students are expected to have developed a strong portfolio of original work.

PROGRAM GOALS

- To provide students with the core foundations classes necessary for visual arts majors.
- To assist students in developing a strong portfolio of original work for transfer into an accredited BA or BFA program.
- To provide students with a foundation in a general, liberal arts education.
- To ensure transferability of course work to four-year colleges and universities B.A. degree programs.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Draw from life (observational drawing).
2. Design projects in both two and three dimensions.
3. Apply the fundamentals of design to the problem solving and crafting aspects of their visual arts pursuits.
4. Make, comprehend and evaluate works of visual fine art and design.

EXTRACURRICULAR ACADEMIC OPPORTUNITIES AT CCC

- Exhibition opportunities
- Visiting artists, lectures, trips
- Service learning
- Independent study
- Art co-ops/internships

EMPLOYMENT OPPORTUNITIES

- Graphic Design
- Illustration
- Animation
- Industrial design
- Art education
- Fashion design
- Interior design
- Architecture
- Cartooning
- Art curator

CONTACT PERSONS

Professor Gregory Brellochs, Coordinator
(856) 227-7200, ext. 4251
email: gbrellochs@camdencc.edu

Professor Kay Klotzbach
(856) 227-7200, ext. 4342
email: kklotzbach@camdencc.edu

Highlights

This program enables students to transfer successfully upon completion. Transfer agreements exist between CCC and Moore College of Art and Design as well as CCC and the Pennsylvania Academy of Fine arts for this program.

Students have the opportunity to show their work in the College's art gallery.

Liberal Arts and Science: Music Option

MUS.AA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	MUS-105	Advanced Music Lessons I	1
HIS-111	Western Civilization I or		MUS-124	Music Theory II	3
HIS-101	World Civilization I	3	MUS-200	Aural Theory II	2
.....	Language General Education Elective ¹	3	MUS-201	Class Piano II	1
.....	Social Science General Education Elective	3	MUS....	Ensemble Elective	1
.....	Technology General Education Elective	3	.....	Laboratory Science General Education Elective ²	4
MUS-161	College Choir I or		MTH....	Mathematics General Education Elective	3
MUS-162	College Choir II or				15
MUS-263	College Choir III or		Second Semester		
MUS-264	College Choir IV	1	MUS-202	Advanced Music Lessons II	1
		16	SPE-102	Public Speaking	3
			.....	Social Science General Education Elective	3
Second Semester			MTH....	Mathematics General Education Elective or	
ENG-102	English Composition II	3	.....	Science General Education Elective	3/4
HIS-112	Western Civilization II or		.....	Diversity General Education Elective	3
HIS-102	World Civilization II or		.....	Humanities General Education Elective ³	3
HIS-103	World Civilization III	3	.....	(not a History or Language course)	
MUS-103	Intermediate Music Lessons	1			16/17
MUS-104	Aural Theory I	2	Total Minimum Credits		
MUS-123	Music Theory I	3			64
MUS-125	Class Piano I	1			
MUS....	Ensemble Elective	1			
.....	Language General Education Elective ¹	3			
		17			

¹ Must take six credits in one language. It is recommended that music majors take six credits in German or Italian. See Course Descriptions for requisites on placement.

² The following laboratory science courses are recommended for non-science majors: BIO-106, BIO-130, BIO-140, CHM-140, PHY-103

³ ENG-271 World Literature I is a recommended course.

PROGRAM DESCRIPTION

The Camden County College music program delivers a curriculum of written, aural and piano theory designed to help each student develop mature skills in analysis, composition and ear training.

In addition, after three semesters of ensemble performance and private lessons, each student participates in the development and implementation of a music recital.

PROGRAM GOALS

- To prepare students to demonstrate beginning competencies in music.
- To prepare students to demonstrate stage presence, concert acumen, and develop the confidence that comes as a result of successful concert presentation.
- To provide students with the information necessary to develop the essential technical skills on instruments or voices through private instruction.
- To obtain concert production skills through participation in the preparation of concerts; i.e., public relations, ticket sales, stage and auditorium preparation, facilities requests.
- To learn artistic and technical music competencies through observing professionals via our artist series and those of area colleges and public theaters.
- To prepare students to evaluate their own musical growth and development.
- To provide students with a General Education foundation.
- To prepare students to transfer to a four-year institution.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Perform, analyze, dictate and discuss an advanced repertoire of music.
2. Perform in piano, choral and ensemble.
3. Present a collegiate recital showcasing a variety of music and techniques.
4. Explain and apply music theory.

EMPLOYMENT OPPORTUNITIES

- Composer/arranger
- Conductor
- Music librarian
- Music therapist
- Newspaper critic/reporter
- Producer
- Professional musician/recording artist
- Sound mixer
- Teacher- elementary, secondary, post secondary, and studio
- Tuner/technician/instrumental repair

CONTACT PERSON

Professor Mike Billingsley, Coordinator
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email: mbillingsley@camdencc.edu

Highlights

*Students have the opportunity to perform with music organizations.
The program transfers to baccalaureate programs in music.*

ASSOCIATE IN APPLIED SCIENCE

Audio Production

MUS.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
MUS-127	Fundamentals of Music for Sound Engineers	3	ENG-102	English Composition II	3
MUS-129	Introduction to Audio Recording	3	.....	Humanities General Education Elective ¹	3
MUS-133	Audio Recording Techniques I	3	MUS-229	Basic Studio Maintenance	3
MUS-135	MIDI/DAW I	3	MUS-230	Audio Production	3
PHY-103	Physics I (for the Non-Science Major)	4	MUS-231	Mixing Audio	3
		16			16
First Year/Second Semester			Second Year/Second Semester		
ENG-101	English Composition I	3	.....	Diversity General Education Elective ²	3
MUS-134	Audio Recording Techniques II	3	MTH-100	Algebraic Concepts	4
MUS-136	MIDI/DAW II	3	MUS-232	Sound Design	3
MUS-227	Live Sound Reinforcement	3	MUS-233	Advanced Audio Production and Mixing	3
MUS-228	Business of Music	3	MUS-275	Audio Internship	3
		15			16
				Total Minimum Credits	63

¹ Recommended courses are MUS-101 (Music Appreciation I), MUS-106 (World Music Cultures), MUS-111 (Music History I), MUS-112 (Music History II), or MUS-113 (Jazz History)

² Recommended courses are MUS-106 (World Music Cultures) or MUS-113 (Jazz History)

PROGRAM DESCRIPTION

The Audio Production degree begins with the development of the fundamental skills needed in the fields of audio production, music recording and sound engineering and gradually advances towards the procurement of an audio-based portfolio and capstone internship. Aimed at individuals interested in securing work primarily as sound engineers in a variety of media-related fields, this two-year program covers audio recording, mixing, live sound and audio-visual sound design. Also, students will learn the nuts and bolts of studio maintenance and repair, fundamentals of music theory for more effective communication with recording artists and the essentials of the music business as needed for managing a career in the field of audio production, music recording and sound engineering.

PROGRAM GOALS

- To provide a foundation of skill and knowledge for students to work in the recording, live and broadcast sound fields.
- To provide access for students to experiment and build a portfolio for future engineering and production work.
- To give students hands-on experience with industry-standard recording equipment and techniques.
- To provide students with a General Education foundation.
- To prepare students for employment.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the student will be able to:

- Manage, engineer and mix a full recording session.
- Communicate effectively with clients to achieve their technical and aesthetic audio demands.
- Critically analyze and provide constructive criticism to improve musician and ensemble performance.

EMPLOYMENT OPPORTUNITIES

- Recording producer
- Audio engineer
- Sound mixer
- Music technician
- Music composer/arranger
- Professional musician

CONTACT PERSON

Professor Michael Billingsley, Coordinator
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Music Recording

MUS.CA

CODE	COURSE	CREDITS
First Year/First Semester		
MUS-127	Fundamentals of Music for Sound Engineers	3
MUS-129	Introduction to Audio Recording	3
MUS-133	Audio Recording Techniques I	3
MUS-135	MIDI/DAW (Digital Audio Workstation) I	3
		12
Second Semester		
MUS-134	Audio Recording Techniques II	3
MUS-136	MIDI/DAW (Digital Audio Workstation) II	3
MUS-227	Live Sound Reinforcement	3
MUS-228	Business of Music	3
		12
	Total Minimum Credits	24

PROGRAM DESCRIPTION

The Music Recording certificate is designed to provide students with an opportunity to learn the skills involved with recording and editing music. Aimed at individuals interested in building their own home studios or seeking the skills required of entry-level interns in the field of music engineering, this two-semester program covers the nuts and bolts of multi-track recording, digital audio workstations and an overview of live sound. In addition, students learn basic piano skills for MIDI input/editing, fundamentals of music theory for more effective communication with recording artists and the essentials of the music business as needed for managing a career in the field of music engineering and/or performance.

PROGRAM GOALS

- To prepare students to demonstrate skills for entry-level employment in recording studios.
- To provide students the exposure to technology and software associated with the recording of music.
- To provide students with the skills for entry-level employment as audio engineers with live performance talent.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Organize, manage, engineer and edit a recording session.
2. Discuss a wide variety of equipment, hardware and software related to the recording and editing of audio files.
3. Provide sound reinforcement in a live-concert setting.
4. Describe critical issues related to the music recording profession.

EMPLOYMENT OPPORTUNITIES

- Recording producer
- Audio engineer
- Sound mixer
- Music technician
- Music composer/arranger
- Professional musician

CONTACT PERSON

Professor Michael Billingsley, Coordinator
(856) 227-7200, ext. 4563
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**THIS PROGRAM IS NOT APPROVED
FOR FINANCIAL AID**

Liberal Arts and Science: Photography Option

PHO.AA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	PHO-221	Studio Photography	3
HIS-111	Western Civilization I or HIS-101 World Civilization I	3	SPE-102	Public Speaking	3
ART-166	Two Dimensional Design — AFA Majors	3	MTH....	Mathematics General Education Elective	3
PHO-101	Photography I	3	.....	Language General Education Elective ¹	3
.....	Technology General Education Elective	3	.....	Diversity General Education Elective	3
		15			15
Second Semester			Second Semester		
ENG-102	English Composition II	3	PHO-226	Digital Photography	3
HIS-112	Western Civilization II or HIS-102 World Civilization II or HIS-103 World Civilization III	3	MTH....	Mathematics General Education Elective or Science General Education Elective or Technology General Education Elective	3/4
PHO-102	Photography II	3	.....	Laboratory Science General Education Elective ²	4
.....	Social Science General Education Elective	3	.....	Humanities General Education Elective (Not a History or Language course)	3
.....	Language General Education Elective ¹	3	.....	Social Science General Education Elective	3
HPE....	Health & Exercise Science Elective	1			16/17
		16		Total Minimum Credits	62

¹Students must take six credits of one language. See Course Descriptions for requisites on placement.

²Chemistry of Art Materials (CHM-150) is recommended for Photography majors

PROGRAM DESCRIPTION

In today's visual culture it is important to understand visual communication. The famous photographer Laszlo Moholy-Nagy said in 1934, "The illiterate of the future will be the person ignorant of the use of the camera as well as the pen." The program emphasizes learning how to communicate ideas visually as well as learning the technical aspects of the medium. The program provides: all phases of camera operation; basic black and white darkroom techniques; studio experience; and experience with current digital imaging technology. The facilities include: a well-equipped darkroom with 18 enlargers that are able to print up to 4X5 negatives; a fully-equipped studio with both hot lights and flash equipment; medium format and large format cameras for student use. We also have a digital photography lab that includes the latest computers, image editing software, scanners and printers.

PROGRAM GOALS

- To provide students with a foundation in general education.
- To provide a concentration of course work appropriate for a photography major.
- To ensure transferability of course work to four-year colleges and universities.
- To prepare students to develop an individual perspective about photography.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Synthesize the fundamental concepts of photography.
2. Produce high quality photographic prints.
3. Create a cohesive visual statement.
4. Critically evaluate photographs.

EMPLOYMENT OPPORTUNITIES

- Artist
- Advertising photographer
- Commercial photographer
- Photojournalist
- Photo lab technician

CONTACT PERSONS

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Highlights

This program prepares students for careers in photography and transfers to four-year institutions.

Liberal Arts and Science: Theatre Option

SPT.AA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	SPE-102	Public Speaking	3
THE-131	Voice and Diction	3	THE-233	Playwriting	3
THE-253	Stagecraft I	3	.....	Social Science General Education Elective	3
HIS-111	Western Civilization I or		.....	Laboratory Science General Education Elective ³	4
HIS-101	World Civilization I	3	.....	Diversity General Education Elective	3
MTH....	Mathematics General Education Elective	3			16
.....	Language General Education Elective ¹	3	Second Semester		
		18	THE-242	Acting II	3
Second Semester			THE-252	Children's Theatre	3
ENG-102	English Composition II	3	MTH....	Mathematics General Education Elective or	
THE-141	Acting I	3	.....	Science General Education Elective	3/4
HIS-112	Western Civilization II or		.....	Social Science General Education Elective	3
HIS-102	World Civilization II or		.....	Technology General Education Elective	3
HIS-103	World Civilization III	3			15/16
.....	Language General Education Elective ¹	3	Total Minimum Credits		
.....	Humanities General Education Electives ²	3			64
	(Not a History or Language course)				
		15			

1 Students must take six credits of one language. See Course Descriptions for requisites on placement.

2 Theatre Appreciation (THE-121) is recommended.

3 The following laboratory science courses are recommended for non-science majors: BIO-106, BIO-130, BIO-140, CHM-140, PHY-103

PROGRAM DESCRIPTION

The program is designed to help students demonstrate beginning competencies in speech and theatre. The program focuses on the performance aspects of theatre and on the technical aspects of set and scenery design, construction, stage management, and directing.

PROGRAM GOALS

- To provide students with a foundation in general education.
- To provide a concentration of course work appropriate for a theatre major.
- To ensure transferability of course work to four-year colleges and universities.
- To develop the students voices, bodies, and creative imagination.
- To provide students with a General Education foundation.
- To prepare students to transfer to a four-year institution.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Discuss the culture of theatre including the ethics, financial implications and necessary commitment
 2. Identify strengths and weaknesses of their voice, bodies and creative imaginations
 3. Produce a play
 4. Define and apply the vocabulary of theatre genres

EMPLOYMENT OPPORTUNITIES

- Acting
- Directing
- Public relations
- Set designing
- Light design
- Stage managing

CONTACT PERSONS

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Professor Marjorie Sokoloff
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Highlights

Students participate immediately in all productions. Theatre majors are required to audition at the College. Graduates transfer to colleges offering baccalaureate programs in speech, theatre, or dance.

Studio Art

STA.AFA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG 101	English Composition I	3	ENG.....	Literature General Education Elective	3
ART 111	Art History I	3	HIS...	History General Education Elective	3
ART 123	Basic Drawing I- AFA	3	ART 165	Color Theory & Practice	3
ART 166	Two Dimensional Design- AFA	3	PHO 226	Digital Photography	3
.....	Studio Elective	3	.....	Studio Elective	3
		15			15
First Year/Second Semester			Second Year/Second Semester		
ENG 102	English Composition II	3	.....	Studio Elective	3
ART 112	Art History II	3	.....	Studio Elective	3
ART 124	Basic Drawing II- AFA	3	.....	Social Science General Education Elective	3
ART 167	Three Dimensional Design- AFA	3	.....	Humanities General Education Elective	3
.....	Studio Elective	3	.....	Math or Science General Education Elective	3/4
		15			15/16
			Total Minimum Credits		60

Studio Electives (Choose ANY five studio electives listed below. Clusters are recommendations only.)

Photography	Film	Traditional Studio	Animation/Design
PHO-101 Photography I	FLM-110 Filmmaking I	ART-134 Life Drawing I	ART-134 Life Drawing I
PHO-102 Photography II	FLM-210 Filmmaking II	ART-143 Sculpture I- AFA	ART-143 Sculpture I- AFA
PHO-221 Studio Photography	FLM-205 Motion Graphics	ART-144 Sculpture II- AFA	ART-145 Painting I- AFA
PHO-106 Beginning Digital Photography	PHO-221 Studio Photography	ART-145 Painting I- AFA	FLM-110 Filmmaking I
FLM-110 Filmmaking I	PHO-106 Beginning Digital Photography	ART-146 Painting II- AFA	FLM-205 Motion Graphics
<i>Recommended Humanities General Education Elective: PHO-111 History of Photography</i>	<i>Recommended Humanities General Education Elective: FLM-101 Television Appreciation or FLM-201 Film Appreciation</i>	ART-153 Ceramics & Pottery I- AFA	
		ART-154 Ceramics & Pottery II- AFA	

PROGRAM DESCRIPTION

This degree program provides students with an art intensive course of study. This program is designed to give students a broad base of studio art and design experience, with an emphasis on both the core foundations classes and more advanced studio art classes. This program is designed for transfer into a Bachelor of Fine Arts (BFA) program. Upon completion of the program, students are expected to have developed a strong portfolio of original work.

PROGRAM GOALS

- To provide students with the core foundations classes necessary for visual arts majors.
- To assist students in developing a strong portfolio of original work for transfer into an accredited BA or BFA program.
- To provide students with a foundation in a general, liberal arts education.
- To ensure transferability of course work to Bachelor of Fine Arts (BFA) and Bachelor of Arts (BA) programs at four-year colleges and universities.
- To communicate effectively in a visual manner.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Draw from life (observational drawing).
 2. Design projects in both two and three dimensions.
 3. Apply fundamentals of design and fine art studio to the problem solving and crafting aspects of their visual arts pursuits.
 4. Make, comprehend and evaluate works of visual fine art and design.
 5. Discuss the history of western art.

EMPLOYMENT OPPORTUNITIES

- Studio Fine Art
- Illustration
- Animation
- Design
- Art Education (higher education)
- Curator

CONTACT PERSONS

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 email: gbrellochs@camdencc.edu

Professor Kay Klotzbach
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Highlights

This program enables students to transfer successfully upon completion. Transfer agreements exist between CCC and Moore College of Art and Design as well as CCC and the Pennsylvania Academy of Fine arts for this program.

Students have the opportunity to show their work in the College's art gallery.

Film and Television Production

FLM.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	FLM-210	Filmmaking II	3
FLM-201	Film Appreciation	3	FLM-205	Motion Graphics	3
PHO-106	Beginning Digital Photography	3	FLM-101	Television Appreciation	3
ART-166	Two Dimensional Design—AFA Majors	3	THE-253	Stagecraft	3
MTH-.....	Mathematics General Education Elective	3	ART-111	Art History I or	
		15	ART-112	Art History II or	
			PHO-111	History of Photography	3
Second Semester			Second Semester		
ENG-102	English Composition II	3	FLM-215	Production Internship I	3
FLM-110	Filmmaking I	3	PHO-226	Digital Photography	3
ART-123	Basic Drawing I—AFA Majors		ART-165	Color: Theory & Practice	3
ART-167	Three Dimensional Design—AFA Majors	3	ART-103	Visual Culture	3
ART-111	Art History I or		PSY-101	Basic Psychology	3
ART-112	Art History II or				15
PHO-111	History of Photography	3			60
		15			
			Total Minimum Credits		

PROGRAM DESCRIPTION

An understanding of the role of film and television is intrinsic to an understanding of popular culture. Film and television production changes and improves with the changes and improvements in technology. This program is balanced to introduce the student to the historic/social impact of film and television with the practical hands-on application of film and television production in the 21st century.

PROGRAM GOALS

- To provide students with a foundation in general education.
- To provide a concentration of course work appropriate for a free-lance film/television technician in audio, light, sets and editing.
- To prepare the student for an entry-level position in the film/television industry.

PROGRAM STUDENT LEARNING OUTCOMES

By the end of the program, the graduate will be able to:

1. Identify all areas of responsibility in film and television production.
2. Demonstrate an ability to participate in all areas of film and television production.
3. Demonstrate an understanding of the history and evolution of film and television production.
4. Demonstrate an understanding of film and television in popular culture.

EMPLOYMENT OPPORTUNITIES

- Production assistant
- Camera assistant
- Grip
- Gaffer
- Location scout
- Assistant editor

CONTACT PERSON

Professor Gregory Brellochs, Coordinator
(856) 227-7200, ext. 4251
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Professor Tom Murray
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Automotive Technology (Apprentice)

AUT.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
AUT-101	Automotive Fundamentals	3	ENG-102	English Composition II	3
AUT-111	Automotive Brake Systems	3	AUT-242	Automotive Electrical/Electronic Systems	4
AUT-121	Steering & Suspension Systems	4	AUT-253	Automotive Engines	4
CSC-101	Computer Literacy	3	AUT-261	Manual Drive Trains and Axles	4
.....	Diversity: Humanities ucation Elective	3	PHY-103	Physics I (for the Non-Science major)	4
		16			19
Second Semester			Second Semester		
ENG-101	English Composition I	3	AUT-262	Automatic Transmissions & Transaxles	4
AUT-131	Automotive Heating and Air Conditioning	3	AUT-271	Advanced Automotive Systems I	4
AUT-141	Automotive Electrical/Electronic Principles	4	AUT-272	Advanced Automotive Systems II	4
MTH.....	Mathematics General Education Elective	3/4	AUT-286	Automotive Capstone Practicum (360 hours)	3
.....	Social Science General Education Elective	3			15
		16/17		Total Minimum Credits	66

Note: The program accepts students each semester.

PROGRAM DESCRIPTION

This open enrollment curriculum is designed to prepare students for careers as service technicians in the automotive industry.

PROGRAM GOALS

- To provide students with quality state of the art education in the latest automotive technologies that are incorporating increasingly sophisticated computer-controlled and electronic systems.
- To provide students with safety education in the workplace by passing several safety evaluations in the automotive program.
- To prepare students to qualify for entry-level employment as a "C" class technician.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Work safely in an automobile repair facility.
 2. Perform basic techniques involved in diagnosis and repair of automobiles.
 3. Explain basic principles of automotive technology.

PROGRAM REQUIREMENTS

Applicants must complete the required application form, submit official high school records and college transcripts and arrange to take the College Placement Test. Students should have good mechanical skills. Toward the end of the program, a 360-hour practicum is required.

CERTIFICATION

The Automotive Technology program at Camden County College is fully certified as a master training program by the National Institute for Automotive Service Excellence.

EMPLOYMENT OPPORTUNITIES

The program prepares students to work at all automotive service facilities, whether independent service organizations or new car dealerships.

Graduates of this program experience a very high job placement rate in the automotive industry as an:

- Automotive technician
- Automotive service writer
- Automotive parts counter specialist

CONTACT PERSONS

Christopher Gallo, Director
 (856) 227-7200, ext. 4544
 email: cgallo@camdencollege.edu

Highlights

The automotive instructors have won many awards and are recognized nationally for their teaching and automotive expertise.

Automotive Technology: General Motors / ASEP Option

GMA.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Semester (Fall) 15 weeks			Third Semester (Fall) 9 weeks		
AUT-101	Automotive Fundamentals	3	ENG-101	English Composition I	3
AUT-111	Automotive Brake Systems	3	AUT-242	Automotive Electrical/Electronic Systems	4
AUT-141	Automotive Electrical/Electronics Principles	4	AUT-253	Automotive Engines	4
.....	Diversity - Humanities General Education Elective	3	Dealership Experience 9 weeks		
		13	AUT-283	Automotive Practicum III	3
Second Semester (Spring)			Fourth Semester (Spring) 9 weeks		
Dealership Experience First 9 weeks			ENG-102	English Composition II	3
AUT-181	Automotive Practicum I	3	AUT-271	Advanced Automotive Systems I	4
Second 9 weeks			AUT-272	Advanced Automotive Systems II	4
AUT-121	Automotive Steering & Suspension Systems	4	MTH.....	Mathematics General Education Elective	3
AUT-131	Automotive Heating & Air Conditioning	3	Dealership Experience 9 weeks		
CSC-101	Computer Literacy	3	AUT-284	Automotive Practicum IV	3
.....	Social Science General Education Elective	3			17
		16	Fifth Semester (Summer) 9 weeks		
Dealership Experience (Summer) 9 weeks			AUT-261	Manual Drive Trains & Axles	4
AUT-182	Automotive Practicum II	3	AUT-262	Automatic Transmissions & Transaxles	4
		3	PHY-103	Physics I (for the Non-Science major)	4
					12
			Total Minimum Credits		75

PROGRAM DESCRIPTION

Camden County College, General Motors Corporation and General Motors dealerships jointly sponsor this selective admission program. It is designed specifically for automotive technicians mutually selected for the program by Camden County College and area General Motors dealerships.

PROGRAM GOALS

- To provide students with the ability to be successful and productive employees of General Motors dealerships by having completed and passed four, nine-week practicums at General Motors dealerships.
- To instill in the students a willingness to exercise safe working habits.
- To develop the students' ability to integrate social and decision-making skills and good work habits into the everyday work environment of automotive service and repair.
- To insure students possess the ability to successfully complete update-training seminars, workshops, manufacturer's courses and College classes in automotive technology.
- To provide students with a General Education foundation.
- To prepare students for employment.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Work safely in a GM repair facility.
 2. Integrate social and decision-making skills with standard professional work habits.
 3. Explain basic principles of automotive technology as it applies to General Motors manufactured automobiles.
 4. Diagnose and repair General Motors automobiles.

SPECIAL ADMISSIONS REQUIREMENTS

- Applicants must complete the required application form, submit official high school records and college transcripts and, if applicable, arrange to take the College Placement Test.
- After applying for admission, students will receive test information from the ASEP Director.
- Applicants must bring an abstract of their driving record from the NJDMV.
- After being accepted by the College, students must be sponsored by a General Motors dealer before beginning the program.
- Students must purchase or possess a basic tool set before beginning their first college practicum at the sponsoring dealerships. (The College provides a list of the required tools.)
- Students must have clean driving record, and be able to pass drug and background checks.

CERTIFICATION

The Automotive Technology program at CCC is fully certified as a master training program by the National Institute for Automotive Service Excellence.

EMPLOYMENT OPPORTUNITIES

- The GM sponsor provides a uniform, an hourly wage and a workplace where students obtain on-the-job training.
- ASEP graduates experience a very high job placement rate with their sponsoring dealerships.

CONTACT PERSONS

Christopher Gallo, Director
(856) 227-7200, ext. 4544
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Highlights

The automotive instructors have won many awards and are recognized nationally for their teaching and automotive expertise.

Automotive General Technician

GAT.CA

CODE	COURSE	CREDITS			
First Year/First Semester			Second Year/First Semester		
AUT-101	Automotive Fundamentals	3	AUT-242	Automotive Electrical/Electronic Systems	4
AUT-111	Automotive Brake Systems	3	AUT-253	Automotive Engines	4
AUT-121	Automotive Steering and Suspension Systems	4	AUT-261	Manual Drive Trains and Axles	4
		10			12
First Year/Second Semester			Second Year/Second Semester		
AUT-131	Automotive Heating and Air Conditioning	3	AUT-262	Automatic Transmissions and Transaxles	4
AUT-141	Automotive Electrical/Electronic Principles	4	AUT-271	Advanced Automotive Systems I	4
		7	AUT-272	Advanced Automotive Systems II	4
			AUT-286	Automotive Capstone Practicum (360 hours)	3
					15
					44
			Total Minimum Credits		44

PROGRAM DESCRIPTION

This open enrollment program is designed to prepare students for careers in the automotive industry as general automotive service technicians.

PROGRAM GOALS

- To provide quality, state-of-the-art training to those who wish to enter the automotive service industry as a technician.
- To prepare students to enter the automotive service field and serve as general automotive technicians.
- To encourage students to embrace lifelong learning by applying their credits toward the associate degree in automotive technology.

SPECIAL PROGRAM REQUIREMENTS

- The basic skills placement test must be taken for admittance. It is highly recommended that any basic skills classes needed be completed by graduation.
- At the end of the program, a 360-hour practicum or work experience is required, where students work in automotive service facilities where they can put theory into practice in actual work situations.

EMPLOYMENT OPPORTUNITIES

The program prepares students to work at all automotive service facilities, whether independent service organizations or new car dealerships.

Students who complete this program experience a very high job placement rate in the automotive industry as an:

- Automotive technician
- Automotive service writer
- Automotive parts counter specialist

CONTACT PERSONS

Christopher Gallo, Director
 (856) 227-7200, ext. 4544
 email: cgallo@camdenc.edu

Highlights

The automotive instructors have won many awards and are recognized nationally for their teaching and automotive expertise.

Automotive General Motors Technician

GMT.CA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Semester (Spring)		
AUT-101	Automotive Fundamentals	3	AUT-131	Automotive Heating and Air Conditioning	3
AUT-111	Automotive Brake Systems	3	AUT-121	Steering & Suspension Systems	4
AUT-141	Automotive Electrical/Electronic Principles	4			7
		10	Dealership Experience (Summer)		
			AUT-181	Automotive Practicum I	3
			Total Credits		20

PROGRAM DESCRIPTION

This program will prepare students to perform maintenance and minor repairs on GM vehicles. Students may also move from this program into the GM/ASEP degree program.

PROGRAM GOALS

- To provide quality, state-of-the-art training to those who wish to enter the automotive service industry as a GM technician.
- To provide quality, state-of-the-art training to those people who are currently employed in the automotive service industry and wish to upgrade their technical skills.
- To prepare students to enter the automotive service industry and serve as general automotive technicians.
- To encourage students to embrace lifelong learning by applying their credits toward the associate's degree in Automotive Technology.

SPECIAL PROGRAM REQUIREMENTS

Clean driving record, criminal and drug background.

EMPLOYMENT OPPORTUNITIES

The students must complete at least one 9-week practicum at a GM dealership to meet graduation requirements. This practicum usually leads to full-time employment. The dealers have requested GM to develop this type of program.

CONTACT PERSONS

Christopher Gallo, Director
 (856) 227-7200, ext. 4544
 email: cgallo@camdencc.edu

THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

Automotive

AUTOMOTIVE TECHNOLOGY

This program addresses the fundamental working principles of the modern automobile. This program is designed for those who intend to make the Automotive Trades their career. Instruction is provided in an ASE (Automotive Service Excellence) certified shop with ASE certified instructors. Skills and theories in the program follow proficiencies outlined through NATEF (National Automotive Technical Education Foundation) and are comprised of the technician certification areas offered through ASE to the technician currently employed in the field. This program consists of both classroom and lab (shop) opportunities. Shop experience features "live work" situations, where students perform maintenance and repair services on vehicles in daily use, approximating actual shop conditions as closely as possible within the learning environment.

Included in this program are topics in vehicle construction and design as they apply to mechanical, hydraulic, and electrical system service. The student will use diagnostic equipment to troubleshoot and service ignition, fuel injection, on board computer, battery, starting and charging, cooling, suspension, and brake systems.

Students will learn:

- Engine Design and Operation
- Brake System Operation & Service
- Steering System Service
- Transmission Overhaul
- Drive Lines
- Suspension Systems & Alignment
- Engine Control Systems
- Electrical and Electronic Systems
- Tires and Wheels
- Hand & Power Tools, Shop Equipment, & Hand Held Test Equipment
- Shop Safety Practices
- Fasteners, Gaskets, Seals & Sealants
- Service Manuals
- Energy Conversion
- Combustion Requirement
- Emission System Theory

Upon successful completion of the program students will be prepared to seek employment in the automotive trades that require general mechanic skills, specialty areas like brake and muffler shop work, emission control service.

Now includes OSHA10 certification.

Admission Requirements: There are no special requirements for admission to this program. However, a basic comprehension of reading and math is expected
Location: Camden County Technical School, Sicklerville Campus

CE.TRD-011 Hours: 382 CEUs: 38.2

AUTO COLLISION REPAIR & REFINISHING TECHNOLOGY

Students will receive training in all phases of the auto body trade. This program focuses on panel installation, welding, straightening, aligning, refinishing, and frame straightening. Emphasis is placed on new tools, techniques and processes in the field of auto refinishing. Instruction on estimating techniques is also provided. The Auto Collision Repair and Refinishing Technology program allows students the opportunity to learn and supply skills involving non-structural analysis and damage repair. Successful graduates of this program may be eligible to take the industry recognized certification test sponsored by the National Institute for Automotive Service Excellence (ASE).

Students will learn:

- Sheet Metal Repair & Plastic Filler
- Use of Hand Electric & Pneumatic Tools
- Welding Techniques
- Painting
- Estimating

Graduates of this program may seek employment as painters, prep persons and installers for car dealership and auto body repair businesses. They may also pursue post-secondary training and work in these positions or as insurance adjusters or estimators. They may open their own businesses, as well.

Now includes OSHA10 certification.

Admission Requirements: There are no special requirements for this program. However, a basic comprehension of reading and math is expected.
Location: Camden County Technical School, Sicklerville Campus

CE.TRD-010 Hours: 246 CEUs: 24.6

**CAREER & TECHNICAL INSTITUTE
OF CAMDEN COUNTY COLLEGE**

856-874-6004
 tradetraining@camdencc.edu
 www.camdencc.edu/ce

ASSOCIATE IN SCIENCE

Business Administration

ABA.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year /First Semester		
ENG-101	English Composition I	3	ECO-102	Microeconomics	3
ACC-104	Financial Accounting ¹	3	HIS-101	World Civilization I	3
CSC-101	Computer Literacy ² or Technology General Education Elective	3	MGT-102	Introduction to Management	3
MGT-101	Introduction to Business	3	MTH-112	Elements of Statistics II ³	3
MTH-122	Applied Calculus or MTH-140 Calculus I ³	3/4	.....	General Education Elective ³	3
		15/16			15
First Year/Second Semester			Second Year/Second Semester		
ENG-102	English Composition II	3	HIS-102	World Civilization II or HIS-103 World Civilization III	3
ACC-105	Managerial Accounting	3	LAW-101	Legal Environment/Business Law I	3
ECO-101	Macroeconomics	3	MKT-101	Principles of Marketing	3
MTH-111	Introduction to Statistics ³	3	ENG-271	World Literature I or CIS-206 Advanced Computer Concepts/Applications	3
.....	Laboratory Science General Education Elective	4	.....	General Education Elective ³	3
		16			15
				Total Minimum Credits	61

¹ Accounting 101 and Accounting 102 may substitute for Accounting 104 and Accounting 105 to satisfy the CCC degree but additional Accounting courses may be needed to satisfy transfer requirements.

² CSC-101 is a pre-requisite for CIS-206.

³ Courses should be selected with the assistance of an academic advisor or the program coordinator. MTH-122 and MTH-140 have pre-requisites that may be used as a General Education elective.

PROGRAM DESCRIPTION

The curriculum leads to the bachelor's degree in business administration. Specialized fields in upper division studies include accounting, business administration, economics, finance, human resource management, marketing, computer studies, and other business-related professions.

PROGRAM GOALS

- To provide students with a foundation in general education required for transfer to a baccalaureate program.
- To assure that students understand the fundamentals of financial analysis of information and regulatory requirements related to business decision making.
- To prepare students to use information technology to make successful management and business decisions.
- To provide students with a basic core of business studies including economics, accounting, law, management, business and ethics, emphasizing the value of a global orientation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Apply and explain the fundamentals of financial reporting and analysis.
 2. Research and communicate business information using information technology.
 3. Describe the legal implications of business situations.

RECOMMENDATIONS

- Students should contact transfer institution before enrolling in the program.
- Students should enlist the assistance of academic advisors in choosing electives.
- This program is designed for the student who wishes to transfer to a four-year college or university.

TRANSFER OPPORTUNITIES

Students in this program transfer to many institutions including:
 Rutgers University
 Rowan University
 Stockton University
 Rider University
 Drexel University

CONTACT PERSONS

Professor Bill Allen, Coordinator
 (856) 227-7200, ext. 4455
 Email: ballen@camdencc.edu

Professor Richard Sarkisian
 (856) 227-7200, ext 4492
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Highlights

The program prepares students who are interested in business to transfer to a four-year institution. NJ Transfer is a web-based data information system designed to provide a seamless transfer from New Jersey community colleges to New Jersey four-year colleges and universities. Visit the web site at www.njtransfer.org.

ASSOCIATE IN SCIENCE

Sport Management

SPM.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ACC-104	Financial Accounting	3	HPE-201	Introduction to Sport Management ²	3
ENG-101	English Composition I	3	MGT-102	Introduction to Management	3
HPE-130	Consumer Health Decisions or		MTH-111	Elements of Statistics	3
HPE-102	Health & Wellness	3	PSY-101	Basic Psychology	3
.....	Laboratory Science General Education Elective ¹	4	HIS-101	World Civilization I	3
		13			15
Second Semester			Second Semester		
ENG-102	English Composition II	3	HPE-170	First Aid, Safety & Prevention of Injuries	3
HPE-195	Concepts of Individual and Dual Sports	3	SOC-101	Introduction to Sociology	3
ECO-101	Macroeconomics or		HPE-209	Internship: Sport Management	1
ECO-102	Microeconomics	3	.....	History General Education Elective	3
.....	Laboratory Science General Education Elective ¹	4	.....	Humanities General Education Elective	3
.....	Free Elective	3	.....	Humanities - Literature General Education Elective	3
		16			16
			Total Minimum Credits		60

¹ Students are encouraged to consult transfer institution for appropriate lab science elective.

² This course is offered fall semester only.

PROGRAM DESCRIPTION

The Sport Management program prepares students to receive an Associate in Science degree and transfer to a four-year school to major in sport management. Sport management is an all-encompassing term associated with the management of sport, fitness/wellness, and leisure recreation programs. An increased growth in competitive athletics, sport participation by all segments of society, and sport-related businesses has created a need for individuals trained in sport management.

PROGRAM GOALS

- To prepare students for transfer to a four-year college or university for further study in sport management.
- To provide students with a foundation in general education.
- To prepare students with an understanding of the various career opportunities and areas of specialization within the field of sport management.
- To provide students with a successful work experience in sport management.
- To provide students with a foundation in basic accounting.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Explain the various careers in sport management.
 2. Use critical analysis in solving problems and analyzing information as it relates to sport management.
 3. Work effectively in a professional sport business environment.
 4. Explain the key factors that led to sport evolving into business.

EMPLOYMENT OPPORTUNITIES

- Amateur competitive athletics
- Professional sports
- Sports agencies
- Municipal recreation and sports
- Sport merchandising
- Sport news media
- Health & fitness
- Resort recreation
- Specialized sport resorts & instructional programs

CONTACT PERSON

Dr. Nicholas DiCicco, Director
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ASSOCIATE IN APPLIED SCIENCE

CIP Code 52.0302

Accounting

ACC.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ACC-104	Financial Accounting	3	ACC-214	Intermediate Accounting I (Fall only)	3
ENG-101	English Composition I	3	ACC-223	Income Tax Accounting I (Fall only)	3
LAW-101	Legal Environment/Business Law I or		CIS-102	Spreadsheets	3
LAW-102	Business Law II	3	ECO-101	Macroeconomics	3
MGT-101	Introduction to Business	3	.....	Business Elective	3
CIS-101	Personal Computer Applications or				15
CSC-101	Computer Literacy	3	Second Semester		
MTH.....	Mathematics General Education Elective	3	ACC-216	Intermediate Accounting II (Spring only)	3
		18	ACC-224	Income Tax Accounting II (Spring only)	3
Second Semester			ACC-225	Auditing or (Spring only)	
ACC-105	Managerial Accounting	3	BUS-201	Co-op I: Business	3
ACC-213	Computerized Accounting	3	ECO-102	Microeconomics	3
ENG-102	English Composition II	3	MGT-102	Introduction to Management	3
FIN-212	Principles of Finance	3	.....	Diversity - Humanities General Education Elective	3
MTH.....	Mathematics General Education Elective	3			18
		15	Total Minimum Credits		
					66

PROGRAM DESCRIPTION

Accounting clerks maintain systematic and up-to-date records of accounts and business transactions. They also prepare periodic financial statements.

PROGRAM GOALS

- To provide training for facilitating entry-level employment as an accountant, appraiser, bank teller, loan officer, revenue agent or tax collector.
- To prepare students to maintain systematic and up-to-date records of accounts and business transactions.
- To provide students with the ability to prepare financial statements.
- To prepare students to use computers as tools in the solution of accounting problems.
- To provide training for students in accounting fields to upgrade their training.
- To prepare students to take and pass the CPA exam.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Maintain systematic and up-to-date records of business transactions.
 2. Prepare financial statements, including income statements, statement of owner's equity, balance sheets and statement of cash flow.
 3. Use computer software to design and maintain bookkeeping and accounting systems.

EMPLOYMENT OPPORTUNITIES

- Accountant
- Appraiser
- Bank teller
- Loan officer
- Revenue agent
- Tax collector

CONTACT PERSONS

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Highlights

This program prepares students for a variety of entry-level accounting positions.

ASSOCIATE IN APPLIED SCIENCE

CIP Code 52.0201

Management

MGT.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	ECO-101	Macroeconomics	3
ACC-104	Financial Accounting	3	LAW-102	Business Law II	3
BMT-101	Business Mathematics I	3	MGT-212	Human Resource Management	3
CSC-101	Computer Literacy	3	MKT-101	Principles of Marketing	3
MGT-101	Introduction to Business	3	MTH-111	Introduction to Statistics	3
		15	HPE....	Health & Exercise Science Elective	1
Second Semester			Second Semester		
ENG-102	English Composition II	3	ECO-102	Microeconomics	3
ACC-105	Managerial Accounting	3	FIN-212	Principles of Finance or	
BMT-102	Business Mathematics II	3	BUS-201	Co-op I: Business	3
LAW-101	Legal Environment/Business Law I	3	MGT-213	Operations Management (Spring Only)	3
MGT-102	Introduction to Management	3	MGT-216	Human Relations in Business & Industry (Spring Only)	3
HPE.....	Health & Exercise Science Elective	1	.....	Diversity General Education Elective	3
		16			15
					62
Total Minimum Credits					62

PROGRAM DESCRIPTION

Managers direct the activities of their individual departments within the framework of the overall plans of the organizations.

PROGRAM GOALS

- To assure that students can analyze and demonstrate an understanding of exposure to the general business environment to enhance entry level employment.
- To prepare students to exercise the valuable skill set obtained during cooperative internships with local employers and apply this knowledge to a business environment.
- To prepare students to qualify for entry-level employment as an assistant manager, employment interviewer, management trainee, manager, office manager and supervisor.
- To instill in the students a commitment to lifelong learning which engenders the desire to transfer credits to an affiliated baccalaureate program.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Discuss, explain and describe the general business environment.
 2. Manage, communicate with and direct a diverse workforce.
 3. Describe the legal implications of management decisions.

EMPLOYMENT OPPORTUNITIES

Projected employment growth varies by industry, yet most industries will continue to expand rapidly. There is a great demand for entry-level and middle-level managers in miscellaneous business services. The future projection of employment for managers continues to grow both nationally and globally in all fields. Managers are needed in all levels of production, service and distribution type businesses.

- Assistant manager
- Retail manager
- Management trainee
- Manager
- Office manager
- Supervisor
- Bank manager
- Healthcare career manager

CONTACT PERSONS

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Highlights

According to the Bureau of Labor Statistics, managers are listed as one of the occupations with the largest job growth potential.

ASSOCIATE IN APPLIED SCIENCE

CIP Code 52.1401

Marketing

MKT.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	MKT-102	Retail Management	3
ACC-104	Financial Accounting	3	ECO-101	Macroeconomics	3
MGT-101	Introduction to Business	3	SOC-205	Social Diversity	3
CSC-101	Computer Literacy	3	LAW-102	Business Law II	3
MTH-111	Introduction to Statistics	3	.....	Humanities General Education Elective	3
OST-110	Microcomputer Keyboarding	1	HPE....	Health & Exercise Science Elective	1
		16			16
Second Semester			Second Semester		
ENG-102	English Composition II	3	BUS-201	Co-op I: Business	3
ACC-105	Managerial Accounting	3	ECO-102	Microeconomics	3
MGT-102	Introduction to Management	3	MKT-124	Fundamentals of Selling or	
MKT-101	Principles of Marketing	3	MKT-123	Introduction to Promotion	3
LAW-101	Legal Environment/Business Law I	3	MKT-212	Strategies in Marketing or	
HPE....	Health & Exercise Science Elective	1	MKT-125	Principles of E-Commerce	3
		16	MTH ...	Mathematics General Education Elective	3
					15
				Total Minimum Credits	63

PROGRAM DESCRIPTION

The Marketing program is designed to provide students with the practical knowledge and skills necessary to plan, manage and monitor trends which indicate the need for new products and services offered by an organization. Required courses emphasize the development of marketable skills essential to career success, including sales techniques, market research, promotional strategies, and applied management practices. Students will cultivate an understanding of consumer purchasing behavior concepts which will advance the students' managerial abilities for problem solving, communication, leadership, and teamwork.

PROGRAM GOALS

- To provide students with an understanding of consumer purchasing behavior concepts.
- To develop the students' managerial abilities in problem solving, communication, leadership, and teamwork.
- To enable students to use current and emerging information technology tools for employment, personal productivity, communication and research.
- To assure that students possess professional values and exhibit professional behaviors in the workplace including demonstrating an understanding and appreciation for other cultures and backgrounds.
- To provide students with a General Education foundation.
- To prepare students for employment.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Apply knowledge of fundamental marketing planning and its concepts and theories.
 2. Compare and contrast purchasing behaviors.
 3. Plan, prioritize and manage marketing research projects.
 4. Identify professional values and exhibit professional behaviors in the work environment.

EMPLOYMENT OPPORTUNITIES

As domestic and foreign competition increases, so will marketing and promotional activities. Careers in marketing are expected to increase significantly throughout this century. Listed below are some of the possible employment opportunities.

- Marketing assistant/coordinator
- Management trainee
- Advertising coordinator
- Retail sales associate
- Inside or outside sales representative

CONTACT PERSONS

Professor Richard Sarkisian, Coordinator
 (856) 227-7200, ext. 4492
 Email: rsarkisian@camdencc.edu

Highlights

Careers in marketing are expected to increase due to domestic and foreign competition.

ASSOCIATE IN APPLIED SCIENCE

Office Systems Technology Administrative Assistant

ADA.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	CIS-191	Internet: Tools & Techniques	3
ACC-104	Financial Accounting	3	ECO-101	Macroeconomics	3
CSC-101	Computer Literacy	3	MGT-102	Introduction to Management	3
OST-113	Keyboarding & Document Processing	3	SOC-205	Social Diversity	3
OST-123	Introduction Microsoft Word	3	.....	Humanities General Education Elective	3
		15	HPE....	Health & Exercise Science Elective	1
Second Semester			Second Semester		
ENG-102	English Composition II	3	CIS-102	Spreadsheets	3
ACC-105	Managerial Accounting or		BUS-201	Co-op I: Business or	
ACC-213	Computerized Accounting	3	CIS-103	Database Management	3
OST-151	Powerpoint1	3	MGT-212	Human Resource Management	3
OST-224	Advanced Microsoft Word and Desktop Publishing ¹	3	OST-241	Administrative Office Procedures or	
MTH....	Mathematics General Education Elective	3	MGT-214	Office Management ¹	3
HPE....	Health & Exercise Science Elective	1	SPE-102	Public Speaking	3
		16			15
					62
Total Minimum Credits					62

¹ Offered in spring semester only.

NOTE: Several Office Systems Technology (OST) courses in this program lend themselves to credit by examination for those students who believe that through prior learning (e.g., self-directed study, on-the-job training, or past employment) they have acquired the competency ordinarily associated with satisfactory course completion. To obtain further information, contact the program coordinator at (856) 227-7200, ext. 4424.

PROGRAM DESCRIPTION

An administrative assistant performs a large number of administrative tasks in order for a business or organization to run effectively and efficiently. They serve as information and communication managers for an office, plan and schedule meetings and appointments, organize and maintain paper and electronic files and manage projects. They conduct research and disseminate information by using the telephone, mail services, Web sites and e-mail. They also handle travel and guest arrangements and provide "in-house" computer and software training. Administrative assistants resolve day-to-day problems, make decisions and display skill in communication, organization and time management.

PROGRAM GOALS

- To develop proficiency in basic and advanced computer skills including keyboarding, word processing, spreadsheets, database management, presentation software and Internet usage.
- To assure students demonstrate the skills needed to prepare oral and written communications that meet business standards.
- To assure that students possess professional values and exhibit professional behaviors in the workplace by demonstrating an understanding and appreciation for other cultures and backgrounds.
- To prepare students for employment or advancement in office support positions.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Exhibit strong keyboarding skills to improve accuracy, speed and general efficiency in computer operations, and for securing and maintaining an office position.
 2. Communicate information orally and in the writing and production of business documents.
 3. Exhibit interpersonal skills and abilities in teamwork including an understanding and appreciation for persons of other cultures and backgrounds.
 4. Manage multiple office tasks, researching and prioritizing; both individually and collaboratively.
 5. Prepare to take an examination for Microsoft Office Specialist certification.

EMPLOYMENT OPPORTUNITIES

Administrative assistants usually work in schools, hospitals, corporate settings, government agencies, or legal and medical offices. Listed below are some of the possible employment opportunities.

- Administrative assistant/secretary
- Executive assistant
- Office administrator/manager
- Help desk assistant
- Word processing specialist
- General office clerk

CONTACT PERSON

Professor Sondi Lee, Coordinator
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Highlights

- Hands-on training*
- Tutorial labs*
- Credit for life experience opportunities*

ASSOCIATE IN APPLIED SCIENCE
Paralegal Studies

PAR.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	PAR-210	Law Office Management	3
CSC-101	Computer Literacy	3	LAW-101	Legal Environment/Business Law I	3
PAR-101	Introduction to Paralegal Studies	3	CRJ-103	Legal Systems	3
PAR-201	Legal Research and Writing I	3	SPE-102	Public Speaking	3
MTH.....	Mathematics General Education Elective	3	SOC-205	Social Diversity	3
HPE.....	Health & Exercise Science Elective	1	HPE.....	Health & Exercise Science Elective	1
		16			16
Second Semester			Second Semester		
ENG-102	English Composition II	3	PAR-203	Family Law	3
OST-123	Introduction to Microsoft Word	3	PAR-204	Real Estate Law or	
PAR-102	Litigation/Civil Procedures	3	PAR-207	Bankruptcy Basics	3
PAR-202	Legal Research and Writing II	3	PAR-205	Estate and Probate	3
POL-101	Introduction to Political Science	3	PAR-206	Paralegal Internship	3
CRJ-105	Criminal Law	3	.....	Humanities General Education Elective	3
		18			15
			Total Minimum Credits		65

PROGRAM DESCRIPTION

This program is designed to prepare students for entry-level paraprofessional positions in the legal field. A paralegal is a person qualified by education, training, or work experience; who is employed or retained by a lawyer, law office, corporation, governmental agency, or other entity, and who performs specifically delegated substantive legal work for which a lawyer is responsible. Paralegals may not give legal advice or otherwise engage in the unauthorized practice of law. Paralegal work includes developing and modifying procedures used in the legal field, preparing routine legal documents, assisting in the preparation of cases for trial, investigating facts, researching, selecting, assessing, compiling, and using information from the law library and other references, and analyzing and handling procedural problems.

All Paralegal Studies degree candidates must comply with the applicable legal authority governing the unauthorized practice of law in the jurisdiction in which they will eventually practice.

PROGRAM GOALS

- To assure students can identify roles and responsibilities of paralegals and use legal terminology effectively.
- To prepare students to discuss fundamental legal concepts and principles, think critically about law and social issues, and evaluate a legal case from an ethical point of view.
- To instruct students on how to conduct effective and comprehensive legal research.
- To instruct students in the skills needed to prepare oral and written communications that meet the standards of the legal environment.
- To qualify students for entry-level paraprofessional positions in the legal field.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Discuss fundamental legal concepts and principles to think critically about law and social issues.
 2. Evaluate the court system and both civil and criminal procedure.
 3. Conduct legal research using both primary and secondary sources in either printed or electronic versions.
 4. Interact with clients of various cultures and backgrounds.

EMPLOYMENT OPPORTUNITIES

- Law firms
- U.S. or state prosecutors' and public defenders' offices
- Financial institutions, insurance companies and other corporations
- The government
- Legal aid offices

CONTACT PERSON

Professor Sondi Lee, Coordinator
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 email: slee@camdencc.edu

Business

Small Business Institute (6 sessions)

These workshops are designed to give you the business management skills necessary to succeed in today's competitive market.

INTRODUCTION TO SMALL BUSINESS OWNERSHIP (1)

Participants will be introduced to what it takes to start or purchase a small business. Economic climate and other factors of business ownership are discussed with an emphasis on a positive approach to this series of seminars.

CE.BUS 001-51 *Hours: 2.5* *CEUs: .25*

THE BUSINESS PLAN PART I: PLANNING PROCESS (2)

This seminar concentrates on the organization and elements of a basic business plan. Learn the uses of a business plan and when and why it is necessary – a must for people starting their own business or business owners seeking financing.

CE.BUS 002-51 *Hours: 2.5* *CEUs: .25*

THE BUSINESS PLAN PART II: MARKETING & PROMOTION (3)

This seminar continues from Part I, the Planning Process, by focusing on the business plan and its affect on marketing and promotion for the business owner.

CE.BUS 010-51 *Hours: 2.5* *CEUs: .25*

CREATING A BUDGET FOR YOUR SMALL BUSINESS (4)

Learn to plan and forecast your cash needs in order to start, operate, or purchase a business. This step-by-step seminar concentrates on the basics of cash flow planning. Learn to plan your own cash flow from actual case studies. This seminar teaches you the proper format and purpose of this vital part of operating a small business.

CE.BUS 003-51 *Hours: 2.5* *CEUs: .25*

FINANCING A SMALL BUSINESS (5)

Learn where and how to borrow money, the do's and don'ts of borrowing, and the different sources of money available to you. Learn how to build the proper banking relationship and what is needed to secure that business loan.

CE.BUS 004-51 *Hours: 2.5* *CEUs: .25*

TAXES AND RECORD KEEPING (6)

Learn what type of business entity is right for you. Learn what legal and tax benefits are available to you in starting or owning your own business. This seminar concentrates on various legal forms of business, their costs, tax reporting, and benefits to the small business owner.

CE.BUS 005-51 *Hours: 2.5* *CEUs: .25*

Investment Institute

In these unpredictable and often turbulent times that we now face, it is more important than ever to increase your personal knowledge of investing for you and your family. In this seminar, you will learn the essentials of investing by exploring the various options and techniques commonly utilized by today's financial consultants. These courses are instructed by a highly experienced financial executive, Mr. William Dorman, who will guide you through the investment spectrum. Cost: \$120 for series or individual class costs apply

BUDGETING AND FIXED INCOME INVESTMENTS

This session will introduce investment options including CD's, tax free vs. taxable bonds, and other fixed income products. A discussion on budgeting will help attendees better understand monies available for investment, as well as profiting their own assets.

CE.INV 001-71 *Hours: 2.5* *CEUs: .25*

THE STOCK MARKET

This course will offer incite as to how the market operates. It will include a discussion on how to research and purchase stock, understanding dividends, stock splits, PE ratios and IPO's. A review of fundamental vs. technical analysis will be included. Handouts will provide current data used to make stock selections.

CE.INV 002-71 *Hours: 2.5* *CEUs: .25*

MUTUAL FUNDS

This seminar will focus on purchasing mutual funds, the internal working funds, risk tolerance and load vs. no load. We will also discuss closed end funds and annuities.

CE.INV 003-71 *Hours: 2.5* *CEUs: .25*

RETIREMENT PLANNING AND FUNDING

The final night will explore strategies for those planning for retirement by focusing on rollovers, lump sum distributions, social security, long term care insurance, and estate planning. A review of how to fund retirement will include a discussion on retirement accounts including IRA's, Roth IRA and 401K's. Although you may take these individually, for the best experience, please plan to attend all four as they are separate but related topics.

CE.INV 004-71 *Hours: 2.5* *CEUs: .25*

**CAREER & TECHNICAL INSTITUTE
OF CAMDEN COUNTY COLLEGE**

856-874-6004
tradetraining@camdencc.edu
www.camdencc.edu/ce

COSMETOLOGY / HAIR STYLIST

Students will gain skills and training necessary to meet the requirements established by the New Jersey State Board of Cosmetology. The program consists of hands-on training using all implements and performing basic designs on mannequins and patrons in a clinical salon setting. As a cosmetology student, you will receive a minimum of 1000 hours of instruction in our well-equipped salon, working also with business and hairstyle computers. CTI is now offering a rolling admission schedule with multiple start dates to choose from. This program has been approved by the NJ State Board of Cosmetology Licensing. Milady Standard CD-ROM and texts will be used in the program. Note: no classes are held during July & August.

Students will learn:

- State Laws
- Shop Management
- Scalp Conditioning
- Hair Styling
- Permanent Waving
- Thermal Waving
- Hair Shaping
- Hair Cutting
- Shampooing
- Tinting
- Hair Coloring
- Shaving
- Styling & Fitting of Wigs and Hairpieces
- Nail Sculpturing
- Manicuring
- Facials
- Chemistry in Clinical Practice

Graduates of this program can find employment as hairstylists, estheticians, manicurists, manufacturers' representatives, cosmetic or wig salespersons, receptionists, salon owners or platform artists

Admission Requirements: Cosmetology applicants must possess a high school diploma, GED, or equivalent. The State requires an up to date physical examination toward the end of the program for examination and licensing. Details regarding physical requirements will be distributed during class.

Location: Camden County Technical School, Sicklerville Campus

CE.TRD-040

Hours: 1,071

CEUs: 107.1

Real Estate

CTI

REAL ESTATE LICENSING

Real Estate Sales: This is a basic five-credit course in the principles of real estate and includes the study of property interests, contracts, financing, titles, deeds, closings, appraising leases, Federal laws, NJ statutes, and NJ Real Estate Commission rules and regulations. This course is designed to prepare students to sit for the NJ Real Estate Salesperson Exam.

New Jersey Licensing: An applicant for a NJ real estate salesperson's license must be at least 18 years old and have a high school diploma or GED. A student must pass the 75 hour course, pass the state exam (\$60), and have a NJ broker sponsor their license. The NJ Real Estate Commission will conduct a criminal background check on all Agent candidates.

FIN-215

Hours: 75

CAREER & TECHNICAL INSTITUTE OF CAMDEN COUNTY COLLEGE

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Liberal Arts and Science: Communications Option

COM.AA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	ENG-102	English Composition II	3
HIS-111	Western Civilization I or HIS-101 World Civilization I	3	SPE-102	Public Speaking	3
MTH....	Mathematics General Education Elective	3	COM-102	Theory of Communication	3
.....	Language General Education Elective ¹	3	.....	Laboratory Science General Education Elective ²	4
.....	Social Science General Education Elective	3	MTH....	Mathematics General Education Elective or Science General Education Elective ²	3/4
HPE....	Health & Exercise Science Elective	1			16/17
		16	Second Semester		
Second Semester			COM-103	News Writing & Reporting	3
COM-101	Influence of Mass Media	3	COM-143	Introduction to Electronic Media	3
COM-145	Intercultural Communications	3	COM....	Communications Course ³	3
HIS-112	Western Civilization II or HIS-102 World Civilization II or HIS-103 World Civilization III	3	.....	Humanities General Education Elective (not a History or Language course)	3
.....	Language General Education Elective ¹	3	.....	Social Science General Education Elective	3
.....	Technology General Education Elective	3			15
		15	Total Minimum Credits		62

¹ Students must take six credits of one language. See Course Descriptions for requisites on placement.

² The following laboratory science courses are recommended for non-science majors: BIO-106, BIO-130, BIO-140, CHM-140, PHY-103

³ Any Communication course not required in curriculum

PROGRAM DESCRIPTION

This program is designed to teach the technology, theory, and process of communication. Preparation is focused on helping students become a media worker that is a critical thinker and well informed media consumer.

PROGRAM GOALS

- To prepare students to become familiar with the history and evolution of American mass media.
- To prepare students to recognize how and why the media operate as they do, and what results they produce.
- To prepare students to develop analytical and critical skills enabling enlightened evaluation of media products.
- To prepare students to demonstrate an understanding of the obvious and the subtle effects of media upon the individual, the society, and the culture.
- To prepare students to study and analyze the principles and theories of communication and apply these principles and theories to different communication situations.
- To prepare students to learn communication terminology and the communication process.
- To prepare students to understand the function and perception of the communication process and its limitations.
- To prepare students to become aware of nonverbal communication and its effect on communication.
- To provide students with a General Education foundation.
- To prepare students to transfer to a four-year institution.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Discuss the history and evolution of American mass media.
 2. Analyze media products.
 3. Explain the effects of media upon the individual, the society and culture.
 4. Define communication terminology and apply this to the communication process.

EMPLOYMENT OPPORTUNITIES

- Advertising
- Editing
- Newspaper journalism
- Broadcast journalism
- Radio broadcasting
- Audio production
- Corporate & industrial telecommunications
- Cable
- Internet
- Public relations
- TV broadcasting & producing
- Film
- Social media
- Digital media

TRANSFER OPPORTUNITIES

Students in this program transfer to many institutions including:
 Rutgers-Camden University
 Rutgers-New Brunswick University
 Rowan University
 Temple University
 Stockton University

CONTACT PERSON

Professor Drew Jacobs, Coordinator
 (856) 227-7200, ext. 4217
 email: djacobs@camdenc.edu

Highlights

Students participate in internships at local radio stations, television stations, and newspapers.

Liberal Arts and Science: Public Relations/Advertising Option

PRA.AA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	COM-101	Influence of Mass Media	3
HIS-111	Western Civilization I or HIS-101 World Civilization I	3	COM-104	Introduction to Public Relations	3
COM-145	Intercultural Communications	3	.....	Technology General Education Elective	3
MTH....	Mathematics General Education Elective	3	.....	Laboratory Science General Education Elective ²	4
.....	Social Science General Education Elective	3	.....	Language General Education Elective ¹	3
HPE....	Health & Exercise Science Elective	1	Second Semester		
16			MKT-123	Introduction to Promotion	3
Second Semester			COM-103	News Writing & Reporting	3
ENG-102	English Composition II	3	COM-208	Public Relations: New Media	3
HIS-112	Western Civilization II or HIS-102 World Civilization II or HIS-103 World Civilization III	3	SPE-102	Public Speaking	3
MTH.....	Mathematics General Education Elective or Science General Education Elective	3/4	.....	Humanities General Education Elective (not a History or Language Course)	3
.....	Language General Education Elective ¹	3	Total Minimum Credits		
.....	Social Science General Education Elective	3	62		
15/16					

¹ Students must take six credits of one language. See Course Descriptions for requisites on placement.

² The following laboratory science courses are recommended for non-science majors: BIO-106, BIO-130, BIO-140, CHM-140, PHY-103

PROGRAM DESCRIPTION

This program is designed especially for those students who wish to specialize early or who are already employed in a related occupation.

PROGRAM GOALS

- To provide students with a foundation in general education.
- To provide a concentration of course work appropriate for a public relations/advertising major.
- To ensure transferability of course work to four-year colleges and universities.
- To enable students to understand the management of relationships between an organization and its public.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Explain the management of relationships between an organization and various publics.
 2. Discuss the history and evolution of public relations in America.
 3. Construct messages designed to communicate to a diverse audience.
 4. Define communication terminology and apply this to the public relations process.

EMPLOYMENT OPPORTUNITIES

- Advertising
- Corporations (employee, media, government, community, and consumer relations)
- Nonprofit organizations and trade associations
- Independent public relations agencies
- Integrated marketing communications
- Governments

CAMPUS OPPORTUNITIES

Working with student organizations, clubs and some non-profit agencies in the county, students in the public relations course learn how to research, conduct a survey and create PR materials.

TRANSFER OPPORTUNITIES

Students in this program transfer to many institutions including:
 Rutgers-Camden University
 Rutgers-New Brunswick University
 Rowan University
 Stockton University

CONTACT PERSON

Professor Drew Jacobs, Coordinator
 (856) 227-7200, ext. 4217
 email: djacobs@camdencc.edu

Highlights

Students participate in internships at local media operations and businesses.

ASSOCIATE IN ARTS

**Liberal Arts and Science:
Computer Graphics Option**

CGR.AA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	CGR-113	Web Page Design I	3
HIS-111	Western Civilization I or HIS-101 World Civilization I	3	CIS-191	Internet Tools & Techniques	3
CGR-104	Elements and Principles of Graphic Design	3	MTH....	Mathematics General Education Elective	3/4
CGR-111	Computer Graphics I	3	.....	Social Science General Education Elective	3
.....	Language General Education Elective ¹	3	.....	Humanities General Education Elective	3
		15		(not a History or Language course)	15/16
Second Semester			Second Semester		
ENG-102	English Composition II	3	CGR-253	Digital Illustration	3
HIS-112	Western Civilization II or HIS-102 World Civilization II or HIS-103 World Civilization III	3	SPE-102	Public Speaking	3
CGR-112	Computer Graphic Design II	3	.....	Laboratory Science General Education Elective ²	4
.....	Language General Education Elective ¹	3	.....	Diversity General Education Elective	3
MTH....	Mathematics General Education Elective or Science General Education Elective	3/4		Social Science General Education Elective	3
		15/16		Total Minimum Credits	61

¹ Students must take six credits of one language. See Course Descriptions for requisites on placement.

² The following Lab Science courses are recommended for non-science majors: BIO-106, BIO-140, CHM-140, PHY-103

PROGRAM DESCRIPTION

This career-oriented program can transfer to baccalaureate programs in computer-related fields. It uses state-of-the-art hardware and software.

PROGRAM GOALS

- To provide student with sufficient knowledge of visual elements such as type, illustration, graphics, photography, new media and animation and instruct them on how to utilize these skills to create effective design solutions and guide a job from concept to completion.
- To train students to use a variety of specialized computer software, hardware and peripherals.
- To instruct students on visual problem solving principles, team development skills, and graphic production standards.
- To prepare and guide the student to use his/her well-rounded portfolio to qualify for entry into a four-year college or university and transfer to a baccalaureate program in a computer graphics related field.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Apply information design skills used in the fields of computer graphics, multimedia design, animation and interactive video.
2. Analyze client needs and create effective design solutions.
3. Utilize fundamental principles and practices required by computer graphic professionals.
4. Use a variety of specialized computer graphic software, hardware and peripherals.

EMPLOYMENT OPPORTUNITIES

- Computer animation
- Computer graphics
- Electronic publishing
- Multimedia

TRANSFER OPPORTUNITIES

Students in this program transfer to many institutions including:
Rowan University
Rutgers University
Wilmington University
Drexel University
University of the Arts
Stockton University

CONTACT PERSONS

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Professor Phyllis Owens
(856) 227-7200, ext. 4682
email: powens@camdencc.edu

Highlights

There are cooperative education opportunities with local employers.

This course transfers to baccalaureate programs in computer-related fields.

ASSOCIATE IN APPLIED SCIENCE

Computer Graphics

CGR.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	CGR-239	2D Animation	3
CGR-104	Elements and Principles of Graphic Design	3	CGR-214	Web Page Design II	3
CGR-106	Print Publishing	3	CGR-253	Digital Illustration	3
CGR-111	Computer Graphic Design I	3	CIS-191	Internet Tools & Techniques	3
.....	Social Science General Education Elective	3	MTH....	Mathematics General Education Elective	3/4
		15			15/16
Second Semester			Second Semester		
ENG-102	English Composition II	3	CGR-213	Computer Graphic Design III	3
CGR-102	Electronic Publishing & Prepress	3	CGR-244	Special Effects	3
CGR-112	Computer Graphic Design II	3	CGR-252	Portfolio Design	3
CGR-113	Web Page Design I	3	CGR-260	Comic Book Design	3
.....	Diversity General Education Elective	3	.....	Humanities General Education Elective	3
		15			15
			Total Minimum Credits		60

PROGRAM DESCRIPTION

The program integrates design skills with computerized skills and uses state-of-the-art hardware and software. This career-oriented program consists of a core of computer graphic courses, general education components and a cooperative education option.

PROGRAM GOALS

- To guide and assist the students as they prepare their portfolios and use them to demonstrate the fundamental design skills and practices used in the computer graphics, multimedia design, animation and interactive video fields.
- To provide the student with the ability to analyze client needs and create effective design solutions.
- To provide training in a variety of specialized computer graphic software, hardware and peripherals.
- To prepare students to qualify for entry-level employment in design studios, printing companies, advertising agencies, or in-house corporate graphic departments.
- To instill in the students a commitment to lifelong learning which compels them to transfer credits to an affiliated baccalaureate program.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Apply information design skills used in the fields of computer graphics, multimedia design, animation and interactive video.
 2. Analyze client needs and create effective design solutions.
 3. Utilize fundamental principles and practices required by computer graphic professionals.
 4. Use a variety of specialized computer graphic software, hardware and peripherals.

EMPLOYMENT OPPORTUNITIES

- Computer animation
- Computer graphics
- Electronic publishing
- Graphic design advertising
- Multimedia

CONTACT PERSONS

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Highlights

There are cooperative education opportunities with local employers. This program transfers to such baccalaureate programs as computer graphics, advertising and design, animation, multimedia and other related fields.

ASSOCIATE IN APPLIED SCIENCE

Computer Graphics: Game Design and Development

GDD.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	ENG-221	Creative Writing	3
CGR-111	Computer Graphic Design I	3	CGR-112	Computer Graphic Design II or	
CGR-104	Elements & Principles of Graphic Design	3	CSC-121	Structured Programming (C++)	3/4
CGR-125	Game Design & Development I	3	CGR-107	Script Writing	3
.....	Diversity General Education Elective	3	CGR-255	Game Design & Development III	3
		15	CGR-241	Computer Animation I or	
			CGR-260	Comic Book Design	3
Second Semester			Second Semester		
ENG-102	English Composition II	3	CGR-242	Computer Animation II or	
CSC-105	Fundamentals of Programming	4	CGR-253	Digital Illustration	3
CGR-115	Digital Storytelling	3	CGR-244	Special Effects	3
CGR-200	Game Design & Development II	3	CGR-256	Game Design & Development Final Project	3
MTH-100	Algebraic Concepts or		.....	Humanities General Education Elective	3
MTH-111	Introduction to Statistics	3/4	.....	Social Science General Education Elective	3
		16/17			15
			Total Minimum Credits		61

PROGRAM DESCRIPTION

This program is designed for students interested in creating anything game related; 3D objects, to environments, to entire games themselves. Students will use a variety of design software and learn specific programming techniques involved in creating interactive games.

PROGRAM GOALS

- To assure that students can understand and explain the programming, modeling and animation techniques used to create interactive 2-D and 3-D computer and video games.
- To instruct students on how to properly examine market research and business concepts related to video game production and distribution processes and understand the economic, social and cultural implications of interactive media.
- To equip students with a working knowledge of a variety of specialized computer software, hardware and peripherals.
- To prepare students to qualify for entry-level employment as a game-play tester, 2D conceptual artist, 3D character builder, 3D object modeler, game designer, game programmer and related occupations.
- To instill in the students a commitment to lifelong learning which compels them to transfer credits to an affiliated baccalaureate program.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Create interactive 2-D and 3-D computer and video games individually and in a group.
 2. Analyze design software, programming languages, modeling and animation skills, level design and game engines used to design and develop video and interactive games.
 3. Analyze and apply market research and business concepts related to video game production and distribution processes.
 4. Synthesize and explain the economic, social and cultural implications of interactive media.

EMPLOYMENT OPPORTUNITIES

- Game-play tester
- 2D conceptual artist
- 3D character builder
- 3D object modeler
- Game designer
- Game programmer

CONTACT PERSONS

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ASSOCIATE IN APPLIED SCIENCE

Web Design and Development

WEB.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	CGR-123	Interactive Interface Design	3
CGR-104	Elements and Principles of Graphic Design	3	CGR-205	Graphics for Web	3
CGR-111	Computer Graphic Design I	3	CGR-214	Web Page Design II	3
CSI-191	Internet Tools and Techniques	3	CGR-231	Video Imaging Technology I	3
MTH-100	Algebraic Concepts	4	.....	Humanities General Education Elective	3
		16			15
Second Semester			Second Semester		
ENG-102	English Composition II	3	CGR-215	Web Multimedia	3
CGR-105	Podcasting	3	CGR-220	Web Development	3
CGR-112	Computer Graphic Design II	3	CGR-252	Portfolio Design	3
CGR-113	Web Page Design I	3	CSI-192	Practical Applications of Website Management	3
.....	Social Science General Education Elective	3	.....	Diversity General Education Elective	3
		15			15
			Total Minimum Credits		61

PROGRAM DESCRIPTION

The growth of the Internet has increased the demand for graphic designers with web capabilities. This degree will train students to have a competitive edge in this market. It will prepare students for jobs in web and interactive media design. It focuses on the design aspects of creating interactive web pages and on the artistic development of effective websites.

PROGRAM GOALS

- Students develop a strong foundation in graphic design with emphasis on Internet related programming.
- Students learn to create websites that are aesthetically pleasing and user friendly.
- In addition to graphic design courses, students take basic courses in programming and database management and graphic software, such as Photoshop and Flash.
- To provide students with a General Education foundation.
- To prepare students for employment.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will have the skills necessary to:

1. Produce high-quality, web enabled graphics.
2. Develop all types of graphic media including: web pages, Internet marketing material, advertising and instructional material.
3. Plan, design, implement, test and maintain effective interactive sites and animations.
4. Use industry-standard tools and languages for website and interactive media creation.
5. Create a professional portfolio of interactive and web design samples.

EMPLOYMENT OPPORTUNITIES

- Web designer
- Interactive media producer
- Web project coordinator
- Web animator

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ASSOCIATE IN SCIENCE

Management of Information Systems

MIS.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	ECO-101	Macroeconomics	3
ACC-104	Financial Accounting	3	CSC-214	Visual Basic II	3
CSC-101	Computer Literacy ¹ or		CIS-210	Information Systems Concepts ²	3
CIS-101	Personal Computer Applications or		LAW-101	Legal Environment/Business Law I	3
CIS-206	Advanced Computer Concepts and Applications	3	SPE-102	Public Speaking	3
MGT-101	Introduction to Business	3			15
MTH-100	Algebraic Concepts	4			
		16	Second Year/Second Semester		
First Year/Second Semester			ECO-102	Microeconomics	3
ENG-102	English Composition II	3	HIS-101	World Civilization I or	
ACC-105	Managerial Accounting	3	HIS-102	World Civilization II or	
CSC-111	Introduction to Programming	3	HIS-103	World Civilization III	3
CIS-237	Relational Database Concepts ²	3	CIS -231	System Analysis and Design ³	3
MTH-114	College Algebra	3	MKT-101	Principles of Marketing	3
		15	.....	Laboratory Science General Education Elective	4
					16
			Total Minimum Credits		62

¹CSC-101 is a pre-requisite for CIS-206.

² Only offered during the fall semester.

³ Only offered during the spring semester.

PROGRAM DESCRIPTION

The Associate in Science transfer program is designed to provide the first two years of a Bachelor of Science degree in Information Systems. This forward-thinking program offers a solid background in liberal arts and sciences as well as the skills and knowledge needed to design, create, manage, and effectively use modern information systems. The information systems curriculum has no single application focus. It is directed to the art and science of managing information in all application environments. Students learn how to determine information needs, design appropriate information systems, manage those systems, and measure the systems' performance. The emphasis is on the users of computers, and on building professional-level information systems skills.

PROGRAM GOALS

- To provide the students with the necessary foundation to transfer to a baccalaureate degree in the computer field.
- To qualify students for entry level employment in the field of computer hardware, programming, software applications in the business, education, and library science environment in both public and private industry
- To empower the students to design information systems solutions to improve the business environment.
- To provide the students with the business, accounting, programming, software and systems knowledge to operate effectively in a business computing environment.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- Upon completion of this program, the graduate will be able to:
1. Execute the fundamental skills of business, programming, system software and application software in a business computing environment.
 2. Apply analysis and design to implement system change in a business environment.
 3. Communicate effectively within an organization information systems solutions using both verbal and written communication.
 4. Work productively as team member as well as independently.
 5. Demonstrate professionalism and ethical behavior.
 6. Adapt to emerging technologies and new environments.

EMPLOYMENT OPPORTUNITIES

MIS graduates can find career opportunities wherever computers are used in business, industry, education, library, research and government. Here are just a few examples:

- Application software support
- Business application developer
- Business decision support specialist
- Chief Information Officer
- Computer support specialist
- Data warehousing/mining
- Database manager/administrator
- Help desk
- Human computer interaction specialist
- Internet/intranet manager
- IS/IT manager
- Management analyst
- Management consultant
- Operations research analyst
- Systems analyst

TRANSFER OPPORTUNITIES

Students in this program may transfer to many institutions including:

- Rowan University
- Rutgers University
- Temple University

CONTACT PERSONS

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Professor Melvin Howell
 (856) 227-7200, ext. 3105
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ASSOCIATE IN APPLIED SCIENCE

Computer Information Systems

CIS.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	ACC-105	Managerial Accounting	3
CSC-101	Computer Literacy	3	CIS-237	Relational Database Concepts ²	3
CSC-111	Introduction to Programming or		CST-103	Microcomputer Operating Systems I: Workstations	3
CSC-161	Introduction to Java	3	ECO-101	Macroeconomics	3
MGT-101	Introduction to Business	3	HPE.....	Health & Exercise Science Elective(s)	3
MTH.....	Mathematics General Education Elective ¹	3/4			16
		15/16	Second Semester		
Second Semester			CIS-181	Linux/UNIX Essentials	3
ENG-102	English Composition II	3	CIS-231	System Analysis And Design ³	3
ACC-104	Financial Accounting	3	ECO-102	Microeconomics	3
CIS-206	Advanced Computer Concepts & Applications	3	MGT-102	Introduction to Management or	
CSC-214	Visual Basic II ¹ or		FIN-212	Principles of Finance	3
CSC-262	Advanced Java ¹	3	.....	Diversity - Humanities General Education Elective	3
MTH.....	Mathematics General Education Elective ¹	3/4			15
		15/16	Total Minimum Credits		60

¹ The pre-requisites listed with course descriptions must be met for all programming and math courses. Students should read these before selecting Computer Programming and Mathematics courses.

² Only offered during the fall semester.

³ Only offered during the spring semester.

PROGRAM DESCRIPTION

This career degree is designed to prepare students to find employment using current computer applications in a business or organizational computing environment. Students will obtain an understanding of programming, operating systems and databases as well as basic knowledge of business fundamentals such as accounting, marketing, economics and management. This degree is designed to provide a solid foundation in the fundamental skills that are generally required to analyze organizational processes and design computer information system solutions, or to support and manage information systems. Courses within this program provide students with a solid base in problem solving skills.

PROGRAM GOALS

- To demonstrate the ability to work independently or with a group to systematically develop good programs.
- To utilize software applications and programming techniques to devise effective business and organizational computing environment solutions.
- To use critical thinking skills in problem solving to address organizational and technical problems.
- To prepare students to qualify for entry-level employment as a database administrator, system analyst, programmer, or technical support specialist.
- To instill in the students a commitment to a lifelong learning which fosters in them a desire to transfer credits to an affiliated baccalaureate program.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Analyze and design information systems and database applications solutions to achieve business/organizational goals.
 2. Implement a designed solution to solve business Information Technology (IT) problems using state-of-the-art programming techniques and applications software.
 3. Present technical solutions effectively.
 4. Demonstrate proficiency in common industry software applications to effectively communicate in a professional computing environment.
 5. Exhibit competency in the use of two operating systems.

EMPLOYMENT OPPORTUNITIES

CIS.AS graduates can find career opportunities wherever computers are used in business industry, education, library, research and government. Here are just a few examples:

- Computer marketing representative
- Computer programmer
- Computer service IS support associate
- Database administrator
- Help desk technician
- Information system specialist
- Systems analyst
- IS/IT manager
- Technical assistant
- Technical support
- Technical writer

CONTACT PERSONS

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Professor Melvin Howell
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Highlight

Many of the courses in this program can be applied to the MIS.AS degree which transfers to a 4-year institution.

ACADEMIC CERTIFICATE

Computer Information Systems

CPG.CT

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Semester		
ENG-101	English Composition I	3	ACC-105	Managerial Accounting	3
ACC-104	Financial Accounting	3	CIS-231	System Analysis & Design ²	3
CSC-101	Computer Literacy or		CIS-237	Relational Database Concepts ³	3
CSC-206	Advanced Computer Concepts & Applications ¹	3	CSC-214	Visual Basic II ⁴	3
CSC-111	Introduction to Programming	3	MTH.....	Mathematics General Education Elective ⁴	3/4
MGT-101	Introduction to Business	3			15/16
		15		Total Minimum Credits	30

¹ CSC-101 is a pre-requisite for CIS-206.

² Offered only in the Spring semester.

³ Offered only in the Fall semester.

⁴ Prerequisites listed with the course descriptions must be met for all programming languages and the mathematic elective.

PROGRAM DESCRIPTION

This certificate program develops software solutions to meet the growing demand for individuals skilled in the development and management of information systems. Students learn how to determine information needs, design appropriate information systems, manage those systems, and measure the systems' performance. It prepares students for careers in a rapidly changing technological world by training them to analyze business and organizational problems, challenges, and opportunities and to subsequently design, develop, implement and maintain computing solutions through the use of information and information technology.

PROGRAM GOALS

- To provide students with programming and software application skills for use in both information systems and business environment.
- To provide students with the software development skills required to solve information systems problems in a business or organizational computing environment.
- To equip students with the understanding of the principles of relational databases.
- To provide students with the option to apply their credits toward the CIS.AAS degree career program and/or the MIS.AS degree transfer program.
- To prepare students to develop software solutions for business and organizational computing environment.
- To prepare students for fundamental training to gain employment in technical fields.
- To provide students with General Education courses.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Perform fundamental skills of business, programming, and application software in a business/organizational computing environment.
 2. Analyze and design information systems and database solutions to an information system problem.
 3. Implement the designed solution to solve information system problems using programming techniques and application software.

EMPLOYMENT OPPORTUNITIES

- Computer marketing representative
- Computer operator
- Lab assistant
- Quality control specialist
- Research analyst
- Software tester
- System analyst

CONTACT PERSONS

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Highlight

Courses in this certificate can be applied to the degree CIS.AAS.

CERTIFICATE OF ACHIEVEMENT

SQL Analyst Certificate

SQL.CA

CODE	COURSE	CREDITS
First Year/First Semester		
CSC-171	Introductory Programming with Python	3
CIS-103	Database Management ¹	3
CIS-235	SQL Fundamentals I ¹	3
CIS-237	Relational Database Concepts ¹	3
		12
First Year/ Second Semester		
CIS-225	Project Management Essentials ²	3
CIS-236	SQL Fundamentals II ²	3
CIS-238	Database Security and Protection ²	3
CIS-239	Database Administration Principles ²	3
		12
	Total minimum credits	24

¹ Offered only in the fall semester.

² Offered only in the spring semester.

PROGRAM DESCRIPTION

The certificate program is designed for individuals who are looking to acquire the skill to perform in-depth queries on popular databases such as MS SQL Server, My SQL and Oracle to become an entry level database analyst, designer, developer and/or administrator. This field is in demand as it is essential to progress in the business environment. The SQL Analyst is the point person in industry for information when critical business decisions are to be made based on data as well as in daily business operations in the company.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Design and develop SQL for handling tasks such extracting information, trends, insights and metrics from data stored in the database.
2. Design, develop, create and run the queries and reports needed by end users or management teams.
3. Monitor, investigate, correct, and prevent data quality problems.
4. Create and manage a project using project management tools.
5. Write applications using Python.

PROGRAM GOALS

- To provide students with the opportunity to gain job skills in programming, database management, SQL and project management to work in the database environment using SQL.
- To acquire the technical skills required to write basic Transact- SQL queries

EMPLOYMENT OPPORTUNITIES

- Database analyst
- Database designer
- Database developer
- Database administrator
- SQL database programmer

CONTACT PERSONS

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Highlight

Successful completion of this certificate program prepares students to take the exam for a Microsoft MTA Certificate

CERTIFICATE OF ACHIEVEMENT

Linux/UNIX Administration**UNIX.CA**

CODE	COURSE	CREDITS
CIS-181	Linux/UNIX Essentials ¹	3
CIS-187	Linux/UNIX Administration I	3
CIS-284	Shell Programming under Linux/UNIX	3
CIS-285	Linux/UNIX Networking and Security	3
CIS-288	Linux/UNIX Administration II	3
CIS-289	Linux/UNIX Server Security	3
	Total Minimum Credits	18

¹ This course must be taken before all others.

Recommended Linux/UNIX courses may be taken in the same semester. The recommended groups are:

- CIS-181 Linux/UNIX Essentials
- CIS-284 Shell Programming Under Linux/UNIX, CIS-187 Linux/UNIX Administration I, CIS-285 Linux/UNIX Networking and Security
- CIS-288 Linux/UNIX Administration II and CIS-289 Linux/UNIX Server Security

PROGRAM DESCRIPTION

This three-semester certificate program is career-oriented and consists of six core courses using RedHat Linux that will provide the student with a general working knowledge of the Linux/UNIX Operating System and the skill to handle the software used by the system. The goal of this certificate program is to enhance the student's computer skills with a general, practical background in RedHat Linux/UNIX to become a Linux/UNIX Administrator.

PROGRAM GOALS

To equip the students to seek employment in junior systems administration, end user trainer, help desk support, research assistance, commercial data processing, scientific and high function graphics, network security, information technology management and Linux/UNIX engineering.

EMPLOYMENT OPPORTUNITIES

- Commercial data processing
- Database servers
- Engineering, scientific, and high function graphics
- Help desk support
- Junior systems administration

CONTACT PERSONS

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THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID**Recommendations**

Entering students should have strong computer skills gained in a related field, in a degree program, in course work, or through work-related experience.

ASSOCIATE IN ARTS

Computer Science

CSC.AA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	CSC-223	Computer Science II	4
CSC-121	Structured Programming (C++) ¹	4	MTH-129	Discrete Mathematics	4
HIS-111	Western Civilization I or		.....	Diversity General Education Elective	3
HIS-101	World Civilization I	3	.....	Laboratory Science General Education Elective	4
MTH-124	Precalculus Mathematics II or		.....	Language General Education Elective ³	3
MTH-125	Accelerated Precalculus or				18
MTH-140	Calculus I	4	Second Semester		
.....	Social Science General Education Elective	3	CSC-226	Programming Languages or	
		17	CSC-240	Computer Organization	3
Second Semester			SPE-102	Public Speaking	3
ENG-102	English Composition II	3	.....	Language General Education Elective ³	3
CSC-122	Computer Science I	4	.....	Humanities General Education Elective	3
HIS-112	Western Civilization II or		Total Minimum Credits		
HIS-102	World Civilization II or				62
HIS-103	World Civilization III	3			
MTH-150	Calculus II or				
MTH-111	Introduction to Statistics ²	3/4			
.....	Social Science General Education Elective	3			
		16/17			

¹ It is recommended that students with no prior programming experience take CSC-105 Fundamentals of Programming prior to taking CSC-121 Structured Programming.

² Students must complete MTH-140. MTH-111 only to be taken if MTH-140 has been completed.

³ Must take six credits in one language. *See individual languages under Course Descriptions for requisites on placement.

PROGRAM DESCRIPTION

The program is designed to match the first two years of a Bachelor of Art (B.A.) in computer science degree at a baccalaureate institution by providing a seamless transition to upper-division computer science coursework. The curriculum emphasizes the theoretical foundations of computing, data structures and algorithms, object-oriented software design and programming, computer architecture and the study of high-level language paradigms. Students practice analysis, design, implementation, and testing of software solutions. Students graduating from the program will be awarded an associate in arts degree.

PROGRAM GOALS

- To provide students with the ability to think critically and skillfully apply theoretical knowledge of computing to the discipline of computing.
- To develop her/his ability to work effectively as a member of a team; including reading, interpreting, and analyzing technical information, listening effectively to, communicating orally with, and writing clearly for a wide range of audiences.
- To provide students with the full complement of general education requirements that will prepare them for transfer into the upper division B.A. program in computer science.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Analyze, design, develop and test computer based applications using problem solving and analytical skills developed throughout the program.
 2. As part of a team, develop software applications that meet program requirements including the production of design and formal test plan documentation.
 3. Demonstrate social awareness and analyze the global impact of computing on individuals, organizations and society.

EMPLOYMENT OPPORTUNITIES

- Software manager
- Technical assistant
- Computer marketing representative

TRANSFER OPPORTUNITIES

Students in this program transfer to many institutions including:
 Rowan University
 Rutgers University
 Drexel University

CONTACT PERSONS

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- Professor William Taylor
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- Professor Anita M. Wright
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 email: awright@camdencc.edu

ASSOCIATE IN SCIENCE

Computer Science

CSC.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	CSC-223	Computer Science II	4
CSC-121	Structured Programming (C++)	4	MTH-129	Discrete Mathematics	4
HIS-101	World Civilization I	3	PHY-201	Physics III	4
MTH-124	Precalculus Mathematics II or		MTH-150	Calculus II or	
MTH-125	Accelerated Precalculus or		MTH-111	Introduction to Statistics	3/4
MTH-140	Calculus I	4			15/16
.....	Social Science General Education Elective	3	Second Semester		
		16/17	CSC-226	Programming Languages	3
Second Semester			CSC-240	Computer Organization	3
ENG-102	English Composition II	3	MTH-145	Linear Algebra	4
CSC-122	Computer Science I	4	PHY-202	Physics IV	4
HIS-102	World Civilization II or				14
HIS-103	World Civilization III	3	Total Minimum Credits		
MTH-140	Calculus I or				63
MTH-150	Calculus II	4			
.....	Social Science General Education Elective	3			
		17			

PROGRAM DESCRIPTION

The program is designed to match the first two years of a Bachelor in Science (B.S.) in computer science degree at a baccalaureate institution by providing a seamless transition to upper-division computer science coursework. The curriculum emphasizes the theoretical foundations of mathematics, computing, data structures and algorithms, object-oriented software design and programming, as well as computer architecture and the study of high-level language paradigms. Students practice analysis, design, implementation, and testing of software solutions. Students graduating from the program will be awarded an associate in science degree.

PROGRAM GOALS

- To provide students with the ability to reason mathematically and scientifically apply theoretical knowledge of computing and mathematics to the discipline of computer science.
- To develop her/his ability to work effectively as a member of a team; including reading, interpreting, and analyzing technical information, listening effectively to, communicating orally with, and writing clearly for a wide range of audiences.
- To prepare students to demonstrate proficiency in scientific and mathematical reasoning.
- To provide students with the full complement of general education requirements that will ready them for transfer into the upper division program in computer science.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Analyze, design, develop and test computer based applications using problem solving and analytical skills developed throughout the program.
 2. As part of a team, develop software applications that meet program requirements including the production of design and formal test plan documentation.
 3. Apply scientific and mathematical principles to study of computer science.

EMPLOYMENT OPPORTUNITIES

- Computer programmers
- Systems Analyst
- Software Manager

TRANSFER OPPORTUNITIES

Students in this program transfer to many institutions including:
 Rowan University
 Rutgers University
 Drexel University

CONTACT PERSONS

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ASSOCIATE IN APPLIED SCIENCE

Computer Systems Technology

CST.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	CST-201	Advanced Networking	3
CIS-181	Linux/UNIX Essentials	3	CIS-285	Linux/UNIX Networking and Security	3
CST-103	Microcomputer Operating Systems I: Workstations	3	EET-101	Electrical/Electronic Principles	3
MTH-123	Precalculus Mathematics I	4	CSC-171	Introductory Python Programming	3
HPE.....	Health and Exercise Science Elective	1	PHY-103	Physics I (For the non-science major) or	
		14	PHY-101	Physics I	4
Second Semester			Second Semester		
ENG-102	English Composition II	3	CST-109	Building, Upgrading, and Repairing Personal Computers	3
CIS-187	Linux/UNIX Administration I	3	CST-204	Computer and Network Security	3
CST-102	Introduction to Networking	3	EET-221	Digital Circuits	3
CST-106	Microcomputer Operating Systems II: Server Systems	3	CIM-115	Microcontroller Applications	3
MTH-124	Precalculus Mathematics II	4	.....	Diversity: Humanities General Education Elective	3
		16			15
				Total Minimum Credits	61

PROGRAM DESCRIPTION

The CST associate degree program combines training in the design, implementation, and maintenance of microcomputer hardware with operating systems and network systems management and administration. This career-oriented degree also offers basic electrical engineering technology courses along with a diverse elective bank of computer studies and internet courses. Included is a basic general education core and a cooperative education option.

PROGRAM GOALS

- To assure that students can demonstrate a comprehensive understanding of modern microcomputer operating systems, network architecture, computer hardware, architecture, subsystems, and computer and network security.
- To prepare students to solve basic network design and application problems using knowledge of common network architectures and network software.
- To provide students with a baseline understanding of electronic principles and digital electronics necessary to diagnose, troubleshoot, and repair computer and network hardware problems.
- To instill in the students a commitment to lifelong learning which fosters in them a desire to transfer credits to an affiliated baccalaureate program or to seek many of the various industry certifications.
- To prepare students to qualify for entry-level employment as a Microcomputer Technician, Systems Administrator, Network Manager, Technical Support Specialist, and related jobs in the computer support and networking fields.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Apply the principles of modern microcomputer operating systems, network architecture, hardware architecture, and subsystems to network, repair and manage operating systems.
 2. Solve basic network design and application problems using knowledge of common network architectures and network software.
 3. Utilize electronic principles and digital electronics necessary to diagnose, troubleshoot, and repair computer and network hardware problems.

EMPLOYMENT OPPORTUNITIES

- Computer service engineering technician
- Computer systems technician
- Network manager
- Technical control specialist

CONTACT PERSON

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 email: rdolan@camdencc.edu

Note

Transferability of credit depends on the decision of the evaluating institution.

ACADEMIC CERTIFICATE

Computer Systems Technology

CST.CT

CODE	COURSE	CREDITS
ENG-101	English Composition I	3
CST-102	Introduction to Networking	3
CST-103	Microcomputer Operating Systems I: Workstations	3
CST-106	Microcomputer Operating Systems II: Server Systems	3
CST-109	Building, Upgrading, and Repairing Personal Computers	3
CST-201	Advanced Networking	3
CST-204	Computer and Network Security	3
EET-101	Electrical and Electronic Principles	4
EET-221	Digital Circuits	3
.....	General Education Elective	3
.....	Computer Information Systems Elective or	
.....	Technical Elective or	
EGR-208	Co-op I: Engineering I	3/4
	Total Minimum Credits	34

PROGRAM DESCRIPTION

The Computer System Technology (CST) certificate combines training in the design, implementation and maintenance of microcomputer hardware with operating systems and network systems management and administration.

PROGRAM GOALS

- To prepare students to qualify for enhanced job opportunities which will utilize his/her update training in modern microcomputer and network hardware and operating systems.
- To prepare students to solve basic network design and application problems using knowledge of common network architectures and network software.
- To provide students with a baseline understanding of electronic principles and digital electronics necessary to diagnose, troubleshoot, and repair computer and network hardware problems.
- To qualify students for entry-level employment as a microcomputer technician, system administrator, network manager, computer technical support specialist, and related jobs in the computer support and networking fields.
- To prepare students to continue their studies toward the CST.AAS degree or seek many of the various industry certifications.
- To provide students with General Education courses.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Apply the principles of modern microcomputer operating systems, network architecture, hardware architecture, and subsystems to network, repair and manage operating systems.
2. Solve basic network design and application problems using knowledge of common network architectures and network software.
3. Utilize electronic principles and digital electronics necessary to diagnose, troubleshoot, and repair computer and network hardware problems.

EMPLOYMENT OPPORTUNITIES

- Computer service engineering technician
- Computer systems technician
- Network manager
- Technical control specialist

CONTACT PERSON

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Microsoft Office

MICROSOFT OFFICE SPECIALIST

Within this program students will become proficient in Microsoft Office products including Word, PowerPoint, Excel and Access. The level of expertise will afford students the opportunity to become a certified Microsoft Office Specialist (MOS).

This program includes one Microsoft Office Specialist Exam Voucher, which may be used for any one of the MOS exams (Word, PowerPoint, Excel or Access).

CE.CMS 034

Hours: 66

CEUs: 6.6

CTI

Information Technology

AUTOCAD LEVEL 1: INTRODUCTION TO 2D DESIGN IN AUTOCAD

This course provides a fundamental understanding of introduction to 2D design. Hands on exercises are used throughout the course to teach students the basic commands necessary for professional 2D drawing, design, and drafting.

Students will learn how to:

- Create lines
- Draw circles, rectangles, and use trim & extend
- Build a drawing using a reference frame
- Use a multiline text, text editing, dynamic text, and justification
- Dimension styles: linear dimension, editing, dimension text, and radial dimensions.

CE.CAD 001

Hours: 24

CEUs: 2.4

AUTOCAD LEVEL 2: ADVANCED 2D DESIGN IN AUTOCAD

This course teaches students tools and techniques for drawing, dimensioning, and printing 2D drawings. Content learned in level 1 will carry into this course.

Students will learn how to:

- Use multiline viewpoints and work with layout templates
- Use surveyor units in a design and investigate polylines and polyline editing
- Use editing with the context menu
- Use tools such as polar tracking, polar snapping and temporary tracking points
- Work with text styles
- Work with dimension styles and leader lines to annotate drawings

CE.CAD 002

Hours: 24

CEUs: 2.4

AUTOCAD LEVEL 3: 3D DESIGN IN AUTOCAD

This course provides a fundamental understanding of 3D Design for the advanced AutoCAD user. This course will cover creation of 3D models using wire frame, surface, and solid modeling techniques.

Students will learn how to:

- Use 3D workspace, 3D views, visual styles, 3D coordinates, and user coordinate system
- Create an architectural solids design
- Work with solids editing
- Create solids from 2D designs and extract 2D views from 3D solids

CE.CAD 003

Hours: 24

CEUs: 2.4

MICROSOFT CERTIFIED SOLUTIONS ASSOCIATE WINDOWS SERVER 2012 (MCSA)/CISCO CERTIFIED NETWORK ASSOCIATE ROUTING AND SWITCHING (CCNA)

This program is designed for administrators working in small to mid-size information services departments which require a wider skill set with both information technology and networking training. The MCSA Server Administrator certification will help you develop and demonstrate your knowledge and skills in working with Server 2012. The CCNA certification validates the ability to install, configure, operate, and troubleshoot medium-size routed and switched networks.

Courses Included:

Microsoft Certified Solutions Associate Windows Server 2012
Cisco Certified Network Associate

Certifications: MCSA, CCNA

Prerequisite: General networking knowledge with one year recent experience or equivalent certifications.

CE.BUN 011

Hours: 300

CEUs: 30.0

MICROSOFT CERTIFIED SOLUTIONS ASSOCIATE (MCSA: WINDOWS SERVER 2012)

Earn the Microsoft Certified Solutions Associate (MCSA: Windows Server 2012) certification to demonstrate your leadership and problem-solving skills in working with Windows Server 2012.

The MCSA Server 2012 certification will help you develop and demonstrate your knowledge and skills in working with Server 2012 and prepare you for several different roles including:

- Network Administrators
- Systems Administrators
- Technical Support Engineers
- Systems Analysts
- Network Analysts
- Technical Consultants

You will prepare to sit for the following exams:

- Installing and Configuring Windows Server 2012: Exam:70-410
- Administering Windows Server 2012: Exam: 70-411
- Configuring Advanced Windows Server 2012: Exam: 70-412

Prerequisite: General networking knowledge with one year recent experience or equivalent certifications.

To ensure the highest quality of education, CCC students are provided extensive hands-on experience, quality textbooks and simulated testing software.

CE.CST 074

Hours: 180

CEUs: 18.0

CTI

CISCO CERTIFIED NETWORK ASSOCIATE (CCNA) ROUTING AND SWITCHING CERTIFICATION

The Cisco CCNA network associate certification validates the ability to install, configure, operate, and troubleshoot medium-size routed and switched networks, including implementation and verification of connections to remote sites in a WAN. This new curriculum includes basic mitigation of security threats, introduction to wireless networking concepts and terminology, and performance-based skills.

Certifications:

One exam 200-120 Cisco Certified Network Associate (CCNA) or two exams 100-101 ICND1 and 200-101 ICND2.

Prerequisite: Students need to have basic computer knowledge that includes the ability to use a mouse, edit and save files. File copying, disk copying, moving and renaming directories in a Windows environment and experience in Network+ are essential.

CE.CST 067

Hours: 120

CEUs: 12.0

COMPUTER TECHNICIAN SUPPORT SPECIALIST

The Computer Technician Support Specialist Program is designed to give students the skills and credentials to enter the Technology Support workforce. Using hands-on technical training, the students will be introduced to practical troubleshooting methods in addition to work related responsibilities. CompTIA A+ confirms a technician's ability to perform tasks such as installation, configuration, diagnosing, preventive maintenance and networking. CompTIA Network+ confirms technician's ability to describe the features and functions of networking components and to install, configure and troubleshoot basic networking hardware, protocols and services.

The Security+ certification covers the most important foundational principles for securing a network and managing risk.

Courses included: CompTIA A+, Net+, and Security+

Certifications: A+, Network+, and Security+

Prerequisite: None, but preferred would be basic computer navigation and comprehension of basic terms.

CE.BUN 002

Hours: 345

CEUs: 34.5

A+ CERTIFICATION BY COMPTIA

This CompTIA A+ Program prepares you for certification by providing instruction on system configuration, installation, upgrades, diagnosis, repair, preventive maintenance, and safety of vendor neutral PC Hardware.

- CompTIA A+ Operating Systems Certification
- CompTIA A+ Hardware Certification

CE.CST 012

Hours: 140

CEUs: 14.0

NETWORK+ CERTIFICATION BY COMPTIA

Network technicians need to be certified in order to advance in the industry. The marketplace is so starved for qualified personnel; a well-trained certified technician can easily find work in the industry. Whether you're looking to upgrade your skills, advance your career, or start a career in networking then the Network+ certification course is for you.

- CompTIA NETWORK+ Certification

CE.CST 008

Hours: 80

CEUs: 8.0

SECURITY+

Security+ covers the most important foundational principles for securing a network and managing risk. Access control, identity management and cryptography are important topics as well as selection of appropriate mitigation and deterrent techniques to address network attacks and vulnerabilities. Security concerns associated with cloud computing, BYOD and SCADA are addressed.

CE.CMS 033

Hours: 125

CEUs: 12.5

CAREER & TECHNICAL INSTITUTE OF CAMDEN COUNTY COLLEGE

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Elementary/Secondary Education

EDU.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	EDU-101	Historical Trends in American Education	3
HIS-111	Western Civilization I or		PSY-103	Educational Psychology	3
HIS-112	Western Civilization II or		.....	Laboratory Science General Education Elective	4
HIS-101	World Civilization I or		HPE-102	Health and Wellness or	
HIS-102	World Civilization II or		HPE-104	Health and Personal Living	3
HIS-103	World Civilization III	3	.....	Elective ³	3
PSY-101	Basic Psychology	3			16
SPE-102	Public Speaking	3	Second Semester		
MTH.....	Mathematics General Education Elective ¹	3/4	SOC-101	Introduction to Sociology	3
		15/16	GEO-101	Cultural Geography	3
Second Semester			ENG-121	Introduction to Literature ⁴ or	
ENG-102	English Composition II	3	ENG-281	American Literature I ⁴ or	
EDU-100	Teaching: An Introduction to the Profession	3	ENG-282	American Literature II ⁴ or	
HIS-121	United States History I or		ENG-271	World Literature I ⁴ or	
HIS-122	United States History II	3	ENG-272	World Literature II ⁴	3
PSY-105	Child Psychology or		.....	Elective ³	3
PSY-106	Psychology of Adolescence ²	3	.....	Elective ³ or	
ART-101	Art Appreciation or		.....	Science General Education Elective ³	3/4
ART-111	Art History I or				15/16
MUS-101	Music Appreciation I or		Total Minimum Credits		
THE-121	Theatre Appreciation	3			64
MTH.....	Mathematics General Education Elective ¹	3/4			
		18/19			

¹ Elementary education students should enroll in MTH-105, Math Systems I: Structures, and MTH-107, Math for Liberal Arts.

² A student who intends to teach at the elementary level should take Child Psychology. A student who intends to teach at the secondary level should take Psychology of Adolescence.

³ The electives are chosen from those courses which articulate to the student's transfer institution's education program. Students are strongly recommended to check with their curriculum advisor.

⁴ A student who intends to choose the History coordinate at Rowan University OR the Education majors at Rutgers University should enroll in World Literature in lieu of either Introduction to Literature or American Literature. A student who enrolls in the American Studies coordinate at Rowan University should enroll in American Literature. Any student who intends to teach math or science should follow the math or science curriculum at Camden County College and not the Elementary/Secondary Education curriculum.

PROGRAM DESCRIPTION

This program is essentially the first two years of a baccalaureate degree in elementary and secondary education. The curriculum is specific in order to facilitate transfer of Camden County College credits. The curriculum is based on New Jersey state teacher certification requirements and teacher transferability to education programs in the region.

PROGRAM GOALS

- To prepare students to compare and contrast the major types of curriculum organizations.
- To prepare students to outline stages of child development and describe how each affects the learning process.
- To prepare students to discuss current research and approaches to educational issues, such as classroom management, diversity and the education of students with special needs.
- To prepare students for classroom instruction by requiring over 15 hours of field experience.
- To prepare students to articulate the components of their personal philosophy of education.
- To provide students with a General Education foundation.
- To prepare students for transfer to a four-year institution.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Articulate an understanding of today's students in a diverse society and the societal influence on education.
 2. Explain the characteristics of the teaching profession including the processes of teaching and learning.
 3. Discuss the historical development of current educational issues.
 4. Articulate the components of their personal philosophy of education.

CONTACT PERSON

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Program Information

Secondary Education students interested in a math, biology, chemistry or physics co-major should follow the curriculum for the Liberal Arts and Science: Secondary Education in Mathematics Option, the Liberal Arts and Science Biology Option: Secondary Education in Biology Option and not the Elementary/Secondary Education curriculum.

Early Childhood Education

EED.AA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	EDU-102	Human Exceptionality	3
EDU-100	Teaching: An Introduction to the Profession	3	EED-205	Creative Arts	3
EED-110	Early Childhood Curriculum	3	HIS-121	United States History I or	
MTH-105	Mathematical Systems I-Structures	3	HIS-122	United States History II	3
SOC-101	Introduction to Sociology	3	GEO-101	Cultural Geography	3
		15	SPE-102	Public Speaking	3
			.....	Language General Education Elective	3
Second Semester					18
ENG-102	English Composition II	3	Second Semester		
EED-115	Child Development and Learning	3	EDU-101	Historical Trends in American Education	3
BIO....	Biology Laboratory Science Elective ¹ or		ENG-271	World Literature I	3
MTH....	Mathematics General Education Elective ²	3/4	.....	Humanities General Education Elective	3
HIS-111	Western Civilization I or		.....	Language General Education Elective	3
HIS-101	World Civilization I	3	.....	Laboratory Science General Education Elective	4
.....	Technology General Elective	3			16
		15/16		Total Minimum Credits	64

¹ Biology Laboratory Science Elective is recommended for students transferring to Rowan University.

² Mathematics General Education Elective is recommended for students transferring to Rutgers University.

PROGRAM DESCRIPTION

The Early Childhood Education, Associate in Arts degree is designed to prepare students for transfer to a four-year college to achieve a baccalaureate degree and certification in early childhood education. This program will provide the philosophical and historical foundation of early childhood education while introducing students to curriculum planning within the confines of New Jersey State Standards. The developmental focus of this program enables the student to understand the specific learning needs of children ages birth through eight years old.

PROGRAM GOALS

- To prepare students to transfer to four-year colleges.
- To prepare students to design developmentally appropriate early childhood curriculum and lesson plans.
- To provide students with an understanding of the historical trends in education.
- To provide students with prominent development theorists.
- To introduce students to New Jersey State Standards for Early Childhood Education and NAEYC (National Association for the Education of Young Children).
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
- Outline the stages of child development within the learning process and discuss the role of prominent early childhood developmental theorists within this process.
 - Discuss current and historical trends in early childhood education.
 - Articulate both New Jersey State Standards for Early Childhood Education and NAEYC Standards for effective early learning environments.
 - Design developmentally appropriate early childhood curriculum and lesson plans.

CONTACT PERSON

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Liberal Arts and Science: Secondary Education in Mathematics Option SEM.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	MTH-145	Linear Algebra	4
BIO-111	Biology I – Science or		MTH-210	Calculus III	4
CHM-111	Chemistry I Science	4	PHY-201	Physics III	4
HIS-101	World Civilizations I	3	PSY-103	Educational Psychology	3
MTH-140	Calculus I	4			15
		14	Second Semester		
Second Semester			EDU-101	Historical Trends in American Education	3
ENG-102	English Composition II	3	MTH-220	Differential Equations	4
BIO-112	Biology II – Science or		PHY-202	Physics IV	4
CHM-112	Chemistry II Science	4	.....	Social Science General Education Elective or	
MTH-129	Discrete Mathematics	4	.....	Humanities General Education Elective ¹	3
MTH-150	Calculus II	4			14
PSY-101	Basic Psychology	3	Total Minimum Credits		
		18			61

¹ Select electives based on requirements of Transfer Institution

PROGRAM DESCRIPTION

This transfer program is designed for students wishing to pursue a career in mathematics secondary education. Currently, students wishing to teach high school mathematics are required to complete a baccalaureate degree in their subject area and a degree or certificate in secondary education. This curriculum provides students with the necessary math, science, and general education requirements to transfer into both programs offered by their desired transfer institution.

PROGRAM GOALS

- To provide students with a foundation in general education.
- To provide a concentration of coursework appropriate for mathematics and secondary education.
- To ensure transferability of coursework to a baccalaureate program in mathematics and secondary education.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Utilize computational and analytical skills in conjunction with mathematical concepts to solve abstract mathematics problems and applied problems in the fields of science, business, engineering, and technology.
 2. Use technological tools, such as graphing calculators or computers, to analyze and solve mathematical and applied problems.
 3. Follow a logical, symbolic argument and apply the concept of proof, as it relates to mathematical results.
 4. Explain current educational issues in view of their historical context.

GRADUATION REQUIREMENTS

Secondary Education in Mathematics majors must earn a grade of C or better in all mathematics courses to be eligible for graduation.

TRANSFER OPPORTUNITIES

Students in this program transfer to many institutions including:
 Rowan University
 Rutgers University
 Fairleigh Dickinson University
 Stockton University
 Drexel University
 Temple University

EMPLOYMENT OPPORTUNITIES

- Public high schools
- Private high school

CONTACT PERSON

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Preschool Teacher Education

PTE.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	EDU-102	Human Exceptionality	3
EDU-100	Teaching: An Introduction to the Profession	3	EED-205	Creative Arts: Early Childhood Learner	3
EED-105	Children's Health, Nutrition and Safety	3	EED-210	Math/Science Concepts for the Preschool Child	3
EED-110	Early Childhood Curriculum	3	MTH....	Mathematics General Education Elective	3/4
MTH.....	Mathematics General Education Elective	3/4	.....	Diversity General Education Elective	3
		15/16			15/16
First Year/Second Semester			Second Year /Second Semester		
ENG-102	English Composition II	3	EED-220	Behavior Management	3
EED-115	Child Development and Learning	3	EED-230	Applied Preschool Experience	3
EED-120	Language Arts for the Preschool Child	3	EDU-101	Historical Trends in American Education	3
SOC-101	Introduction to Sociology	3	.....	Science General Education Elective	3/4
SPE-102	Public Speaking	3	HIS.....	History General Education Elective	3
		15			15/16
			Total Minimum Credits		60

PROGRAM DESCRIPTION

The Preschool Teacher Education Applied Associate of Science Degree (PTE.AAS) prepares students to work with young children in a variety of settings including home day care, childcare settings, Head Start programs and private preschools. This program emphasizes the developmental needs of young children from birth to the eighth year of life. Students will learn how to design and apply developmentally appropriate activities for children ages birth to eight years through fundamental course work along with an internship in an early childhood settings.

PROGRAM GOALS

- To prepare students to apply for the role of an assistant teacher or head teacher in a daycare or non-public school.
- To prepare students to design developmentally appropriate early childhood curriculum and lesson plans.
- To provide students with an understanding of the historical trends in education.
- To provide students with the knowledge of prominent developmental theorists.
- To introduce students to NJ State Standards for Early Childhood Education and NAEYC.
- To provide students with a General Education foundation.
- To prepare students for employment.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
- Design developmentally appropriate early childhood curriculum and plans in five subject areas.
 - Compare and contrast early childhood development theorists such as Piaget, Vygotsky, Gardner and Erikson.
 - Identify the essentials necessary to promote a safe and healthy environment for children.
 - Apply course work to an early childhood field experience.

CONTACT PERSONS

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Teacher Education

CTI

NEW PATHWAYS TO TEACHING

NPTNJ is a partnership between New Jersey City University and many of the New Jersey Community Colleges. New Pathways to Teaching in New Jersey offers a statewide alternate route teacher preparation program designed to provide candidates with the skills and strategies necessary to become excellent, successful teachers. Candidates take NPTNJ coursework at local NJ Community Colleges either on campus or as a hybrid program. The program provides a process for individuals who already hold a bachelor's degree (or higher) to become licensed teachers without having to complete a traditional teacher training program. The NPTNJ program is regulated and approved by the N.J. Department of Education (DOE).

The requirements are as follows:

- College transcripts indicating a Bachelor's Degree
- The Praxis II test
- The Core Academic Skills test
- GPA 3.0

CE.ALT 006 – CE.ALT 010

Hours: 400

CEU's: 40.0

CERTIFIED SUBSTITUTE TEACHER

Camden County College's Faculty Development Institute in cooperation with the school districts in Camden County offers a one-stop training seminar to prepare and certify substitute teachers as well as to offer a refresher in-service program for substitute teachers currently employed by local school districts. Topics will include successful classroom management techniques, cultivating positive first impressions, rapport with students, articulating clear lesson goals, objectives and procedures, making efficient use of instructional time, etc. Students must have a minimum of 60 college credits and successfully undergo a criminal background check to qualify as a substitute teacher. All paperwork will be completed during the seminar. A certificate of completion will be awarded at the end of the course.

CE.SUB 001

CAREER & TECHNICAL INSTITUTE OF CAMDEN COUNTY COLLEGE

856-874-6004
tradetraining@camdencc.edu
www.camdencc.edu/ce

Engineering Science

EGR.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	MTH-145	Linear Algebra	4
CAD-101	Computer Aided Engineering Graphics	4	MTH-210	Calculus III	4
CHM-111	Chemistry I - Science	4	CSC-121	Structured Programming (C++)	4
MTH-140	Calculus I	4	EGR-201	Statics ¹	3
PHY-201	Physics III	4	.....	Social Science General Education Elective ²	3
		19			18
Second Semester			Second Semester		
ENG-102	English Composition II	3	MTH-220	Differential Equations	4
CHM-112	Chemistry II - Science	4	EGR-211	Engineering Circuit Analysis	3
MTH-150	Calculus II	4	EGR-202	Dynamics ¹	3
PHY-202	Physics IV	4	.....	Humanities General Education Elective	3
EGR-101	Introduction to Engineering	2	.....	Diversity - Humanities General Education Elective	3
		17			16
				Total Minimum Credits	70

¹ Students planning to major in Chemical Engineering should take Organic Chemistry I & II in lieu of Statics and Dynamics.

² Microeconomics (ECO-102) is recommended.

PROGRAM DESCRIPTION

Engineering uses the physical sciences and mathematics to design and develop products and systems. It uses advanced techniques to find solutions to technical problems and other complex issues facing society. This program represents the first two years of a baccalaureate engineering program. Students must transfer to a college of engineering, specializing in a specific discipline.

PROGRAM GOALS

- To prepare students to use a multi-disciplinary set of core theories from mathematics and physical sciences and apply them to solve problems in higher-level courses in a college of engineering.
- To instruct students on how to utilize computer-assisted engineering software to solve specific engineering problems.
- To instruct students in the skills and scientific theories needed to prepare oral and written presentations that meet the standards of business and industry.
- To instill in the students a commitment to lifelong learning which fosters a desire to transfer credits to a baccalaureate engineering science program and obtain professional licensure.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Utilize advanced mathematics, including Calculus, to solve problems in physical and applied sciences related to engineering.
 2. Work in teams to successfully analyze and propose alternate strategies to solve problems in systems, processes or products.
 3. Utilize specialized computer programs to improve productivity in different engineering disciplines.
 4. Compare and contrast different engineering disciplines.
 5. Apply the scientific method of inquiry to analyze problems and draw conclusions from data.

SPECIAL ADMISSION REQUIREMENTS

Students entering this program should have had above-average achievement in high school science and mathematics and should have taken one year of high school physics, chemistry, pre-calculus and English.

To begin this program, students must have had three years of academic mathematics, including pre-calculus.

TRANSFER TIP

Students transferring to Drexel should take Biology I - Science, BIO-111 in addition to courses within the program.

EMPLOYMENT OPPORTUNITIES

- Design engineer
- Insurance adjuster
- Production engineer
- Laboratory supervisor
- Research and development assistant
- Sales and technical support

CONTACT PERSONS

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Highlights

Camden County College has specific articulation agreements with the engineering science programs at several colleges and universities in the area. The program successfully transfers to most engineering colleges throughout the country.

Engineering Technology: Electrical-Electronic Engineering

EET.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	EET-201	Electrical Circuits	3
EET-101	Electrical/Electronic Principles	4	EET-221	Digital Circuits	3
CIM-101	Machine Shop Practices	3	CSC-111	Introduction to Programming or	
MTH-125	Accelerated Precalculus ¹ or		CSC-121	Structured Programming (C++)	3/4
MTH-140	Calculus I ²	4	PHY-102	Physics II or	
.....	Social Science General Education Elective ³	3	PHY-202	Physics IV	4
		17	.....	Technical Elective ⁴	3/4
Second Semester			Second Semester		
ENG-102	English Composition II	3	EET-212	Electronics II	3
CAD-101	Computer Aided Engineering Graphics	4	EET-213	Electronic Communications	3
EET-211	Electronics I	3	EET-251	Electronic Project or	
PHY-101	Physics I or		EGR-208	Co-op I: Engineering	3
PHY-201	Physics III	4	MTH-132	Statistics for Technology or	
.....	Diversity - Humanities General Education Elective	3	MTH-150	Calculus II ²	4
		17	HPE...	Health & Exercise Science Elective	1
					14
					16/17/18
Total Minimum Credits					64

¹ The Precalculus Mathematics (MTH-123) & Precalculus Math II (MTH-124) series of course may be substituted for Accelerated Precalculus (MTH-125).

² All students transferring to NJIT, Temple, Drexel and Thomas Edison must take the Calculus I, II track.

³ Economics (ECO-102) is recommended.

⁴ Courses in physical sciences, high technology curricula (CADD, CIM, CST), mathematics, and computer programming will fulfill this elective.

PROGRAM DESCRIPTION

The program is designed to prepare students to work in engineering environments to construct, test, and maintain electronic devices and systems. The program uses current state-of-the-art electronic industrial test equipment and procedures.

PROGRAM GOALS

- To assure that students possess the ability to integrate analog and digital discrete and integrated circuits to develop an electronic system or process or propose alternate strategies to solve electrical/electronic circuit problems.
- To equip students to use productivity and computerized circuit simulation software to analyze experimental data from AC and DC circuits.
- To prepare students to, either singly, or in teams, develop written and oral presentations of a theory, concept or analysis of a complex electronic-related problem or electronic project.
- To prepare students to seek employment as a technician or junior engineer, using industrial test and measurement equipment to evaluate and trouble-shoot the operation of electronic circuits or systems.
- To instill in the students a commitment to lifelong learning which fosters in them a desire to transfer credits to a baccalaureate program in electrical/electronic engineering technology.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Integrate, test and analyze analog and digital components and circuits in an electronic product, system or process.
 2. Analyze alternate strategies to solve electrical/electronic circuit problems.
 3. Use productivity and computerized circuit simulation software to analyze experimental data from analog and digital circuits.
 4. Write and orally present theory, concept or analysis of an electronic-related problem or electronic project.

SPECIAL PROGRAM REQUIREMENT

Students should have an adequate background in algebra and trigonometry.

EMPLOYMENT OPPORTUNITIES

- Junior engineer
- Field service engineer
- Lab technician
- Quality control specialist
- Production technician
- Technical salesperson

CONTACT PERSON

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Highlights

This program maintains articulation with the following baccalaureate institutions offering degrees in engineering technology: New Jersey Institute of Technology, Temple University, Thomas Edison College, and Drexel University.

Engineering Technology: Electromechanical Engineering

EME.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	EET-221	Digital Circuits	3
CIM-101	Machine Shop Practices	3	EET-241	Robotics	3
EET-101	Electrical/Electronic Principles	4	CIM-211	PLC Programming	4
MTH-125	Accelerated Precalculus ¹ or		PHY-102	Physics II or	
MTH-140	Calculus I ²	4	PHY-202	Physics IV	4
.....	Social Science General Education Elective ³	3	CSC-111	Introduction to Programming or	
		17	CSC-121	Structured Programming (C++)	3/4
					17/18
Second Semester			Second Semester		
ENG-102	English Composition II	3	MET-233	Project Design or	
CAD-101	Computer Aided Engineering Graphics	4	EGR-208	Co-op I: Engineering	3
EET-211	Electronics I	3	CIM-231	Motors, Controllers and Sensors	3
PHY-101	Physics I or		MTH-132	Statistics for Technology or	
PHY-201	Physics III	4	MTH-150	Calculus II ²	4
.....	Diversity - Humanities General Education Elective	3	.....	Technical Elective ⁴	3/4
		17			13/14
					64
			Total Minimum Credits		64

¹ The Precalculus Mathematics (MTH-123) & Precalculus Math II (MTH-124) series of course may be substituted for Accelerated Precalculus (MTH-125).

² All students transferring to NJIT, Temple, Drexel and Thomas Edison must take the Calculus I, II track.

³ Economics (ECO-102) is recommended.

⁴ Courses in physical sciences, high technology curricula (CADD, CIM, CST), mathematics, and computer programming will fulfill this elective.

PROGRAM DESCRIPTION

The program prepares graduates to work in an engineering environment and to assist with the design, development, testing, programming, installation, and maintenance of electro-mechanical systems.

PROGRAM GOALS

- To assure that students can explain the impact an electronic control system has on a mechanical device, process, or system.
- To foster the ability to work in teams or singly to successfully analyze and propose alternate strategies to solve problems in electromechanical systems and develop written and oral presentations.
- To prepare students to seek employment as a technician or junior engineer, using industrial test and measurement equipment to evaluate and trouble-shoot the operation of an electromechanical machine or system.
- To instill in the students a commitment to lifelong learning which fosters in them a desire to transfer credits to a baccalaureate program in electro-mechanical engineering technology.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Integrate electronic control of a mechanical system or process.
2. Analyze and solve electro-mechanical system problems.
3. Use productivity and computerized circuit simulation software to analyze experimental data from electro-mechanical systems.
4. Write and orally present theory, concept or analysis of a complex electro-mechanical system problem or electronic project.

SPECIAL PROGRAM REQUIREMENT

Students should have an adequate background in algebra and trigonometry.

EMPLOYMENT OPPORTUNITIES

- Junior engineer
- Field service engineer
- Lab technician
- Quality control specialist
- Production technician
- Technical salesperson

CONTACT PERSONS

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Highlights

This program transfers to New Jersey Institute of Technology, Temple University, Thomas Edison College, and Drexel University.

Engineering Technology: Mechanical Engineering

MET.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	CIM-115	Microcontroller Applications or	
CAD-101	Computer Aided Engineering Graphics	4	CSC-121	Structured Programming	3/4
CIM-101	Machine Shop Practices	3	MET-221	Quality Control	2
MTH-125	Accelerated Precalculus ¹ or		MET-236	Mechanics of Materials	3
MTH-140	Calculus I ²	4	CIM-211	PLC Programming	4
PHY-101	Physics I or		.....	Social Science General Education Elective ³	3
PHY-201	Physics III	4			15/16
		18	Second Semester		
Second Semester			MTH-132	Statistics for Technology or	
ENG-102	English Composition II	3	MTH-150	Calculus II ²	4
EET-101	Electrical/Electronic Principles	4	MET-237	Manufacturing Methods	3
MET-228	Statistics for Technologists	3	MET-233	Project Design or	
PHY-102	Physics II or		EGR-208	Co-op I: Engineering I	3
PHY-202	Physics IV	4	MET-242	Design of Machine Elements	3
		14	.....	Diversity Humanities General Education Elective	3
					16
			Total Minimum Credits		63

1 The Precalculus Mathematics (MTH-123) & Precalculus Math II (MTH-124) series of course may be substituted for Accelerated Precalculus (MTH-125).

2 Students transferring to Temple, Drexel, NJIT or Thomas Edison State College must take the Calculus I, II track.

3 Microeconomics (ECO-102) is recommended

PROGRAM DESCRIPTION

The program produces students capable of design analysis and testing of mechanical systems. It uses prevailing industrial procedures to test current mechanical equipment used in industry.

PROGRAM GOALS

- To assure the students gain the ability to analyze, compare and contrast the physical and chemical properties of different materials with particular emphasis on conditions for appropriate usage in machines and structures.
- To foster the willingness and ability to work in teams to successfully analyze and propose alternate strategies to solve problems in mechanical processes or systems.
- To prepare students to develop a written and oral presentation of a theory, concept or analysis of a complex mechanical system or product.
- To prepare students to qualify for entry-level employment as a technician or junior engineer, using industrial test and measurement equipment to evaluate and trouble-shoot the operation of a machine, mechanical processes or structure.
- To instill in the students a commitment to lifelong learning which fosters in them a desire to transfer credits to a baccalaureate program in mechanical engineering technology.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Analyze, compare and contrast the physical and chemical properties of different materials with particular emphasis on conditions for appropriate usage in machines and structures.
 2. Analyze the effectiveness of a quality control process with emphasis on continuous quality improvement.
 3. Propose strategies to solve mechanical process or systems problems.
 4. Write and orally present theory, concept or analysis of a complex mechanical project.

SPECIAL PROGRAM REQUIREMENT

Students should have an adequate background in algebra and trigonometry.

EMPLOYMENT OPPORTUNITIES

- Junior engineer
- Machine and equipment tester
- Production estimator
- Production technician
- System planner

CONTACT PERSONS

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Highlights

This program transfers to baccalaureate programs in engineering technology at New Jersey Institute of Technology, Temple University, Thomas Edison State College, and Drexel University.

CADD: Computer Aided Drafting & Design CAD.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	CAD-201	CADD Applications: MicroStation	3
CAD-101	Computer Aided Engineering Graphics	4	MTH-125	Accelerated Precalculus ¹ or	
CIM-101	Machine Shop Practices	3	MTH-140	Calculus I	4
CST-103	Microcomputer Operating Systems I: Workstations	3	PHY-103	Physics I for Non-Science Majors or	
EGR-103	Technical Drawing	3	PHY-101	Physics I or	
		16	PHY-201	Physics III	4
Second Semester			.....	Diversity - Humanities General Education Elective	3
ENG-102	English Composition II	3	HPE.....	Health & Exercise Science Elective	1
CAD-102	Advanced Computer Aided Engineering Graphics	3			15
CAD-107	Parametric Design: AutoDesk Inventor	3	Second Semester		
CST-102	Introduction to Networking	3	CAD-202	Advanced CADD Project or	
CST-106	Microcomputer Operating Systems II: Server Systems or		EGR-208	Co-op I: Engineering	3
CIM-221	CNC Programming and CAM	3/4	CAD-205	Architectural CADD Using Revit	3
HPE.....	Health & Exercise Science Elective	1	CAD-206	Solids Modeling: SolidWorks	3
		16/17	MTH-132	Statistics for Technology or	
			MTH-150	Calculus II	4
			.....	Social Science General Education Elective	3
					16
					63
				Total Minimum Credits	

¹ The Precalculus Mathematics I (MTH-123) & Precalculus Mathematics II (MTH-124) series of courses may be substituted for Accelerated Precalculus (MTH-125).

PROGRAM DESCRIPTION

The Computer Aided Drafting and Design (CADD) associate degree program is a lab-intensive, hands-on approach to training in the fields of engineering graphics and computer based drafting and design. This career-oriented major includes instruction on the use of a number of the most popular industry-standard graphics and drafting software applications. The program has a basic general education core along with introductory manufacturing and computer courses. A cooperative education option is also available.

PROGRAM GOALS

- To provide students with the ability to propose, develop, complete and articulate professional Computer Aided Drafting (CAD) presentations based on their designs.
- To equip students with a working knowledge of the modern computer platforms upon which CAD software is mounted.
- To assure students can employ and demonstrate effective written communication skills.
- To prepare students to qualify for entry-level employment in any of the disciplines of computer aided drafting such as architectural, mechanical and electrical design or any related field such as space planning, solids modeling and civil site preparation.
- To instill a spirit of lifelong learning which encourages students to transfer to a baccalaureate program in engineering technology.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Solve basic and complex drafting and design application problems using industry standard 2-dimensional and 3-dimensional software and feature-based parametric design software.
 2. Apply the fundamentals of computer aided drafting and design disciplines such as architectural, mechanical and electrical engineering.
 3. Utilize industry standard microcomputer CADD software and the hardware, operating systems and peripherals used to facilitate them.
 4. Create free-hand sketches, engineering notes and scaled drawings using American National Standards (ANSI) and/or International Standards Organization (ISO) specifications.

EMPLOYMENT OPPORTUNITIES

- CADD operator
- CADD technician
- Computer drafts person
- Design drafter
- Drafting detailer

CONTACT PERSONS

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Highlights

This program prepares students for a variety of high-paying careers.

Computer Aided Architectural Drafting and Design

CAR.CA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			First Year/Second Semester		
CAD-101	Computer Aided Engineering Graphics	4	CAD-202	Advanced CADD Project	3
EGR-103	Technical Drawing	3	CAD-205	Architectural CADD Using Revit	3
		7			6
			Total Minimum Credits		13

PROGRAM DESCRIPTION

Computer Aided Architectural Drafting and Design involves the 2D and 3D drafting and modeling of architectural and building structures and systems in accordance with national and international drafting standards. Both computer-assisted and manual drafting techniques will be explored. Students will explore building/zoning codes, graphical information systems (GIS), and Building Information Modeling (BIM). The student will learn to create computerized architectural models plus visualization and 3D walk-throughs. This program is particularly well suited to those students who wish to work with the construction professionals who produce residential and commercial architectural structures. Program completers can work on civil engineering projects including roads, parks, dams, bridges, waste water treatment facilities, etc. Software packages include Autodesk's AutoCAD and Revit. Additionally, the CAR.CA certificate is a career ladder program and all program credits can be applied toward completion of the CAD. AAS degree.

PROGRAM GOALS

The goal of the Computer Aided Architectural Drafting and Design program is to prepare the student for employment in the architectural and related fields:

- Students will learn to prepare architectural drawings of structures and equipment systems derived from layouts and sketches through drafting assignments and projects,
- Students will be able to design a building and structure and its components in 3D, annotate the model with 2D drafting elements, and access building information from the building model's database using BIM software,
- Students will transform initial designs using computer aided drafting (CAD) into working architectural drawings adhering to the American Standards Institute (ANSI) and American Institute of Architects (AIA) drafting standards.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. The graduate will be able to utilize fundamental and advanced two-dimensional and three-dimensional CAD to produce architectural drawings and renderings.
2. The graduate will have generated a personal portfolio of industry standard documents utilizing a variety of computer drafting applications.
3. The graduate will also be proficient in manual, hand drafting practices and techniques.
4. The graduate will be able to develop complete plans to meet the needs of the (AEC) Architecture, Engineering and Construction industries and explain mechanical, electrical and plumbing building systems.
5. The graduate will have created 3-D parametric building models and related content using BIM software and use it to extract embedded information to analyze and document building characteristics.
6. The graduate will be able to develop plans and profiles, section views, sub division map, grading plans with accurate and correct interpretation of survey data utilizing survey instruments.
7. The graduate will be able to collect, manage, and process field data in support of geospatial mapping activities.
8. The graduate will be able to apply quantity takeoffs and calculate earthwork in civil engineering and architectural projects.

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Computer Aided Mechanical Drafting and Design

CME.CA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			First Year/Second Semester		
CAD-101	Computer Aided Engineering Graphics	4	CAD-102	Advanced Computer Aided Engineering Graphics	3
CIM-101	Machine Shop Practices	3	CAD-107	Parametric Design: AutoDesk Inventor	3
EGR-103	Technical Drawing	3	CAD-206	Solids Modeling: Solid Works	3
		10			9
				Total Minimum Credits	19

<p>PROGRAM DESCRIPTION</p> <p>Computer Aided Mechanical Drafting and Design involves the 2D and 3D drafting and modeling of mechanical systems and components in accordance with national and international drafting standards. Students will explore 3D solid modeling, mechanism animation, finite element analysis, and the creation of 2D and 3D schematics of machinery, equipment, and industrial systems. Software packages include Autodesk's AutoCAD, SolidWorks, and Autodesk Inventor. Students could also gain experience with our 3D printers and our CNC machines. Additionally, the CME.CA certificate is a career ladder program and all the program credits can be applied toward completion of the CAD.AAS degree.</p> <p>PROGRAM GOALS</p> <p>The goal of the Computer Aided Mechanical Drafting and Design program is to prepare the student for employment in the mechanical drafting and related fields by developing the following skills:</p> <ul style="list-style-type: none"> • Students will prepare mechanical drawings mechanisms, machine parts, and mechanical systems through drafting assignments and projects, • Students will design and draft 2D and 3D mechanical components using both manual and computer assisted drafting methods, • Students will learn to properly annotate their drawings while adhering to the American Standards Institute (ANSI), Geometric Dimensioning and Tolerancing (GD&T), and American Society of Mechanical Engineers (ASME) drafting standards, • Students will employ finite element analysis, 3D printing, and CNC machining for their creations using additive and non-additive and subtractive manufacturing methods. 	<p>PROGRAM STUDENT LEARNING OUTCOMES</p> <p>At the end of the program, the graduate will be able to:</p> <ol style="list-style-type: none"> 1. The graduate will be able to utilize fundamental and advanced two-dimensional and three-dimensional CAD to produce architectural drawings and renderings. 2. The graduate will have generated a personal portfolio of industry standard documents utilizing a variety of computer drafting applications. 3. The graduate will also be proficient in manual, hand drafting practices and techniques. 4. The graduate will be skilled to create parametrically driven 3D computer models of mechanical components and assemblies using a solid modelling program such as SolidWorks and utilize such programs to conduct Finite Element Analyses of mechanical components. 5. The graduate will be able to explain additive and subtractive manufacturing processes. 6. The graduate will be equipped to develop mechanical detail and assembly drawings per ANSI and ASME standards that satisfy the requirements of various manufacturing industries. 7. The graduate will become skilled in blueprint reading, problem-solving and drafting effort reduction techniques, and methods for customizing drafting. 	<p>CONTACT PERSON</p> <p>Dr. Melvin L. Roberts, Coordinator (856) 227-7200, ext. 4942 email: mroberts@camdencc.edu</p>
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Technical Studies

TES.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	SPE-102	Public Speaking or	
CSC-101	Computer Literacy	3	HSR-105	Group Dynamics	3
MTH....	Mathematics General Education Elective (4 credits)	4	.....	Technical Studies Credit ¹	4
.....	Technical Studies Credit ¹	4	.....	Social Science General Education Elective	3
.....	Technical Concentration ²	3	.....	Technical Concentration ²	3
		17			13
Second Semester			Second Semester		
ENG-102	English Composition II	3	.....	Technical Studies	4
.....	Laboratory Science General Education Elective ³	4	.....	Technical Concentration ²	6
.....	Technical Studies Credit ¹	4	EGR-208	Co-op I: Engineering or	
.....	Technical Concentration ²	3	.....	Apprentice Co-op	3/4
		14	.....	Diversity: Humanities General Education Elective	3
					16/17
				Total Minimum Credits	60

¹ Three to 20 Technical Studies credits may be earned for selected union apprenticeships after review by faculty assessor of related program.

** Individuals without sufficient technical training experience must select up to 5 sequential courses in one of the Concentrations listed below to satisfy the Technical Studies credit requirements.

² Select from one of the following concentrations (Courses must be approved by appropriate faculty advisor): Automotive Technology; Business; Computer Aided Drafting and Design; Computer Information Systems; Computer Integrated Manufacturing; Computer Science; Computer Systems Technology; Engineering Technology (EET, MET, EME); Photonics

³ Recommend Physics for Non-Science majors (PHY-103)

** All Technical Elective courses should be selected with assistance from a faculty advisor

PROGRAM DESCRIPTION

The Technical Studies degree program recognizes that learning can occur in a variety of forums and that this learning may be equivalent to college-level instruction. After assessment of the certified union apprenticeship, corporate, industrial or military training program, the faculty assessor will determine the number of technical credits to be awarded. The remaining program includes the College's general education requirements, advanced technical credits and career related electives (technical concentration).

PROGRAM GOALS

- To assure that students can explain modern design and production concepts used in a specific engineering technology discipline: electrical, mechanical or manufacturing.
- To foster the willingness and ability work in teams to successfully analyze and propose alternate strategies to solve problems in systems, processes or products.
- To equip students to provide value-added service to their existing organization as a technician or junior engineer in areas such as continuous quality improvement and systems analysis.
- To prepare students to develop a written and oral presentation of a theory, concept or analysis of complex system, process or product project. Students shall focus on their individual specialties, electrical, manufacturing, electromechanical or mechanical in the analysis.
- To provide students with a General Education foundation.
- To prepare students for employment.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. To effectively communicate technical concepts in both written and oral formats.
2. Identify resources, obtain and critically evaluate information.
3. Model ethical professional behaviors.
4. Develop an oral presentation or a theory, concept or analysis of a complex system process or product project. Students in apprenticeship programs shall focus on their individual disciplines.

PROGRAM INFORMATION

This program is available only to union apprentices, corporate, industrial and military employers who wish to validate their training programs and provide additional learning experiences for their employees.

SPECIAL ADMISSIONS REQUIREMENTS

The certified union apprenticeship must be reviewed and approved by a faculty assessor to validate the goals, objectives, depth and scope of the training.

EMPLOYMENT OPPORTUNITIES

The Technical Studies degree program provides skill and knowledge enhancement and career mobility for corporate, industrial and military employees.

1. Electrical and Mechanical Systems Maintenance
2. Construction Supervisor
3. Cost estimator
4. Energy Systems Supervisor
5. Corrections Officer
6. Healthcare Administrator

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Computer Aided Manufacturing Technician CAM.CA

CODE	COURSE	CREDITS
First Year/First Semester		
CIM-101	Machine Shop Practices ¹ or	
.....	Technical Studies Credit ²	3
CIM-221	CNC Programming and CAM	4
CIM-222	Advanced CNC Programming and CAM	3
CAD-206	Solid Modeling: SolidWorks	3
	Total Minimum Credits	13

¹ Contact program coordinator to determine technical experience.

² Technical Studies credits may be earned for corporate, industrial, or military training programs after review by faculty assessor.

PROGRAM DESCRIPTION

The Computer Aided Manufacturing (CAM) Certificate of Achievement consists of a grouping of technical courses geared toward the rapid completion of a core set of Computer Numerical Control (CNC) and CAM skills. The student will acquire the CNC set-up and programming competencies that are required to support the advanced metalworking industry. The student will complete several hands-on, machining programming exercises using our authentic, industrial-sized CNC mills and lathes. Current laboratory equipment includes Bridgeport VMCs and HAAS slant bed lathes in addition to our new HAAS office lathe and mill small capacity CNC machines. The current programming environment includes the latest versions of MasterCAM and SolidWorks applications.

PROGRAM GOALS

- Qualify for entry-level employment in a computer numerical control and computer aided manufacturing facility.
- Diagnose project situations requiring special machine considerations.
- Perform quality control functions to ensure part compliance with required specifications.
- Develop solid models and computer graphics files from blueprints for machine programming.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Operate various machine tools both manually and computer controlled.
2. Create computer aided graphics files that represent the part being manufactured.
3. Set up the CNC machines for automatic operation.
4. Manually program machine tool path without the help of a CAM system.

EMPLOYMENT OPPORTUNITIES

- Machinist
- CAM operator
- MasterCAM programmer
- MasterCAM operator
- Machine operator
- Machine setup person
- Mill operator
- Lathe operator
- CNC programmer
- CNC operator
- CNC setup person
- SolidWorks draftsman

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THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

Computer Integrated Manufacturing Engineering Technology

CIM.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	CIM-211	PLC Programming	4
CAD-101	Computer Aided Engineering Graphics	4	CIM-221	CNC Programming & CAM	4
CIM-101	Machine Shop Practices	3	EET-241	Robotics	3
MTH-125	Accelerated Precalculus ¹	4	MET-221	Quality Control	2
		14	PHY-102	Physics II	4
Second Semester			Second Semester		
ENG-102	English Composition II	3	CIM-231	Motors, Controllers and Sensors	3
CST-103	Microcomputer Operating Systems I: Workstation	3	CIM-251	CIM Integration Project or	
EET-101	Electrical/Electronic Principles	4	EGR-208	Co-op I: Engineering	3
MTH-132	Statistics for Technology	4	CIM-212	Advanced PLC Programming or	
PHY-101	Physics I	4	CIM-222	Advanced CNC & CAM	3
		18	CIM-115	Microcontroller Applications or	
			CSC-111	Introduction to Programming or	
			CSC-121	Structured Programming (C++)	3/4
			.....	Diversity - Social Science General Education Elective or	
			.....	Diversity - Humanities General Education Elective	3
			HPE.....	Health & Exercise Science Elective	1
					16/17
				Total Minimum Credits	65

¹The Pre-Calculus Mathematics I (MTH-123) & Precalculus Mathematics II (MTH-124) series of courses may be substituted for Accelerated Precalculus (MTH-125).

PROGRAM DESCRIPTION

Computer Integrated Manufacturing Engineering Technology (CIMET) technicians control, design, maintain, upgrade and operate modern, computer-controlled production equipment and facilities equipment used to manufacture many of the world's goods. The CIMET program equips its graduates with an in-depth multi-disciplinary education in mathematics, physics, engineering technology, both manual and Computer Numerical Controller (CNC) machining, manufacturing processes and methods, industrial electronics, Programmable Logic Controller (PLC) programming and factory automation, as well as a broad education in computer studies, business and liberal arts.

Our highly skilled graduates go on to provide hands-on engineering and managerial service in state-of-the-art high volume and/or high-precision manufacturing enterprises located in southern New Jersey, the Delaware Valley and beyond. Our graduates are currently employed in diverse industries including pharmaceutical and chemical, automotive, packaging, metalworking, aluminum extrusion, mechanical aerospace componentry, bottling and even private consulting companies. Our graduates specialize in either PLC or CNC programming. This program contains the mecatronics technical electives concentration of classes.

PROGRAM GOALS

- To provide students with the skills required to author and troubleshoot Computer Numerically Control and Programmable Logic Controller programs.
- To assure that students gain a working familiarity in the operating principles, selection and installation of common sensors, detectors and electro-mechanical drive elements used in industrial automation settings.

- To prepare students to use their multidisciplinary skill set to troubleshoot and creatively modify manufacturing processes and systems.
- To equip students with the ability to analyze, synthesize and control manufacturing operations and processes using statistical methods.
- To prepare students to qualify for immediate employment or transfer to a baccalaureate program in manufacturing or mechanical engineering technology.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Author and troubleshoot Computer Numerically Control (CNC) and Programmable Logic Controller (PLC), and microcontroller programs.
 2. Specify and install those sensors, detectors and electro-mechanical drive elements that are commonly found in industrial automation settings.
 3. Use manual machine shop tooling including manual lathes, mills and drill presses to fabricate and inspect mechanical parts and assemblies to a tolerance of +/- .003 inches.
 4. Read and explain basic pneumatic and hydraulic symbols and schematics.
 5. Analyze, synthesize, modify and troubleshoot manufacturing processes in the field.
 6. Apply mathematical Statistical Process Control techniques to measure and analyze variations in manufacturing processes.

EMPLOYMENT OPPORTUNITIES

- CNC programmer
- Factory automation specialist
- Manufacturing engineering technician
- PLC programmer
- Robot technician
- Technical salesperson

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Highlights

Nearly a third of all computer and electronic product manufacturing employment is found in Camden and Burlington counties.

Source: NJLWD, Quarterly Census of Employment and Wages Prepared by: New Jersey Department of Labor and Workforce Development December 2012

Computer Integrated Manufacturing Engineering Technology: Precision Machining Option **PMT.AAS**

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
CAD-101	Computer Aided Engineering Graphics	4	CIM-219	CNC Machinist	3
CIM-101	Machine Shop Practices	3	CST-103	Microcomputer Operating Systems I: Workstation	3
CSC-101	Computer Literacy	3	MET-221	Quality Control	2
ENG-101	English Composition I	3	MTH-124	Pre-calculus Mathematics II	4
MTH-100	Algebraic Concepts	4			12
		17	Second Year/Second Semester		
First Year/Second Semester			CAD-206	Solid modeling: Solid Works	3
CIM-202	Conventional Machinist	3	CIM-222	Advanced CNC & CAM	3
CIM-221	CNC Programming & CAM	4	CIM-255	Precision Machining Project or	
ENG-102	English Composition II	3	EGR-208	Co-op I: Engineering	3
MTH-123	Pre-Calculus Mathematics I	4	.....	Diversity - Social Science General Education Elective or	
HPE.....	Health & Exercise Science Elective	1	.....	Diversity - Humanities General Education Elective	3
		15	HPE.....	Health & Exercise Science Elective	1
			PHY-101	Physics I ¹	4
					17
			Total Minimum Credits		61

¹Physics I does not transfer to a four-year institution without taking Physics II.

PROGRAM DESCRIPTION

The Precision Machining Option of the Computer Integrated Manufacturing Engineering Technology Program (PMT) trains individuals to become machinists. The program is an engineering technology program that concentrates on the skills and concepts needed by today's machine shops. Successful graduates should be ready to take on careers which include titles such as machinist (conventional and computer numerically controlled), tool and die maker, and mold maker. The curriculum includes computer aided design and computer aided manufacturing software packages that support the industry. The program follows the NIMs Level One Machinist skills and students should be able to take and pass the NIMs requirements to become a NIMs Level one machinist by graduation.

PROGRAM GOALS

- To provide students with conventional machining competencies.
- To provide students with Computer Numerical Control competencies.
- To familiarize students with Computer Aided Drafting packages that support the industry.
- To qualify students for immediate entry to the workforce.
- To equip students with the ability to analyze and solve manufacturing and fabrication problems.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- Upon completion of this program, the student will be able to:
1. Operate conventional machine shop equipment including mills, lathes, drill presses, grinding equipment, and various other supporting tools.
 2. Create size specific mechanical parts in specified tolerances.
 3. Understand how to "read" part prints, which is the schematic of the mechanical world.
 4. Be proficient in the utilization of Computer Numerical Controlled equipment. This includes the operation of and the setup of Computer Numerical Controlled mills and lathes.
 5. Author and troubleshoot Computer Numerical Control programs.
 6. Create and manipulate Computer Aided Drafting generated print files and solid models.

EMPLOYMENT OPPORTUNITIES

Successful graduates should be ready to take on careers which include titles such as machinist (conventional and computer numerically controlled), tool and die maker, mold maker, SolidWorks drafts person, and Mastercam operator.

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Precision Machining Technology

PMT.CA

CODE	COURSE	CREDITS
First Year/First Semester		
CIM-101	Machine Shop Practice	3
CIM-221	CNC Programming and CAM	4
Second Semester/Spring		
CIM-202	Conventional Machinist	3
CIM-219	CNC Machinist	3
	Total Minimum Credits	13

PROGRAM DESCRIPTION

The Precision Machining Technology Certificate is a series of courses with a concentration in the skill sets required to be a machinist. The four course series is designed to follow the National Institute for Metalworking Skills Machinist Level I credential. Conventional and CNC mill and lathe concepts are covered. Students who successfully complete this certificate program should be successful in a manufacturing environment.

PROGRAM GOALS

- Qualify for entry-level employment in machine shops.
- Diagnose and troubleshoot problems with manufacturing processes.
- Develop manufacturing methods for part creation.
- Facilitate process improvement methodologies on the factory floor.
- Research and develop new methods/processes for improving future manufacturing performance.

PROGRAM STUDENT LEARNING OUTCOMES

Upon completion of this program, the student will be able to:

1. Demonstrate the ability to run conventional machine shop equipment.
2. Demonstrate the ability to measure with precision.
3. Understand the dangers involved with working around industrial equipment and be able to do it safely.
4. Demonstrate proficiency in reading and interpreting part prints.
5. Demonstrate the ability to read and interpret basic GDT Y14.5 symbols.

EMPLOYMENT OPPORTUNITIES

Upon successful completion of the Precision Machining Technology Certificate, students should be qualified to begin careers including: Conventional machinist (also referred to as Manual Machinist), CNC Machinist, Machinist Helper, Manufacturing Technician, Fabrication Technician, entry level Tool and Die maker, Mechanical Designer, supervisory positions, quality control positions, CNC Programmer.

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**THIS PROGRAM IS NOT APPROVED
FOR FINANCIAL AID**

Industrial Controls: Programmable Logic Controller

PLC.CA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester					
CIM-211	PLC Programming	4			
		4			
Second Semester					
CIM-212	Advanced PLC Programming	3			
CIM-231	Motors, Controllers & Sensors	3			
		6			
	Total Minimum Credits	10			

PROGRAM DESCRIPTION

The Industrial Controls: Programmable Logic Controller (PLC) Certificate of Achievement is a course of study designed to quickly train new learners or incumbent electrical mechanics in the skills necessary to troubleshoot and program the PLCs used in batch and/or discrete automation. The PLC is a real-time computer running a specialized Operating System which is programmed using relay ladder logic language. PLCs are used to control high-speed factory automation equipment and manufacturing processes, electrical switchgear, industrial robots, motors, pumps and valves.

The PLC certificate includes courses that will investigate both discrete and analog sensors, pneumatics directional control valves, AC and DC motors, and single-phase and three-phase power. The PLC used will be the Allen Bradley SLC 500 processor running RSLogix software. No special skills are required, however prior industrial electrical experience will prove beneficial to the student.

PROGRAM GOALS

- Qualify students for entry-level employment in an automated manufacturing or process enterprise.
- Diagnose and troubleshoot problems with automated manufacturing production equipment.
- Develop manufacturing methods, processes and systems.
- Facilitate process improvement methodologies in a production environment.
- Research and develop new methods/processes for improving future manufacturing performance.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Specify, populate, and install a Programmable Logic Controller and its input and output modules.
 2. Develop and troubleshoot Relay Ladder Logic (RLL) program code for Allen-Bradley (AB) SLC processors which use discrete and analog I/O modules to monitor, control, and record the states of common digital devices found in typical industrial and manufacturing environments.
 3. Identify, work with, and explain the operating principles of those inductive elements found in typical industrial settings including AC, DC, stepping, and universal motors; electromechanical and solid state relays; solenoids; and transformers.
 4. Read and interpret single phase and three phase motor name plates and wiring diagrams and ISO 1219 pneumatic symbols.
 5. Describe and discuss the differences and similarities between capacitive, inductive, and photoelectric proximity detectors.

EMPLOYMENT OPPORTUNITIES

Computer Integrated Manufacturing Engineering Technology (CIMET) graduates who specialized in PLC programming are currently employed in the process, packaging, labeling, food & beverage, pharmaceutical, waste water, systems integration, power generation, cosmetics, metal extrusion, compact disc pressing, and chemical industries functioning as:

- PLC programmer
- Jr. PLC programmer
- System designer
- Manufacturing technician
- Electrical mechanic
- Process controls technician
- Manufacturing support technician
- Systems integrator

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THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

Photonics: Laser/Electro-Optic Technology PHT.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
LFO-101	Introduction to Photonics & Photonic Safety	4	LFO-241	Principles of Fiber Optics	3
MTH-125	Accelerated Precalculus ¹	4	EET-211	Electronics I	3
ENG-101	English Composition I	3	CSC-121	Structured Programming or	
PHY-101	Physics I ¹	4	CIM-115	Microcontroller Applications	4/3
		15	.....	Social Science General Education Elective ²	3
Second Semester			Second Semester		
LFO-211	Geometric Optics	4	LFO-235	Photonics Applications	3
LFO-231	Photonics Measurements	3	MTH-132	Statistics for Technology ¹	4
PHY-102	Physics II ¹	4	EET-212	Electronics II	3
EET-101	Electrical/Electronic Principles	4	LFO-295	Photonics Project or	
ENG-102	English Composition II	3	EGR-208	Engineering Co-op	3
		18	.....	Diversity: Humanities General Education Elective	3
			Total Minimum Credits		
			61		

¹ Students interested in transferring to Rutgers or Rowan should take Calculus I & II, Physics III and IV track.

² Microeconomics is recommended: ECO-102

PROGRAM DESCRIPTION

Photonics: laser/electro-optic technicians work in companies that manufacture, service, and use optical and laser equipment. Such companies span almost every type of business, from industrial applications to military defense, from telecommunication to health and medicine. Responsibilities of laser/electro-optic technicians include design, production, marketing, testing, maintenance, service, calibration, and troubleshooting of systems that rely on optical and laser components.

PROGRAM GOALS

- To instruct students on how to assemble and align optical components to create optical and electro-optic systems.
- To assure students can operate and maintain different medical, industrial, military, and scientific lasers and laser systems.
- To ground the students in the proper use of industrial test and measurement equipment to evaluate, calibrate, test, and troubleshoot lasers and accompanying equipment.
- To qualify students for entry-level employment as a technician or junior engineer in the laser and optics-related areas.
- To prepare students to transfer to a baccalaureate program in Physicoptical, electrical engineering or material science.
- To prepare students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Apply knowledge of potential hazards associated with the use of lasers and laser systems and corresponding safety measures and controls.
 2. Assemble and align optical components to create optical and electro-optic systems.
 3. Operate, calibrate and maintain different medical, industrial, military and scientific lasers and laser systems.
 4. Use industrial test and measurement equipment to evaluate, calibrate, test and troubleshoot lasers and accompanying equipment.
 5. Explain the basic principles of light generation, detection and propagation through basic optical components.

SPECIAL PROGRAM REQUIREMENT

Two years of high school math, including intermediate algebra.

EMPLOYMENT OPPORTUNITIES

- Telecommunications and video services
- Health-care facilities
- Manufacturing facilities using lasers and optics
- Private laser/optics servicing companies
- Research/government laboratories
- Technical sales and customer relations

CONTACT PERSON

Dr. Lawrence M. Chatman, Coordinator
 (856) 227-7200, ext. 4523
 email: lchatman@camdencc.edu

Highlights

Information technology and telecommunications, health care and sciences, optics manufacturing, national defense, and other areas relying heavily on laser/electro-optics are currently experiencing tremendous growth in research, development, and career and job opportunities.

Photonics: Principles of Laser/Electro-Optics PHT.CA

CODE	COURSE	CREDITS
First Year/First Semester		
LFO-101	Introduction to Photonics & Photonic Safety ¹	4
First Year/Second Semester		
LFO-211	Geometric Optics	4
LFO-231	Photonics Measurements	3
Total Minimum Credits		11

¹ A mathematics co-requisite of MTH-125, Accelerated PreCalculus is required.

PROGRAM DESCRIPTION

Photonic: laser/electro-optic technicians work in companies that manufacture, service, and use optical and laser equipment. Such companies span almost every type of business, from industrial applications to military defense, from telecommunication to health and medicine. Responsibilities of laser/electro-optic technicians include design, production, marketing, testing, maintenance, service, calibration, and troubleshooting of systems that rely on optical and laser components.

PROGRAM GOALS

- Optically align laser system
- Perform operational measurements of laser systems
- Distinguish applications for different laser systems
- Qualify students for entry level employment in an electro-optic facility
- Provide a pathway to the Photonics Associate Degree program (PHT.AAS)

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Specify the safety protocols necessary to operate a laser
 2. Demonstrate refraction/reflection of light rays
 3. Describe different lights sources and their application
 4. Measure interference effects of light waves

SPECIAL PROGRAM REQUIREMENT

Two years of high school math, including intermediate algebra.

EMPLOYMENT OPPORTUNITIES

- Telecommunications and video services
- Health-care facilities
- Manufacturing facilities using lasers and optics
- Private laser/optics servicing companies
- Research/government laboratories
- Technical sales and customer relations

CONTACT PERSON

Dr. Lawrence M. Chatman, Coordinator
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Highlights

Information technology and telecommunications, health care and sciences, optics manufacturing, national defense, and other areas relying heavily on laser/electro-optics are currently experiencing tremendous growth in research, development, and career and job opportunities.

Returning Technical/Trade Professionals CTI

APPRENTICESHIP PROGRAMS

Apprentice courses are designed to aid apprentices both in theory and practical experiences to meet the requirements of US and NJ Departments of Labor. Emphasis is placed on those areas not normally covered in routine job performance. The student's sponsoring employer provides the actual field (on-the-job) experience. Apprentices are required to take a minimum of 144 hours of classroom instruction per year and 2000 hours of on-the-job training per year for the length of the apprenticeship.

Camden County College Career & Technical Institute is proud to offer apprenticeship training opportunities in the areas of: Electrical, Plumbing, and HVAC. The apprentice program is a partnership between industry and educational institutions. In order to qualify for enrollment as an apprentice, it is necessary for the student to be employed in their chosen field. Apprentices MUST be registered with the US Department of Labor, Office of Apprenticeship, and with the NJ Department of Labor and Workforce Development.

All registered apprentices who successfully complete the on-the-job and related classroom training requirements are eligible to receive a Certificate of Completion from the U.S. Department of Labor, Office of Apprenticeship.

Registered apprentices, who successfully complete the apprenticeship career related classroom instruction, are eligible to earn up to 30 college credits toward Camden County College's 60-credit Associates Degree in Technical Studies.

Enrolling in adult education courses at the college DOES NOT automatically register students as apprentices. Employers (sponsors) and employees (appren-

tices) must contact the Apprenticeship Coordinator at Camden County College to facilitate the registration process.

Earn an associate degree and complete your apprenticeship at the same time with NJ PLACE. Through NJ PLACE, you can get college credit for your apprenticeship training, giving you a head start toward your degree. You'll get immediate marketable skills in your occupation and the long-term career possibilities that a college degree opens up for your future. For more information please visit: <http://www.njplace.com/> 15.6 CEUs

For information regarding the Apprenticeship application process, scheduling, pricing, and registration, call (856) 874-6004 or tradetraining@camdencc.edu

TECHNICAL STUDIES

The Technical Studies degree program recognizes that learning can occur in a variety of forums and that this learning may be equivalent to college-level instruction. After assessment of the certified union apprenticeship, corporate, industrial or military training program, the faculty assessor will determine the number of technical credits to be awarded. The remaining program includes the College's general education requirements, advanced technical credits and career related electives (technical concentration).

Dr. Lawrence M. Chatman, Coordinator (856) 227-7200, ext. 4523
lchatman@camdencc.edu

Technology—Construction

CTI

CARPENTRY TECHNOLOGY

This is an introductory level course which covers all phases of residential carpentry. Students will be provided with an orientation of industry tools & materials, and will review wood, lumber and engineered lumber products. Proper and safe use of fasteners, hand tools, portable power tools and stationary power tools will be taught throughout the course. Instruction on architectural plans and building layout will be included. Various types of concrete form construction are taught, as well as print drawing/reading, building location (surveying), estimation time/material, frame construction, roofing/siding, drywall, interior rough work, and finish carpentry. Review of scaffolding, ladders, and horses is included as well.

Now includes OSHA 10 training.

Admission Requirements: There are no special requirements for admission to this program. However, a basic comprehension of reading and math is expected.

Location: Camden County Technical School, Sicklerville Campus

CE.TRD-020

Hours: 382

CEUs: 38.2

WELDING TECHNOLOGY

Students will learn state of the art techniques in ARC welding (electric), TIG welding (Tungsten Inert Gas Welding), and MIG welding (Metallic Inert Gas Welding). These disciplines require the use of steel, stainless steel everdure, aluminum and pipe. Students will proceed through each project at their own rate of speed and receive individualized instruction regarding safety, quality and general welding techniques.

Students will learn:

- Oxyfuel gas cutting
- Shielded Metal ARC Welding (SMAW)
- Gas Tungsten ARC Welding (GTAW)
- Gas Metal ARC Welding (GMAW)
- Plasma ARC Cutting (PAC)
- Print drawing/reading
- Shop maintenance

This program is approved by the American Welding Society and adheres to all standards set forth by the AWS SENSE program. Upon successful completion, students have the ability to be certified by the AWS as a SENSE level 1 Entry Welder or SENSE level 2 Advanced Welder and become part of the AWS SENSE Welder database.

Upon completion of this program, students may find employment in all areas of the welding industry. In addition, they will be prepared to sit for various welding related certifications as required by their individual employers.

Now includes OSHA 10 training.

Admission Requirements: There are no special requirements for admission to this program. However a basic comprehension of reading and math is expected.

Location: Camden County Technical School, Sicklerville Campus

CE.TRD-130

Hours: 564

CEUs: 56.4

HEATING, VENTILATION, AIR-CONDITIONING

Students will prepare for the EPA approved section 608 certification exams. Section 608 Technician Certification is required by the EPA in order to purchase CFC or HCFC containing refrigerants. Students will thoroughly study required material related to the theory of operations; including: safety, leak detection, heating systems (gas, oil, electric), combustion testing, heat pumps, refrigerant recovery and disposal, the national fuel code, oil heat servicing, hot water heat servicing, and heat pump servicing. Hands-on-training will reinforce material covered in theory classes. Computer based training is also provided for self-paced study opportunities.

Before completion of the program, and in addition to the Section 608 EPA certification test, students will also take industry competency exams (I.C.E.) supported by NATE (North American Technician Excellence). These exams measure industry-approved standards of basic competency for entry-level technicians. Upon completion of the course, students will be certified and prepared to enter the trade with confidence in their understanding of HVAC concepts.

Students will learn:

- Safety-Tools and Equipment- Shop Practices
- Theory of Heat
- Refrigeration / EPA/CFC Certification
- Control Systems
- Electric Motors
- Air Conditioning (Heating- Cooling- Humidification)
- Heat Pumps
- Selected Interpretation of the National Fuel Code

Successful graduates may find entry level careers in service, installation, maintenance and sales in HVAC/R. Students may seek employment in both residential and commercial markets. Students may also choose to enter the specialized field of climate control pertaining to research, medical and pharmaceutical.

Now includes OSHA10 training.

Admission Requirements: A high school diploma or GED is not required but is recommended. A basic comprehension of reading and math is expected.

Location: Camden County Technical School, Sicklerville Campus

CE.TRD-090

Hours: 572

CEUs: 57.2

ELECTRICAL RESIDENTIAL

The core of the Electric Program at the Camden County College Career & Technical Institute is the National Electrical Code unifying the subject matter of the residential, commercial, industrial wiring and motor control. The program emphasizes a hands-on approach, so that initially the student is taught the use of tools and safety, prior to practical and theoretical classroom instruction. In addition to the above, instruction in AC/DC theory, electrical math, and electrical power and energy are offered. More advanced students will be exposed to introductory commercial electrical systems.

Due to the evolving nature of the electrical industry graduates are presented with unlimited employment opportunities in the electrical trades particularly residential and commercial. Electrical maintenance, construction, small appliance repair and electronics also offer opportunities.

Now includes OSHA 10 training.

Admission Requirements: A high school diploma, GED, or equivalent is required. A basic comprehension of reading is expected and intermediate math skills are preferred.

Location: Camden County Technical School, Sicklerville Campus

CE.TRD-080

Hours: 372

CEUs: 37.2

HYDRO TECHNOLOGY (PLUMBING)

This program introduces students to all facets of the plumbing trade and will provide the basic skills needed for entry-level employment. Students will learn methods of installation, repair and plumbing maintenance. Theory-based instruction includes: basic trade competencies, trade mathematics, introduction to blueprint reading and drawing, as well as the National Standard Plumbing Code. Hands-

on instruction will be given with the students participating in the actual layout, installation, and repair of plumbing systems, fixtures, and appliances. The tools, materials, and supervised projects assigned in class simulate actual conditions in the domestic and commercial plumbing industries.

CE.TRD 120

Hours: 382

CEU's: 38.2

UNIFORM CONSTRUCTION CODE PROGRAM

Regulations of the New Jersey Uniform Construction Code require that candidates for licensure complete specified educational courses. The Division of Continuing Education at Camden County College has been approved by the New Jersey Department of Community Affairs (DCA) to offer these courses, which are conducted in accordance with N.J.A.C 5:23-5.20. These courses are open to anyone with an interest in construction and mandatory for those desiring licensure. Courses must be taken in their proper sequence (RCS-ICS-HHS). Individuals who are not yet licensed at the RCS level will not be licensed at the ICS or HHS levels until the lower license requirements are fulfilled. Licensing questions and licensing application packet requests should be directed to the Licensing Unit at (609) 984-7834 or you may e-mail at codeslicensing@dca.state.nj.us. It is recommended that you review this packet before you undertake the course. Carefully review all state requirements for licensing and prior required job experience before registering for any course. Refunds on courses cannot be issued for failure to review the necessary requirements for course completion and licensing. You must pass the national exam in order to obtain the license with the DCA.

Students are required to purchase all required textbooks including the Uniform Construction Code Act and Regulations (blue book). Books can be ordered from the Department of Community Affairs at 609-984-0040. In addition, students may be eligible to apply for the tuition remission program; see your instructor for details and necessary paperwork

BUILDING INSPECTOR RCS

This course is designed to provide students with fundamental knowledge and educational experience required by the State of New Jersey for licensure under the title. This course covers all of the code requirements, with the exception of plumbing and electrical, for one and two family homes and small commercial structures. Topics include structural design and analysis techniques, wood framing construction and foundations, material standard, field identification of requirements, inspection techniques, tools and methods, etc.

CE.PRO 027-51

Hours: 90

CEUs: 9.0

BUILDING INSPECTOR ICS

Prerequisite: Successful completion of the Building Inspector RCS course This course is designed to provide students with knowledge on building code requirements for medium sized industrial and commercial structures. Topics covered will include building construction, foundation design, wood and steel frame construction, fire resistance rating, requirements for building subcode, testing materials, and uniform construction code.

CE.PRO 031-51

Hours: 75

CEUs: 7.5

BUILDING INSPECTOR HHS

Prerequisite: Successful completion of the Building Inspector RCS and ICS courses This course is designed to provide students with knowledge on advanced structural systems, advanced fire protection systems, and advanced mechanical systems. This course is part of the requirement for individuals to be certified in high hazard structures.

CE.PRO 039-51

Hours: 60

CEUs: 6.0

SUBCODE OFFICIAL

This course is designed to prepare inspectors to become subcode officials. The class will cover subcode administration, legal aspects of code enforcement, and related legislation. Specific topics will include procedures and forms for permit application, stop orders, emergency situations, condemnations, case records, warrants relocation, housing maintenance, and legal rights of landlords and tenants.

CE.PRO 042-01

Hours: 48

CEUs: 4.8

ELECTRICAL INSPECTOR ICS

This course is designed to provide students with knowledge of electrical systems and system design along with specific plan review and field inspection aspects pertaining to Class II and Class III structures.

CE.PRO 040-51 Hours: 60 CEUs: 6.0

ELECTRICAL INSPECTOR HHS

Prerequisite: Electrical Inspector ICS

This course is designed to provide students with knowledge of advanced electrical systems design. Students must complete the ICS course before undertaking this course.

Blackwood Location

CE.PRO 046-51 Hours: 45 CEUs: 4.5

ELEVATOR INSPECTOR HHS

This course is designed to assist individuals in meeting the requirement needed to become certified elevator inspectors or as an aide to elevator safety mechanics. Topics include inspection, testing, rules and regulations for elevators, escalators, lifts, and other lifting and elevator equipment. In addition, the course will focus on planning and review of inspection techniques.

CE.PRO 041 Hours: 90 CEUs: 9.0

CONSTRUCTION OFFICIAL

This course introduces inspectors and subcode officials to the role of the construction official. Topics will include office organization, purpose and fundamentals of code enforcement, procedures for processing cases, administrative hearings, records maintenance, and housing maintenance.

CE.PRO 048-51 Hours: 45 CEUs: 4.5

FIRE INSPECTOR ICS

This 120-hour program will give students a better understanding of the International Construction Codes as they are adopted by the New Jersey Uniform Construction Code. Student will review construction classification, building types and finishes, as well as means of egress and fire protection systems. Successful completion of this program along with a passing grade on the required test will meet the requirement for the first level of Fire Protection certification.

CE.PRO 002 Hours: 120 CEUs: 12.0

FIRE INSPECTOR HHS

Upon completion of this course the students will have a better understanding of the International Construction Codes and referenced standards as outlined in the NJ Uniform Construction Code. The students will also develop a better understanding of how to complete plan reviews and the entire review process. Upon the completion of this course the students will have met the hourly training requirement set by the UCC to be able to obtain a Fire, HHS certification. 6.0 CEU

CE.PRO 128-51 Hours: 60 CEUs: 6.0

PLUMBING INSPECTOR ICS

This course is designed to satisfy the educational requirements for licensure as a Plumbing Inspector I.C.S.; to provide instruction in technical and administrative areas as they apply to the plan review of class II and class III structures and the inspection of all structures as established at N.J.A.C. 5:23-3.

CE.PRO 104 Hours: 120 CEUs: 12.0

CONSTRUCTION PROJECT MANAGEMENT CERTIFICATE

The certificate program is designed for contractors, sub-contractors, construction workers; building and facilities managers, owners and design professionals, and others in the field of construction who would like to improve their understanding of the construction management process and develop their abilities and skills for effective management of construction projects.

The Construction Project Management Certificate program provides a descriptive breakdown of the management processes utilizing industry standard methods including the following:

- Introduction to the fundamentals of construction project management.
- Overview of the construction industry, basic understanding of a various disciplines and functions of a construction manager.
- Understanding the use and development of the construction documentation, building drawings, and specifications.
- Scheduling design and construction activity.
- Management of Design and Construction administration services.
- Construction administration services and standard practices.
- Construction Project Control Methods and Information Management; including tracking, record keeping, shop drawing and submittal review, approvals, Quality Control, Cost and Productivity analysis.

CE.PRO 044-51 Hours: 49 CEUs: 4.9

TECHNICAL ASSISTANT

This course is designed to provide students with an overview of a wide variety of matters related to the creation and maintenance of New Jersey's infrastructure with respect to issues such as the building of safe structures, maintenance and improvement of structures through the issuance of permits, Certificates of Occupancy, violation notices, and stop-work orders. Specific subject areas will include: computers, construction blue print reading, UCC law and administration, construction fundamentals and code requirements, and technical problem solving.

CE.PRO 043 Hours: 45 CEUs: 4.5

OSHA 10 FEDERAL CERTIFICATION

The OSHA Outreach Training Program is OSHA's primary way to train workers in the basics of occupational safety and health. The OSHA General Industry Outreach Training Programs were developed by the OSHA Training Institute with the intent to assist employers in training and introducing employees to the basic practices of identifying, reducing, eliminating and reporting hazards associated with their work. Students in this program will earn their OSHA 10 General Industry Certification which is a nationally recognized lifetime certification. Topics include Introduction to OSHA, walking and working surfaces, fall protection, trenching/excavation, exit routes, fire protection plans, electrical, personal protective equipment, hazard communication, introduction to HAZWOPER, hazardous materials, bloodborne pathogens, first aid, lockout/tagout, confined space, and welding. This certification is now required in New York, Delaware, and Pennsylvania in order to work in hazardous trades.

CE.TRD 022 Hours: 10 CEUs: 1.0

CNC OPERATIONS

This course is the entry level offering that trains students how to operate a CNC machine. Students will have the opportunity to physically setup both lathe and mill style machines. Machines utilized in the class are industry standard.

CE.MFG 003-51 *Hours: 20* *CEUs: 2.0*

CNC PROGRAMMING

This course is the second level offering that trains students how to manually program a CNC machine. Students will have the opportunity to manually write a CNC program and physically cut it on the machine. There will be mill program and one lathe programming example.

CE.MFG 004-51 *Hours: 20* *CEUs: 2.0*

MASTERCAM MILL LEVEL I

This course is the first level Computer Aided Manufacturing (CAM) offering that trains students how to graphically program a CNC machine utilizing Mastercam software. Students will have the opportunity to operate a CAM software platform to create a CNC program and physically cut it on the machine. CNC mill examples will be used.

CE.MFG 005-51 *Hours: 20* *CEUs: 2.0*

MASTERCAM MILL LEVEL II

This course is the second level Computer Aided Manufacturing (CAM) offering that trains students how to graphically program a CNC machine utilizing Mastercam software. Students will have the opportunity to operate a CAM software platform to create a CNC program and physically cut it on the machine. CNC mill examples will be used.

CE.MFG 006-51 *Hours: 20* *CEUs: 2.0*

CNC/CAM PROGRAMMING PROJECT STUDY

This specialized 60 hour course will focus on instruction in CNC machine setup and CNC manual programming for both mills and lathes. CAM programming concepts will be introduced using MasterCAM software. In addition, full 3D wire frames will be constructed and surfaced with all current surfacing technology.

CE.MFG 008-51 *Hours: 60* *CEUs: 6.0*

MASTERCAM LATHE

This course is the Computer Aided Manufacturing (CAM) offering that trains students how to graphically program a CNC lathe machine utilizing Mastercam software. Students will have the opportunity to operate a CAM software platform to create a CNC lathe program and physically cut it on the machine. CNC lathe machines are full industry standard. 1.8 CEU's

CE.MFG 018-5 *Hours: 18* *CEUs: 1.8*

CAREER & TECHNICAL INSTITUTE OF CAMDEN COUNTY COLLEGE

856-874-6004
tradetraining@camdencc.edu
www.camdencc.edu/ce

ASSOCIATE IN APPLIED SCIENCE

CIP Code 51.0601

Dental Assisting

DAS.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/Summer Semester			Second Year/First Semester		
ENG-101	English Composition I	3	ENG-102	English Composition II	3
DAS-141	Biological Science for the Dental Assistant	1	.....	Humanities General Education Elective	3
DAS-143	Infection Control for the Dental Assistant	2	MTH...	Mathematics General Education Elective	3/4
HPE-181	Basic Life Support "C" AHA	1	.....	Free Elective	3
PSY-101	Basic Psychology	3			12/13
		10	Second Year/Second Semester		
First Year /Fall Semester			.....	Diversity - Humanities General Education Elective	3
DAS-111	Fundamentals of Chairside Assisting	7	.....	Laboratory Science General Education Elective	4
DAS-120	Dental Radiology	4	.....	Social Science General Education Elective	3
DAS-150	Dental Anatomy for Dental Assisting	2			10
DAS-151	Dental Laboratory Procedures I	2	Total Minimum Credits		
DAS-170	Medical Emergencies in the Dental Office	1			63
		16	Note: Part-Time Evening Alternative ALL courses will be held Monday – Thursday 5:30-8:30 p.m.		
First Year /Spring Semester					
DAS-115	Pharmacology	1			
DAS-125	Preventive Dentistry	3			
DAS-152	Dental Laboratory Procedures II	2			
DAS-160	Supervised Clinical Experience	6			
DAS-180	Office Administration	2			
DAS-190	Oral Pathology	1			
		15			

PROGRAM DESCRIPTION

A dental assistant works at chairside while the dentist examines and treats patients. The dental assistant makes the patient comfortable in the chair, prepares the patient for treatment, obtains dental records, prepares impression and restorative materials, exposes and processes dental radiographs, and hands the dentist the proper instruments and materials. The assistant also sterilizes and disinfects instruments, prepares dental tray setups, and instructs the patient in postoperative and general oral health care.

PROGRAM GOALS

- To provide a college-level dental assisting education that will prepare the student to function effectively as a dental assistant in various settings.
- To maintain a dynamic interdisciplinary dental assisting education that recognizes the complexity of a scientific and technologically oriented society.
- To provide the student with the skills and knowledge necessary to attain certification, registration and licensure mandated for dental assistants.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Perform the clinical tasks and responsibilities of a registered dental assistant under direct supervision of a dentist.
 2. Provide patient education.
 3. Apply technology in order to find information, take intraoral photographs, take digital radiographs and manage patient and business records.
 4. Integrate and apply basic science, dental science and dental assisting knowledge and skills.
 5. Explain and apply basic concepts of dental ethics and jurisprudence.

SPECIAL PROGRAM REQUIREMENTS

- Completion of the Dental Assisting Certificate program at Camden County College or graduation from a recognized accredited dental assisting (CODA) career program.
- Assessment of credentials with the program coordinator
- Placement into college-level English and mathematics courses based on the results of the College Placement Test or other approved test
- Proof of high school diploma
- Application to the Dental Assisting program
- Minimum of 2.5 GPA
- Completion of high school biology and chemistry lab course with a "C" or better (equivalent courses may be taken at CCC).
- Must maintain a grade "C" or better in all dental assisting coursework.
- All credit assessments will be conducted by transcripts.
- Students will perform two full-mouth series on patients to pre-clinical proficiency. Although some patients may be provided by the College, the student may need, identify and schedule patients who have a clinical need for dental radiographic imaging.

ACCREDITATION

The program in dental assisting is accredited by the Commission on Dental Accreditation, a specialized accrediting body recognized by the Commission on Recognition of Postsecondary Accreditation and by the United States Department of Education. The Commission on Dental Accreditation can be contacted at (312) 440-2719 or at 211 East Chicago Avenue, Chicago, IL 60611.

The Dental Assisting radiology course is accredited by the New Jersey Radiologic Technology Board of Examiners.

EMPLOYMENT OPPORTUNITIES

- Chairside assistant or business administrator in general or specialty practices
- Chairside assistant or business administrator in hospital and institutional settings
- Dental assisting education

CONTACT PERSON

Professor Roxane Terranova, Coordinator
 (856) 227-7200, ext. 4471
 email: rterranova@camdenc.edu

Highlights

The Associate in Applied Science degree in Dental Assisting is for those who may wish to transfer to a four-year institution and pursue a career in health care administration or education.

ACADEMIC CERTIFICATE

Dental Assisting

DAS.CT

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/Summer Semester			First Year /Spring Semester		
ENG-101	English Composition I	3	DAS-115	Pharmacology	1
DAS-141	Biological Science for the Dental Assistant	1	DAS-125	Preventive Dentistry	3
DAS-143	Infection Control for the Dental Assistant	2	DAS-152	Dental Laboratory Procedures II	2
HPE-181	Basic Life Support "C" AHA	1	DAS-160	Supervised Clinical Experience	6
PSY-101	Basic Psychology	3	DAS-180	Office Administration	2
		10	DAS-190	Oral Pathology	1
First Year /Fall Semester					15
DAS-111	Fundamentals of Chairside Assisting	7	Total Minimum Credits		41
DAS-120	Dental Radiology	4			
DAS-150	Dental Anatomy for Dental Assisting	2			
DAS-151	Dental Laboratory Procedures I	2			
DAS-170	Medical Emergencies in the Dental Office	1			
		16			

NOTICE: Part-Time Evening Alternative ALL courses will be held Monday–Thursday 5:30-8:30 p.m.

NOTICE: Clinical placements are a required part of the curriculum and a requirement for graduation. Clinical placements may require a criminal background check, health clearance and/or drug testing before participation is allowed. Clinical sites may deny a student's participation in the event of a positive finding. Individuals who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding eligibility may be obtained from the appropriate credentialing body.

NOTICE: Student must have adequate transportation for the clinical placement requirement.

PROGRAM DESCRIPTION

A dental assistant works at chairside while the dentist examines and treats patients. The dental assistant makes the patient comfortable in the chair, prepares the patient for treatment, obtains dental records, prepares impression and restorative materials, exposes and processes dental radiographs, and hands the dentist the proper instruments and materials. The assistant also sterilizes and disinfects instruments, prepares dental tray setups, and instructs the patient in postoperative and general oral health care.

PART-TIME OPTION FOR DENTAL ASSISTING (DA) PROGRAM:

This program can be taken on a full time or part-time basis. Classes in the full time program are offered during the day. The part-time program is offered in the evening. Please note that Supervised Clinical Experience in the affiliate offices is offered only during the day in the last semester for both programs.

For more information, email Roxane Terranova, the program coordinator at rterranova@camdenc.edu.

PROGRAM GOALS

- Professional Level CPR certification prior to spring semester.
- To provide a college-level dental assisting education that will prepare the student to function effectively as a dental assistant in various settings.
- To maintain a dynamic dental assisting education that recognizes the complexity of a scientific and technologically oriented society.
- To provide students with the skills and knowledge necessary to attain certification, registration and licensure mandated for dental assistants.
- To provide students with General Education courses.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Perform the clinical tasks and responsibilities of a registered dental assistant under direct supervision of a dentist.
2. Provide patient education.
3. Apply technology in order to find information, take intraoral photographs, take digital radiographs and manage patient and business records.
4. Integrate and apply basic science, dental science and dental assisting knowledge and skills.
5. Explain and apply basic concepts of dental ethics and jurisprudence.

SPECIAL PROGRAM REQUIREMENTS

- Interview with the program coordinator
- Physical exam, various immunizations and proof of health insurance will be required prior to the beginning of class
- Admission on a first-qualified, first-admitted basis
- Proof of high school diploma
- Completion of high school laboratory biology or chemistry with a grade "C" or better (equivalent courses may be taken at CCC).
- Application to the DA program
- Minimum 2.5 GPA
- Must maintain grade "C" or better in all DA coursework.
- Placement at the College level English and math courses based on Accuplacer.
- Students will perform two full-mouth series on patients to pre-clinical proficiency. Although some patients may be provided by the College, the student may need, identify and schedule patients who have a clinical need for dental radiographic imaging.

*The department has an extensive exposure control/infectious disease policy, which is available upon request.

ACCREDITATION

The program in Dental Assisting is accredited by the Commission on Dental Accreditation, a specialized accrediting body recognized by the Commission on Recognition of Postsecondary Accreditation and by the United States Department of Education.

The Commission on Dental Accreditation can be contacted at (312) 440-2719 or at 211 East Chicago Avenue, Chicago, IL 60611.

The Dental Assisting radiology course is accredited by the New Jersey Radiologic Technology Board of Examiners.

EMPLOYMENT OPPORTUNITIES

- Chairside assistant or business administrator in general and specialty practices
- Chairside assistant or business administrator in hospital and institutional settings
- Dental assisting education
- Positions dealing with dental insurance, dental laboratories, dental suppliers and dental placement agencies

CONTACT PERSON

Professor Roxane Terranova, Coordinator
(856) 227-7200, ext. 4471
email: rterranova@camdenc.edu

Highlights

Students who have completed the Dental Assisting certificate program are eligible to continue their studies at the College and earn an Associate in Applied Science degree. The student earns 41 credits for the dental assisting certificate program and with additional credits, the student is eligible for the Associate in Applied Science degree.

ASSOCIATE IN APPLIED SCIENCE

CIP Code 51.0602

Dental Hygiene

DHY.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/Summer Semester			Second Year/Summer Semester		
ENG-101	English Composition I	3	ENG-102	English Composition II	3
BIO-117	Basic Anatomy and Physiology I or		SOC-101	Introduction to Sociology	3
BIO-211	Anatomy and Physiology I	4			6
HPE-181	Basic Life Support "C" AHA	1	Fall Semester		
		8	DHY-223	Dental Hygiene III Seminar	2
Fall Semester			DHY-233	Advanced Techniques in Periodontics	1
BIO-118	Basic Anatomy and Physiology II or		DHY-253	Dental Hygiene III Clinic	6
BIO-212	Anatomy and Physiology II	4	DHY-261	Pathology	2
DHY-111	Dental Hygiene I Seminar	2	DHY-271	Pharmacology and Anesthesiology	2
DHY-120	Dental Radiology	4			13
DHY-130	Dental Anatomy	2	Spring Semester		
DHY-151	Dental Hygiene I Pre-Clinic	2	DHY-212	Community Dentistry	2
DHY-170	Medical Emergencies in the Dental Office	1	DHY-224	Dental Hygiene IV Seminar	2
CHM-130	General/Organic/Biochemistry for Dental Hygiene ¹	4	DHY-252	Local Dental Anesthesiology	2
		19	DHY-254	Dental Hygiene IV Clinic	4
Spring Semester			DHY-262	Ethics, Jurisprudence and Practice Management	1
BIO-121	Basic Microbiology or		PSY-101	Basic Psychology	3
BIO-221	Microbiology I	4			14
DHY-122	Dental Hygiene II Seminar	2	Total Minimum Credits		
DHY-142	Periodontics I	2			78
DHY-152	Dental Hygiene II Clinic	3	NOTE: Clinical placements may be a required part of the curriculum and a requirement for graduation. Clinical placements may require a criminal background check, health clearance and/or drug testing before participation is allowed. Clinical sites may deny a student's participation in the event of a positive finding. Individuals who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding eligibility may be obtained from the appropriate credentialing body.		
DHY-162	Dental Lab Procedures	2	¹ Completion of General, Organic and Biochemistry (CHM-101), and General, Organic and Biochemistry II (CHM-102) will satisfy this requirement		
DHY-172	Head and Neck Anatomy	2			
FNS-106	Foundations of Nutritional Science	3			
		18			

PROGRAM DESCRIPTION

A licensed dental hygienist is a health care professional, oral health educator and clinician who utilizes scientific knowledge and methods to provide preventative, educational and therapeutic services to support the control of oral diseases and the promotion of oral health. Under the supervision of a dentist, the hygienist records the patient's dental history, charts the mouth for evaluation and diagnosis by the dentist, scales and polishes teeth, and functions as a dental health educator. The Dental Hygiene program is a two-year, full-time, daytime program that prepares students to take national, regional and state licensure exams in dental hygiene.

PROGRAM GOALS

- To provide an entry-level dental hygiene education that will prepare the student for licensure and to function effectively in a dental hygiene setting.
- To maintain a dynamic dental hygiene education that recognizes the complexity of a scientific and technologically oriented society.
- To provide quality, patient-centered dental hygiene care to all members of the community.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
- Integrate and apply basic science, dental science and dental hygiene knowledge and skills.
 - Recognize sources of information and information gathering techniques that enable them to seek and obtain information when needed.
 - Apply computer skills in order to find information, take intra-oral photographs, take digital radiographs, obtain periodontal charting information, and manage patient records.
 - Provide humane and compassionate care to all patients with-

- out discrimination as outlined in the Patient's Bill of Rights.
- Provide dental hygiene care utilizing the dental hygiene process of assessment, dental hygiene diagnosis, treatment planning, implementation and evaluation.
 - Present preventative educational programs in various settings.

SPECIAL PROGRAM REQUIREMENTS

Applicants must satisfy the following prerequisites:

- High school college preparatory course diploma or equivalent
- Biology course with lab (high school) - Grade "C" or better
- Chemistry course with lab (high school) - Grade "C" or better
- Placement into college-level English and mathematics courses based on the results of the College Placement Test (or other approved test)
- Minimum cumulative grade point average of 3.2 for college transfer applicants. It is recommended that the applicant take as many core courses as possible included in the hygiene curriculum prior to applying.
- SAT scores of Math 500, Reading 500 (minimum). Applicants who have college experience do not have to submit SAT scores.

After completion of the above prerequisites, an application for admission to the Dental Hygiene program should be submitted to the Office of Admissions and Records and Registration Services. The following will then occur:

- There will be an academic review of transcripts by the director of dental programs.
- Competitive candidates will meet with the director of dental programs.
- Candidates will receive written notification of the admissions committee decision.
- A physical exam, various immunizations, and proof of health insurance will be required prior to the beginning of class. The dental department has an extensive exposure control/

- infectious disease policy, which is available upon request.
 - The Office of Records and Registration will accept applications for the Dental Hygiene Program ONLY between September 1 and February 1.
 - All prerequisite courses and documentation must be completed prior to March 15. A class is accepted once a year for the fall semester.
 - All students must earn a grade of "C" or better in all DHY courses in order to graduate.
- Admission to the Dental Hygiene program is very competitive and completion of all prerequisites and core curriculum courses does not guarantee admission to the program. Since there are more applicants than there are positions, admission will be based on the applicant's documented record. Science courses that were completed five or more years prior to enrollment in the hygiene program will not be accepted for transfer credit. Preference will be given to students who have completed their core curriculum requirements at Camden County College.

ACCREDITATION

The program in Dental Hygiene is accredited by the Commission on Dental Accreditation, and recognized by the Commission on Recognition of Postsecondary Accreditation and by the United States Department of Education. The Dental Accreditation can be contacted at (312) 440-2719 or at 211 East Chicago Avenue, Chicago, IL 60611.

EMPLOYMENT OPPORTUNITIES

- Clinical hygienist
- Dental office manager

CONTACT PERSON

Dr. Catherine A. Boos, Director
(856) 227-7200, ext. 4472
email: cboos@camdenc.edu

ASSOCIATE IN SCIENCE

**Liberal Arts and Science:
Health and Exercise Science Option**

HPE.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
BIO-111	Biology I - Science	4	BIO-212	Anatomy & Physiology II	4
CSC-101	Computer Literacy	3	HPE-195	Concept of Individual/Dual Sports ¹	3
ENG-101	English Composition I	3	HIS-101	World Civilization I	3
HPE-130	Consumer Health Decisions	3	SPE-102	Public Speaking	3
PSY-101	Basic Psychology	3			13
		16	Second Semester		
Second Semester			FNS-105	Introduction to Nutrition	3
BIO-211	Anatomy & Physiology I	4	HPE-178	Motor Development and Motor Learning	3
ENG-102	English Composition II	3	SOC-101	Introduction to Sociology	3
HPE-170	First Aid, Safety & Prevention Of Injuries	3	.....	Humanities General Education Elective ²	3
MTH-111	Introduction to Statistics	3	.....	Free Elective ²	3
HPE-175	Foundations of Fitness	3			15
		16	Total Minimum Credits		60

¹ Students transferring to Rowan for Athletic Training should see the program director.

² Students transferring to Rowan should see the program director.

PROGRAM DESCRIPTION

The Health and Exercise Science Option prepares a student to receive an Associate in Science degree and transfer to a four-year college to major in a variety of related fields in health, fitness, physical education, pre-physical or occupational therapy, and exercise science.

PROGRAM GOALS

- To prepare graduates to transfer to four-year colleges or universities for further study in health and exercise science and physical education.
- To prepare students with a strong knowledge specific to health and exercise science through successful completion of coursework related to this major.
- To prepare students with a broad base of education through the successful completion of a variety of general education courses.
- To provide students with an understanding of the various career opportunities and areas of specialization within the field of health and exercise science.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Perform critical analysis in solving problems and analyzing information as it relates to health and exercise science.
 2. Explain and apply basic CPR and first aid techniques.
 3. Identify and discuss current health issues in the United States.
 4. Identify and explain basic components of physical fitness as they relate to teaching children.

EMPLOYMENT OPPORTUNITIES

- Employment opportunities in health, physical education, exercise science, fitness, sports medicine and coaching will continue to be in high demand.
- A student interested in a career in health and fitness education should demonstrate an interest in working with individuals who may vary in age from pre-school to senior citizen.
- Specific professional opportunities include teaching and supervising fitness, health and/or physical education programs in private and public settings.

AREAS OF EMPLOYMENT:

- Teaching physical education and health
- Fitness centers
- Personal training center
- Wellness centers
- Corporate fitness programs
- Public & private schools
- Sports teams
- Athletic programs

CONTACT PERSON

Dr. Nicholas DiCicco, Director
(856) 227-7200, ext. 4264
email: ndicicco@camdencc.edu

Highlights

There are transfer opportunities to the College of New Jersey, Delaware College, Rowan University, Rutgers University, Temple University and West Chester University.

CERTIFICATE OF ACHIEVEMENT

CIP Code 31.0501

Personal Trainer

PT.CA

CODE	COURSE	CREDITS
First Semester		
CSC-101	Computer Literacy or	
CIS-101	Personal Computer Applications	3
FNS-105	Introduction to Nutrition or	
HPE-129	Sport Nutrition	3/2
HPE-100	Personal Fitness	1
HPE-127	Exercise Techniques and Prescription ¹	1
HPE-161	Weight Training	1
HPE-211	Theories and Applications of Physical Training I ¹	4
HPE-170	First Aid, Safety and Prevention of Injuries	3
		15/16
Second Semester		
HPE-210	Internship: Personal Trainer Certificate ²	3
		3
	Total Minimum Credits	18

¹ Only offered in the fall semester/evening.

² Prerequisite for the Internship is completion of all 15/16 credits as listed above.

All courses except HPE-211 and HPE-127 are offered during summer sessions.

NOTICE: Clinical placements are a required part of the curriculum and a requirement for graduation. Clinical placements may require a criminal background check, health clearance and/or drug testing before participation is allowed. Clinical sites may deny a student's participation in the event of a positive finding. Individuals who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding eligibility may be obtained from the appropriate credentialing body.

PROGRAM DESCRIPTION

Personal fitness trainers help clients to assess their level of physical fitness and help them to set and reach fitness goals. They demonstrate various exercises and help clients to improve their exercise techniques. They may keep records of their clients' exercise sessions in order to assess their progress towards physical fitness. Personal trainers work with clients on a one-on-one basis.

PROGRAM GOALS

- To prepare students to earn American Council on Exercise (ACE) certification.
- To prepare students to utilize common testing and exercise equipment found at health and fitness centers.
- To prepare students to conduct health screening and fitness evaluations.
- To prepare students to develop personalized exercise prescriptions for healthy individuals.
- To provide students with real world experience in personal training.
- To prepare students to be certified in basic first aid and life-saving skills.

SPECIAL PROGRAM REQUIREMENTS

- Completion of an internship at a local fitness center or the College's Wellspring Fitness Center for 10-15 hours per week.
- Students entering college for the first time must take the College Placement Test before entering the program.

EMPLOYMENT OPPORTUNITIES

- Corporate fitness programs
- Fitness centers
- Health clubs
- Nutrition and weight control centers
- Sports medicine centers
- YMCA's

CONTACT PERSON

Dr. Nicholas DiCicco, Director
(856) 227-7200, ext. 4264
email: ndicicco@camdencc.edu

Highlights

Visit the ACE Web site for additional information and testing locations: www.acefitness.org.

ASSOCIATE IN APPLIED SCIENCE

Health Science: Certified Medical Assistant Option

CMA.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Third Semester		
ENG-101	English Composition I	3	PHL-232	Biomedical Ethics	3
HIT-120	Medical Terminology	3	.....	Laboratory Science General Education Elective ¹	4
PSY-101	Basic Psychology	3	.....	Computer Information Systems Elective	3
.....	Laboratory Science General Education Elective ¹	4	HPE....	Health & Exercise Science Elective(s)	2/3
.....	Diversity - Humanities General Education Elective	3			12/13
		16		Post Secondary Work³	22
Second Semester			Total Minimum Credits		
ENG-102	English Composition II	3			63
SOC-101	Introduction to Sociology	3			
.....	Laboratory Science General Education Elective ¹	4			
MTH....	Mathematics General Education Elective ²	3/4			
		13/14			

¹ Suggested electives for students pursuing further study in a non-science related area: Environmental Science (BIO-106), Microbial World (BIO-140), Chemistry and Society (CHM-140), or Introduction to Forensic Science (CHM-145). or

Suggested electives for students pursuing further study in a science related area: Basic A&P I (BIO-117), Basic A&P II (BIO-118), Basic Microbiology (BIO-121) General, Organic & Biological Chemistry I (CHM-101), General, Organic & Biological Chemistry II (CHM-102)

² Suggested Elective: Elements of Statistics I (MTH-111)

³ Students will receive 22 credits for their post-secondary work after completing the 41-43 credits at Camden County College.

Students should consult with the Certified Medical Assistant Advisor for additional advisement.

PROGRAM DESCRIPTION

Medical assistants who hold a Certified Medical Assistant (CMA) certification are eligible to receive college credit for their post secondary education. All applicants to this program must take a required core of courses consisting of a minimum of 40 college credits. Medical assistants are eligible to apply for a maximum of 22 additional college credits toward an associate in health science degree: Certified Medical Assistant Option, through portfolio assessment.

PROGRAM GOALS

- To earn an associate in applied science degree in the Certified Medical Assistant Option through general education for students who have successfully completed an American Association of Medical Assistants - accredited program and who currently hold a license for the certification examination by the AAMA.
- To provide students with a foundation in general education.
- To prepare students for upward career mobility for certified medical assistants by building upon a student's prior professional knowledge and clinical experience.
- To provide students with the skills and abilities of a generally educated person in effective communications, critical thinking and problem solving across disciplines.
- To prepare students for career advancement in the medical assistant field.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Communicate in both written and oral formats.
2. Apply the scientific method of inquiry to analyze problems and draw conclusions from evidence and data.
3. Identify resources, obtain and critically evaluate information.
4. Model ethical professional behaviors in the role of a health care professional.

SPECIAL ADMISSION REQUIREMENTS

In addition to the admission requirements of the College, the following criteria are required:

- Submission of diploma or certificate and transcript from an AAMA accredited medical assistant program and a current Certified Medical Assistant credential or completion of the Certified/Registered Medical Assistant Program at the Technical Institute of Camden County College.
- Conference with the allied health coordinator.
- Must complete all basic skills requirements prior to beginning the program.

EMPLOYMENT OPPORTUNITIES

- Physician offices
- Health practitioner's offices
- Hospitals
- Nursing homes

CONTACT PERSON

Professor Betty Joynes, Allied Health Coordinator
(856) 227-7200, ext. 4324
email: bjoynes@camdencc.edu

Highlights

Continuing Education Office at (856) 874-6004, for information regarding the Medical Assistant portion of the program.

ASSOCIATE IN APPLIED SCIENCE

Health Science

HSC.AAS

CODE	COURSE	CREDITS
First Year/First Semester		
ENG-101	English Composition I	3
BIO-117	Basic Anatomy & Physiology I	4
HIT-120	Medical Terminology	3
PSY-101	Basic Psychology	3
.....	Diversity - Humanities General Education Elective	3
		16
Second Semester		
ENG-102	English Composition II	3
BIO-118	Basic Anatomy & Physiology II	4
PHL-232	Biomedical Ethics	3
SOC-101	Introduction to Sociology	3
MTH...	Mathematics General Education Elective ¹	3/4
		16/17
	Portfolio Assessment	28²
	Total Minimum Credits	60

All students are required to take the core courses listed to left.

Graduation from a recognized accredited Allied Health career program recognized by Camden County College or graduates of an approved Camden County College non-credit program may be eligible to earn college credit for their previous experience.

Programs between 60 and 99 contact hours may earn 4 college credits
 Programs between 100 and 199 contact hours may earn 8 college credits
 Programs between 200 and 299 contact hours may earn 15 college credits
 Programs between 300 and 399 contact hours may earn 21 college credits
 Programs between 400 and 499 hours may earn 25 college credits
 Programs over 500 hours may earn 28 college credits

All credit assessments will be conducted by portfolio assessment.

¹ Suggested Electives: Introduction to Statistics (MTH-111), Algebraic Concepts (MTH-100) or Pre-calculus Mathematics I (MTH-123)

² Students receiving less than 28 college credits for their post-secondary work should select additional courses from the following list to graduate with a minimum of 60 credits: Laboratory Science General Education Elective, Statistics Social Science General Education Elective, Humanities General Education Elective

PROGRAM DESCRIPTION

Allied health paraprofessionals who have earned a certificate or license may be eligible to receive college credit for their accredited, post secondary education. Students may transfer college credit to four-year institutions or use the degree for career advancement.

- Students may earn a minimum of 22 to a maximum of 28 credits for completing a post secondary, accredited allied health program.
- The credits awarded are based on the number of hours spent in training at an accredited allied health program recognized by Camden County College.
- To earn the Associate in Applied Science degree, students must complete the courses listed in the Health Science program curriculum at Camden County College.
- Students must review their portfolio assessment with the coordinator to be eligible to be a health science major.

PROGRAM GOALS

- To earn a health science associate degree, through general education for students who have successfully completed an accredited/approved allied health program.
- To provide students with a foundation in general education.
- To prepare students for upward career mobility for healthcare workers by building upon a student's prior professional knowledge and clinical experience.
- To prepare students for career advancement in an allied health profession.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Communicate in both written and oral formats.
2. Apply the scientific method of inquiry to analyze problems and draw conclusions from evidence and data.
3. Identify resources, obtain and critically evaluate information.

SPECIAL ADMISSION REQUIREMENTS

- Submission of diploma or certificate from an accredited allied health program to the allied health coordinator for evaluation.
- Graduates of an approved Camden County College non-credit program may be eligible to earn college credit for their previous experience.
- Conference with the allied health coordinator.
- Must complete all basic skills requirements prior to beginning the program.

EMPLOYMENT OPPORTUNITIES

- Administration
- Education
- Management

CONTACT PERSON

Professor Betty Joynes, Allied Health Coordinator
 (856) 227-7200, ext. 4359
 email: bjoynes@camdenc.c.edu

CERTIFICATE OF ACHIEVEMENT

Multi-Skilled Technician

MST.CA

CODE	COURSE	CREDITS
First Semester		
ALH-105	Electrocardiography	1
ALH-115	Basic Phlebotomy Techniques	1
ALH-121	Basic Skills for Allied Health Professionals ¹	3
ALH-122	Certified Nurse Aide ²	4
ALH-135	Homemaker Home Health Aide ³	1
HIT-120	Medical Terminology	3
HPE-181	Basic Life Support "C" – AHA	1
Total Minimum Credits		14

¹ Permission of the program director required, specific admission requirements required.

² Program is also open to students who are already CNA certified. Please check with program director for information.

³ 10 hour module

PROGRAM DESCRIPTION

The Multi-Skilled Technician Certificate of Achievement program offers to expand the knowledge and skills of the Certified Nurse Assistant and increase marketability to work in acute, long term and home care settings. Additional skills in the art of Phlebotomy, EKG, CPR, and Homemaker Home Health Aide instruction are included. The entire certificate may be completed in one semester.

PROGRAM GOALS

At the end of this program the student will be able to:

- Differentiate the practices of the Certified Nurse Aide and unlicensed allied health personnel in health and home care settings.
- Demonstrate the expanded roles of the multi-skilled technician.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Describe the various roles of the Multi-Skilled Technician
2. Demonstrate proficiency in the skills utilized in practice as a Multi-Skilled Technician
3. Demonstrate interpersonal behaviors supportive of the development and maintenance of safe, respectful, ethical and culturally sensitive peer and patient relationships.

SPECIAL PROGRAM REQUIREMENTS

- Official High School transcript or GED
- College Placement Tests
- Must be CNA certified before registering for ALH-135. May be required to show current experience over the last 6 months.
- The NJ Board of Nursing requires applicants seeking certifications for Homemaker Home Health Aide to show proof of an offer of employment as HHHA
- Program director's approval is required for registration

EMPLOYMENT OPPORTUNITIES

Program completion can lead to the following employment opportunities:

- Acute care
- Long-term care
- Residential care
- Private home care
- Rehabilitation care
- Doctors' offices

CONTACT PERSON

Professor Robynn Anwar, Coordinator
(856) 227-7200, ext. 1296
email: ranwar@camdencc.edu

THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

ASSOCIATE IN APPLIED SCIENCE

Health Information Technology

HIT.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	HIT-110	Health Informatics	4
BIO-117	Basic Anatomy and Physiology I	4	HIT-130	Introduction to Ambulatory Coding	3
CSC-101	Computer Literacy	3	HIT-115	Healthcare Reimbursement	3
HIT-101	Introduction to Health Information	3	HIT-134	Basic Pathophysiology	3
HIT-120	Medical Terminology	3	HIT-140	Diagnostic and Procedural Coding I	3
		16	HIT-150	Technical Practice Experience ²	1
Second Semester			Second Semester		
ENG-102	English Composition II	3	HIT-202	Statistical Methods for Health Information ¹	3
BIO-118	Basic Anatomy and Physiology II	4	HIT-215	Advanced Ambulatory Coding	3
HIT-132	Basic Pharmacology	3	HIT-235	Organizational Resources, QI and PI ¹	4
HIT-205	Legal and Ethical Issues in HIT	2	HIT-240	Diagnostic and Procedural Coding II	4
MTH-111	Introduction to Statistics I	3	HIT-220	Professional Practice Experience ²	2
.....	Diversity - Social Science General Education Elective or				
.....	Diversity - Humanities General Education Elective	3			
		18		Total Minimum Credits	67

¹ This course is only offered in the Spring Semester.

² Permission of Program Coordinator required prior to registering for this course.

NOTE: Clinical placements are a required part of the curriculum and a requirement for graduation. Clinical placements may require a criminal background check, health clearance and/or drug testing before participation is allowed. Clinical sites may deny a student's participation in the event of a positive finding. Individuals who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding eligibility may be obtained from the appropriate credentialing body.

PROGRAM DESCRIPTION

The Health Information Technology (HIT) program is designed to prepare graduates for employment in the field of health information management technology. Entry-level Health Information Technicians may be employed in a variety of health care settings. These include hospitals, physician's offices, long-term care facilities, ambulatory surgical centers, home health agencies, public health departments, insurance companies and software vendors.

PROGRAM GOALS

- Faculty will demonstrate current knowledge, skills, qualifications and professional development in the content areas they teach.
- The HIT program will demonstrate responsiveness to the needs of the community(ies) of interest.
- The HIT curriculum will include, at minimum, the required knowledge clusters with content and experiences to enable students to meet current entry-level competencies.
- Program graduates will demonstrate the HIM entry-level competencies.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Compute, interpret and analyze healthcare statistics.
 2. Gather, interpret, analyze and monitor data used for quality management and performance improvement programs that relate to Health Information Technology and Health Information Management.
 3. Analyze and validate coding and coding data for accuracy and compliance with federal and coding guidelines.

ACCREDITATION

The Health Information Technology program at Camden County College is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) in cooperation with the American Health Information Management Association (AHIMA). CAHIIM can be reached at www.cahiim.org, or at 233 N. Michigan Ave. Suite 2150, Chicago, IL 60601-5800, telephone number (312) 233-1100.

NATIONAL CERTIFICATION

Students who have graduated from this accredited program are eligible and encouraged to take the Registered Health Information Technician (RHIT) certification exam. Students can receive further information on this exam and its requirements from the director or at the national organizational website (www.ahima.org).

EMPLOYMENT OPPORTUNITIES

HIT professionals enjoy a broad selection of job opportunities and options for professional growth. Based on skills, education and interests, some of the positions available are:

- Health data analyst
- Electronic health record specialist
- Insurance claims analyst
- Records technician specialist
- Clinical coding specialist
- Physician practice manager
- Patient information coordinator

PROGRAM INFORMATION

This program can be completed online.

CONTACT PERSON

Linda Mesko, MS, RHIA, Director
(856) 968-1331
email: Imesko@camdencc.edu

Highlights

Students seeking current information on the growth of the field, salary information, and types of employers should access the national organization via www.ahima.org.

ACADEMIC CERTIFICATE

Medical Coding

MDC.CT

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Semester			Third Semester		
ENG-101	English Composition I	3	HIT-132	Basic Pharmacology	3
BIO-103	Human Biology ¹	3	HIT-135	Medical Coding Internship ²	2
CSC-101	Computer Literacy	3	HIT-215	Advanced Ambulatory Coding	3
HIT-101	Introduction to Health Information	3	HIT-240	Diagnostic and Procedural Coding II	4
HIT-120	Medical Terminology	3			12
		15		Total Minimum Credits	39
Second Semester					
HIT-115	Healthcare Reimbursement	3			
HIT-130	Introduction to Ambulatory Coding	3			
HIT-134	Basic Pathophysiology	3			
HIT-140	Diagnostic and Procedural Coding I	3			
		12			

¹ If students wish to take the Health Information Technology degree program (HIT.AAS) they will need to substitute Basic Anatomy & Physiology I & II (BIO 117, BIO 118) for Human Biology (BIO 103).

² Permission of Program Director required prior to registering for this course.

NOTICE: Clinical placements are a required part of the curriculum and a requirement for graduation. Clinical placements may require a criminal background check, health clearance and/or drug testing before participation is allowed. Clinical sites may deny a student's participation in the event of a positive finding. Individuals who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding eligibility may be obtained from the appropriate credentialing body.

PROGRAM DESCRIPTION

This certificate prepares students for employment in a variety of areas that require coding expertise. This program is approved by the American Health Information Management Association (AHIMA).

PROGRAM GOALS

- The Medical Coding program will demonstrate responsiveness to the needs of the communities of interest.
- The Medical Coding curriculum will include, at minimum, the required knowledge clusters and experiences needed by students to meet current entry-level competencies.
- Program graduates will demonstrate entry-level competencies needed for medical coders.
- To provide students with General Education courses.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:
Assign, analyze and validate coding and coding data for accuracy and compliance with federal coding guidelines

PROGRAM INFORMATION

The Medical Coding certificate program can be completed online.

APPROVAL

This program is approved by the American Health Information Management Association (AHIMA).

EMPLOYMENT OPPORTUNITIES

- Acute care hospitals
- Physician's office
- Ambulatory surgical centers
- Private billing organizations
- Insurance companies

CONTACT PERSON

Linda Mesko, MS, RHIA, Director
(856) 968-1331
email: lmesko@camdencc.edu

Highlight

The Bureau of Labor Statistics estimates a shortage of more than 50,000 qualified HIM and HIT workers.

ASSOCIATE IN APPLIED SCIENCE

Massage Therapy

MAS.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	PSY-101	Basic Psychology	3
MAS-200	Therapeutic Massage ¹	6	MAS-261	Pathology for Massage Therapy ¹	4
MAS-205	Environmental Management	1	HPE-106	Stress Management	3
BIO-117	Basic Anatomy & Physiology	4	HPE-170	First Aid, Safety & Prevention of Injuries	3
MTH....	Mathematics General Education Elective	3	HPE.....	Health & Exercise Science Elective	1
		17			14
Second Semester			Second Semester		
ENG-102	English Composition II	3	MAS-241	Business Management for Massage Professionals	2
FNS-105	Introduction to Nutrition	3	MAS-243	Integrated Myofascial Structural Techniques ¹	2
MAS-209	Structures & Functions for the Bodyworker I	4	MAS-255	Massage Therapy Integration/Application ¹	3
MAS-211	Structures & Functions for the Bodyworker II	2	SPE-102	Public Speaking	3
MAS-240	Specialized Massage Techniques ¹	3	HPE-145	Wellspring Fitness Lab I	1
MAS-260	Palpation and Kinesiology for Massage Therapy	3	.....	Diversity - Humanities General Education Elective	3
		18			14
First Year/Summer Session			Choice of courses to equal 2 credit hours from below:		
MAS-201	Student Massage Clinic	1	MAS-215	Therapeutic Sensory Applications I (1 credit)	
		1	MAS-220	Eastern Therapeutic Concepts (1 credit)	
			MAS-225	Therapeutic Sensory Applications II (2 credits)	
			MAS-230	Therapeutic Herbal Applications (2 credits)	
					2
				Total Minimum Credits	66

¹ These courses only are restricted to students formally admitted into the Massage Therapy program. All other courses may be taken without formal acceptance into the Massage Therapy Program. MAS-200, MAS-240, MAS-243, MAS-260 and MAS-261 require additional materials including oils/lotions/massage table, face cradle and bolster.

NOTICE: Clinical placements are a required part of the curriculum and a requirement for graduation. Clinical placements may require a criminal background check, health clearance and/or drug testing before participation is allowed. Clinical sites may deny a student's participation in the event of a positive finding. Individuals who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding eligibility may be obtained from the appropriate credentialing body.

PROGRAM DESCRIPTION

Massage therapy is a profession in which the practitioner applies manual techniques with the intention of positively affecting the health and well-being of the client. An increasing body of research shows massage therapy reduces heart rate and can help lower blood pressure. The most common types of massage are Swedish massage, deep-tissue massage, Shiatsu-acupressure, neuromuscular, trigger point and sports massage.

PROGRAM GOALS

- To provide students with the skills and knowledge required for eligibility to take the National Certification Board for Therapeutic Massage and Bodywork certification exam.
- To provide students with the basic bodywork techniques and skills needed to be employed as a massage therapist.
- To provide students with a foundation in general education.
- To prepare students to be employable in the massage therapy field.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Create a safe massage environment.
 2. Explain and apply knowledge of basic human anatomy as it relates to massage therapy.
 3. Integrate various massage skills to provide effective massage therapy techniques in a clinical setting.
 4. Obtain information from online and written sources.

SPECIAL ADMISSION REQUIREMENT

An interview with the director is required. Please call the Lourdes Institute for Wholistic Studies, (856) 869-3134 to schedule an appointment.

SPECIAL PROGRAM REQUIREMENTS

- Special lab fees for all Massage Therapy (MAS) program courses.
- Special equipment and materials for all MAS courses.

ACCREDITATION

This program meets all standards and requirements of the 504 minimum hours of massage education which will allow the student to become certified and/or licensed by the state of New Jersey, as described by the New Jersey Board of Massage and Somatic Therapies.

EMPLOYMENT OPPORTUNITIES

- Hospitals
- Chiropractor and physician offices
- Fitness centers
- Health clubs and spas
- Sports medicine centers

CONTACT PERSONS

Professor Betty Joynes, Allied Health Coordinator
(856) 227-7200, ext. 4324
email: bjoynes@camdenc.edu

Lourdes Institute of Wholistic Health contact
Dr. Frank Pilleggi, Program Director
(856) 869-3134
email: pileggif@lourdesnet.org

Highlights

This program is a joint venture between Camden County College and Lourdes Institute of Wholistic Studies in Camden. Visit www.lourdeswellnesscenter.org/wholistic-studies/ for more information.

CERTIFICATE OF ACHIEVEMENT

Massage Therapy

MAS.CA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Semester			Second Semester		
MAS-200	Therapeutic Massage ¹	6	MAS-240	Specialized Massage Techniques ¹	3
MAS-205	Environmental Management ¹	1	MAS-241	Business Management for the Massage Professional ¹	2
MAS-209	Structures & Functions I ¹	4	MAS-255	Massage Therapy Integration & Application ¹	3
MAS-211	Structures & Functions II ¹	2	MAS-260	Palpation and Kinesiology for Massage Therapy ¹	3
HPE-170	First Aid, Safety, Prevention of Injuries	3	MAS-261	Pathology for Massage Therapy ¹	4
		16	HPE-106	Stress Management	3
Summer Session					18
MAS-201	Student Massage Clinic ¹	1	Total Minimum Credits		35
		1			

¹ MAS courses are restricted to students formally admitted into the Massage Therapy Program.

NOTICE: Clinical placements are a required part of the curriculum and a requirement for graduation. Clinical placements may require a criminal background check, health clearance and/or drug testing before participation is allowed. Clinical sites may deny a student's participation in the event of a positive finding. Individuals who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding eligibility may be obtained from the appropriate credentialing body.

PROGRAM DESCRIPTION

Massage therapy is a profession in which the practitioner applies manual techniques with the intention of positively affecting the health and well-being of the client. An increasing body of research shows massage therapy reduces heart rate and can help lower blood pressure. The most common types of massage are Swedish massage, deep-tissue massage, Shiatsu-acupressure, neuromuscular, trigger point and sports massage. This program meets the state of New Jersey requirements for licensure as a massage therapist.

PROGRAM GOALS

- To provide students with the skills and knowledge needed to take the National Certification exam as set forth by the National Certification Board for Therapeutic Massage and Bodywork.
- To provide students with bodywork techniques and skills needed to be employed as a massage therapist.
- To prepare students to be successfully employed in the field of massage therapy.

SPECIAL ADMISSION REQUIREMENT

Students must be interviewed by the director of Lourdes Institute for Wholistic Studies, for entry into the program (856) 869-3134.

SPECIAL PROGRAM REQUIREMENTS

- Special lab fees for all MAS courses
- Special equipment and materials for some MAS courses

ACCREDITATION

This program meets all the standards and requirements of the 504 minimum hours of massage education which will allow the student to become certified and/or licensed by the state of New Jersey, as described by the New Jersey Board of Massage and Somatic Therapies.

EMPLOYMENT OPPORTUNITIES

- Hospitals
- Chiropractor and physician offices
- Fitness centers
- Health clubs and spas
- Sports medicine centers

CONTACT PERSONS

Professor Betty Joynes, Allied Health Coordinator
(856) 227-7200, ext. 4324
email: bjoynes@camdenc.edu

Lourdes Institute for Wholistic Studies contact:
Dr. F. Pilleggi, Director
(856) 869-3134
email: pileggif@lourdesnet.org

THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

Highlights

This program is a joint venture between Camden County College and Lourdes Institute of Wholistic Studies in Camden. All MAS courses will be taught in Camden. Please note special lab fees are required for all MAS courses. Special equipment and materials are required for this program of study.

ASSOCIATE IN SCIENCE, DIPLOMA IN NURSING

Nursing: Our Lady of Lourdes
Cooperative Nursing Program

NOL.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Semester			Third Semester (Fall or Spring)		
ENG-101	English Composition I	3	NOL-110	Health Assessment	2
BIO-211	Anatomy & Physiology I ¹ or		NOL-120	Caring for Patients Across the Lifespan I	9
BIO-117	Basic Anatomy & Physiology I	4	PSY-109	Developmental Psychology	3
CHM-101	General, Organic & Biological Chemistry I	4			14
PSY-101	Basic Psychology	3	Fourth or Fifth Semester (Fall or Spring)		
		14	HIT-110	Health Informatics	4
			NOL-130	Caring for Patients Across the Lifespan II	9
Second Semester			Fourth or Fifth Semester (Summer)		
ENG-102	English Composition II	3	NOL-215	Caring for Patients Across the Lifespan III	6
BIO-212	Anatomy & Physiology II ¹ or		PHL-232	Biomedical Ethics	3
BIO-118	Basic Anatomy & Physiology II	4	SOC-101	Introduction to Sociology	3
BIO-221	Microbiology I ¹ or	4			12
BIO-121	Basic Microbiology	4	Sixth Semester (Fall or Spring)		
HIS-101	World Civilization I	3	NOL-225	Caring for Patients Across the Lifespan IV	9
MTH-111	Introduction to Statistics	3	NOL-235	Transition to Practice	3
		17			12
			Total Minimum Credits		
					82

¹ It is highly recommended that students complete BIO-211, BIO-212 and BIO-221. Prerequisite BIO-111.

NOTICE: A criminal background check, urine, drug screen and health clearance are required of all students before entering Caring for Patients across the Lifespan I. All clinical affiliates require students to have a criminal background check, urine drug screen and health clearance before clinical experiences are permitted at their healthcare facilities. Clinical affiliates may deny a student's access to their facility in the event significant findings are discovered on the Criminal Background Check.

PROGRAM DESCRIPTION

The registered nurse (RN) is a health care professional academically and clinically prepared to care for patients in a variety of health care settings. Nurses help people to reach their full potential for optimal health maintenance and wellness throughout the life span.

PROGRAM GOALS

- To earn an Associate in Science degree from the College and a Diploma in Nursing from Our Lady of Lourdes School of Nursing.
- To prepare students to successfully pass the NCLEX-RN exam for licensure as a registered nurse.
- To provide students with a foundation in general education.
- To provide a concentration of course work appropriate for nursing.
- To ensure transferability of course work to a baccalaureate program in nursing.

PROGRAM STUDENT LEARNING OUTCOMES

1. Evaluate nursing care provided to patients across the lifespan from diverse backgrounds in a variety of settings to ensure that it is compassionate, age and culturally appropriate and based on a patient's preferences, values and needs.
2. Collaborate with members of the interprofessional healthcare team to manage and coordinate the provision of safe, quality care for groups of patients and patients with complex needs.
3. Integrate evidence based practice when managing care for individuals/families, groups of patients and patients with complex needs.

4. Use quality improvement measures to evaluate the effect of change on the delivery of patient care and on patient outcomes.
5. Demonstrate effective use of strategies to mitigate errors and reduce the risk of harm to patients, self and others in healthcare settings.
6. Use electronic resources and technology to communicate relevant patient information, manage care and mitigate errors in the provision of safe, quality patient-centered care.
7. Assimilate integrity and accountability into nursing practice that uphold established regulatory, legal, and ethical principles while providing care to individuals and families.
8. Integrate leadership and management theories and principles into practice when managing the care of individuals/families, groups of patients and patients with complex needs.
9. Evaluate the effectiveness of verbal and nonverbal communication strategies that promote effective exchange of information, development of therapeutic relationships and shared decision-making with patients and families from diverse backgrounds.

SPECIAL PROGRAM REQUIREMENTS

- Prerequisite courses must be completed PRIOR to the start of semester.
- Co-requisite courses must be completed BEFORE or WITH the assigned semester.
- Visit www.lourdesnursingschool.org

ACCREDITATION

Our Lady of Lourdes School of Nursing is accredited by the New Jersey Board of Nursing (NJBON) and the Accreditation Commission for Education in Nursing (ACEN).

CONTACT PERSONS

College Contact:
Dr. Audrey Brooks, Director of Nursing Programs
(856) 227-7200, ext. 4359
email: shansen@camdenc.edu

Nursing School Contact:
Mary Beth Sauter, BS
(856) 757-3726
email: sauterm@lourdesnet.org

ASSOCIATE IN SCIENCE

Occupational Therapy Assistant

OTA.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Semester			Second Semester		
ENG-101	English Composition I	3	ENG-102	English Composition II	3
BIO-117	Basic Anatomy & Physiology I or		BIO-118	Basic Anatomy & Physiology II or	
BIO-211	Anatomy & Physiology I ¹	4	BIO-212	Anatomy & Physiology II	4
PSY-101	Basic Psychology	3	MTH-111	Introduction to Statistics	3
SOC-101	Introduction to Sociology	3	PHL-232	Biomedical Ethics	3
.....	Diversity Humanities General Education Elective	3	PSY-109	Developmental Psychology	3
		16			16
				Total provided by Camden County College	32
				Total provided by SHRP²	42
				TOTAL PROGRAM CREDITS	74

¹ Students taking BIO-211 Anatomy and Physiology I, must successfully complete the pre-requisite requirement BIO-111 Biology I.

² The qualified credits earned from the occupational therapy assistant program at Rutgers - School of Health Related Professions (SHRP) will be transferred as a block to Camden County College to complete the Associate in Science Degree.

NOTICE: Clinical placements are a required part of the curriculum and a requirement for graduation. Clinical placements may require a criminal background check, health clearance and/or drug testing before participation is allowed. Clinical sites may deny a student's participation in the event of a positive finding. Individuals who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding eligibility may be obtained from the appropriate credentialing body.

PROGRAM DESCRIPTION

Occupational Therapy Assistants (OTAs) work to provide services to persons of all ages who are challenged by disability, trauma, and/or the aging process, helping them to participate in occupations that are necessary and meaningful, and to improve their quality of life. OTAs work under the supervision of occupational therapists in all practice settings.

The OTA program, offered by Camden County College in partnership with Rutgers-SHP, is committed to preparing Occupational Therapy Assistants as professionals who will contribute to the health and well-being of individuals, groups, and populations in New Jersey and beyond.

PROGRAM GOALS

- To provide students with a foundation in general education.
- To prepare students to enter the professional phase of the occupational therapy assistant program at Rutgers University in The School of Health Professions (SHP).
- To prepare students to function as competent OTA's in the health care related practice settings.
- To prepare students for satisfactory performance on the National Board for Certification in Occupational Therapy exam for the OTA.

PROGRAM STUDENT LEARNING OUTCOMES:

At the end of this program the graduate will be able to:

1. Communicate in both written and oral formats.
2. Apply the scientific method of inquiry to analyze problems and draw conclusions from evidence data.
3. Identify resources, obtain and critically evaluate information.
4. Model ethical professional behaviors of a healthcare professional.

SPECIAL PROGRAM REQUIREMENTS

- CCC applicants must complete all basic skills requirements.
- Contact SHP for complete admission requirements to the professional OTA program.
- Completion of prerequisite courses does not guarantee admission to the SHP-OTA professional program.
- Complete at least 16 of the specified pre-requisite credits before applying to SHP for the professional curriculum. All remaining credits must be completed for full acceptance.
- Must have a C or better in each pre-professional class at Camden and overall GPA of 2.5 or better
- At Rutgers once enrolled, must maintain 2.3 GPA.
- Applications are due November 1 for part-time studies, and June 1 for full-time studies. Full-time and part-time studies are available on the Scotch Plains campus

ACCREDITATION

The Occupational Therapy Assistant (OTA) Program at Rutgers, The State University of New Jersey is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, Suite 200 Bethesda, MD 20814-3449. ACOTE's telephone number c/o AOTA is (301) 652-AOTA

www.acoteonline.org

EMPLOYMENT OPPORTUNITIES

- Healthcare, Education and other Community Settings.

CONTACT PERSONS

College Contact:
Professor Betty Joynes, Allied Health Coordinator
(856) 227-7200, ext. 4324
email: bjoynes@camdenc.edu

Rutgers Contact:
Debra Rich, Program Assistant
Rutgers School of Health Professions
email: richd1@shp.rutgers.edu
908-889-2430
<http://shp.rutgers.edu/dept/psyr/programs/asdota/index.html>

THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID.**Highlights**

This program is a joint venture between Camden County College and Rutgers - School of Health Related Professions. Currently all OTA courses will be offered at the Scotch Plains campus.

ASSOCIATE IN SCIENCE

Liberal Arts and Sciences: Nursing: Pre-Nursing Option

PRN.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
BIO-111	Biology I - Science or Free Elective	3/4	BIO-212	Anatomy & Physiology II ¹ or BIO-118 Basic Anatomy & Physiology II ¹	4
CHM-101	General, Organic & Biological Chemistry I	4	PSY-109	Developmental Psychology	3
ENG-101	English Composition I	3	PHL-232	Biomedical Ethics	3
PSY-101	Basic Psychology	3	.....	Free Elective	3
HPE-181	Basic Life Support "C"	1			13
		14/15	Second Semester		
Second Semester			BIO-221	Microbiology I ¹ or BIO-121 Basic Microbiology ¹	4
CHM-102	General, Organic & Biological Chemistry II	4	FNS-105	Introduction to Nutrition	3
ENG-102	English Composition II	3	CSC-101	Computer Literacy	3
MTH-111	Elements of Statistics	3	SOC-101	Introduction to Sociology	3
HIS-101	World Civilization I or ENG-271 World Literature I	3	.....	Free Elective ²	3
BIO-211	Anatomy & Physiology I ¹ or BIO-117 Basic Anatomy & Physiology I ¹	4			16
		17	Total Minimum Credits		60

¹ It is highly recommended that students complete BIO-211, BIO-212, and BIO-221. Prerequisite BIO-111.

² Elective should be selected based on transfer institution's requirements.

PROGRAM DESCRIPTION

This program is designed for students who are seeking to transfer to a nursing or health science-related baccalaureate program. The successful student is academically prepared for transfer into the junior of a four-year college or university.

PROGRAM GOALS

- To provide students with a foundation in general education.
- To provide a concentration of course work appropriate for the first two years of a baccalaureate program in nursing.
- To ensure transferability of course work to a baccalaureate program in nursing and related science-based health careers.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Communicate in both written and oral formats.
2. Apply the scientific method of inquiry to analyze problems and draw conclusions from evidence and data.
3. Identify resources, obtain and critically evaluate information.
4. Model ethical professional behaviors in the role of a health care professional.

SPECIAL PROGRAM REQUIREMENTS

- Graduation from an approved secondary school or a GED is required.
- Nursing majors must attend a Nursing information session. The schedule of dates/times/locations can be found on the College webpage or by contacting S. Hansen at (856) 227-7200 ext 4359.

CONTACT PERSONS

Dr. Audrey Brooks, Director of Nursing Programs
(856) 227-7200, ext. 4359
email: abrooks@camdenc.edu

Highlights

Students graduating in this option are prepared for transfer in various nursing and allied health disciplines (such as physical therapy, physician's assistant, or occupational therapy.) CCC has transfer programs with LaSalle University, Widener University, The College of New Jersey, Thomas Jefferson University, Drexel University, Rutgers University, Thomas Edison State University, and Temple University to name a few.

ACADEMIC CERTIFICATE

Practical Nursing

NUR.CT

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
BIO-103	Human Biology ¹	3	FNS-105	Introduction to Nutrition	3
ALH-122	Certified Nurse Aide ²	4	NUR-110	Maternal/Child Practical Nursing ³	4
NUR-102	Introduction to Practical Nursing	3	NUR-116	Practical Nursing: Mental Health ³	3
HIT-120	Medical Terminology	3	BIO-121	Basic Microbiology ⁴	4
		13			14
Second Semester			Second Semester		
ENG-101	English Composition I	3	NUR-206	Practical Nursing: Adult Health II ³	7
HIT-132	Basic Pharmacology	3	NUR-210	Trends, Issues and Preparation for Licensure	3
NUR-106	Practical Nursing: Adult Health I ³	5			10⁵
PSY-101	Basic Psychology	3		Total Minimum Credits	51
		14			

¹ Students intending to enter a school of registered nursing, or completing an associate degree in Health Science, should register for Basic Anatomy & Physiology I (BIO-117) and Anatomy & Physiology II (BIO-118) or Anatomy & Physiology I (BIO-211) and Anatomy & Physiology II (BIO-212). Students must meet Camden County College prerequisites for 4-credit Biology courses.

² Students holding current and verifiable, State-issue Certified Nurse Aide (CNA) credential are awarded 4 credits for their foundational knowledge in basic nursing skills and exempted from taking ALH-122 after successfully completing a written test and pay the appropriate fees.

³ The Practical Nursing courses require significant clinical practices hours in health-care facilities with which the College holds current contracts.

⁴ Students may take Microbiology I (BIO-221), providing they meet Camden County College pre-requisites.

⁵ Students who must maintain fulltime status may wish to apply for the following courses: SOC-101 Introduction to Sociology, PHL-232 Biomedical Ethics, MTH-111 Elements of Statistics I, or CHM-101 General, Organic, & Biological Chemistry I.

NOTE: Clinical placement is a required part of the curriculum and a requirement for graduation. Clinical placement hours may be scheduled during the day, evening or weekends based on availability and approval of the clinical facility. Students must provide their own transportation to and from clinical sites. Clinical placements will require a criminal background check, health clearance and/or drug testing before participation is allowed. Clinical sites may deny a student's participation in the event of a positive finding. Individuals who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding eligibility may be obtained from the appropriate credentialing body.

PROGRAM DESCRIPTION

The Practical Nursing program at Camden County College is approved by the New Jersey Board of Nursing. This program provides the education that leads to a certificate in practical nursing and eligibility to sit for the National Council Licensure Examination for Practical Nursing. The curriculum provides students with the knowledge, technical skills, interpersonal skills and values that qualify graduates for a career in practical nursing. Content include courses in science, social science, humanities, nursing theory, lab skills training and clinical experiences in a variety of healthcare settings. General education credits earned in this program will transfer as per existing intercollegiate agreements. The Practical Nursing program can be completed within 4 semesters.

The New Jersey Board of Nursing defines license practical nurse (LPN) as one who performs tasks and responsibilities within the framework of casefinding; reinforcing the patient and family teaching program through health teaching, health counseling and provisions of supportive and restorative care, under the direction of a registered nurse or licensed or otherwise legally authorized physician or dentist.

PROGRAM GOALS

- To provide a concentration of course work appropriate for license practical nurses.
- To prepare the students to successfully pass the NCLEX-PN exam for licensure as a license practical nurse.
- To earn a certificate in practical nursing from the College.
- To prepare students to be successfully employed in multiple-care arenas.
- To support the continued academic accomplishment of students through the collaborative programs for registered nursing.
- To provide students with General Education courses.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Integrate and apply basic science, practical nursing knowledge, and skills to provide quality, holistic, safe patient-centered nursing care.
2. Participate in the development, implementation, and evaluation and revision of the nursing plan of care with other healthcare professionals.
3. Perform competencies and responsibilities of practical nursing in compliance with the NJ Board of Nursing and established professional ethics

SPECIAL PROGRAM REQUIREMENTS

All applicants must:

- Be at least 18 years of age, high school graduate, and have a GPA of 2.5
- Attend a Mandatory Nursing Information Session. The schedule of dates/times/locations can be found on the College webpage or by contacting S. Hansen at 856-227-7200 ext 4359.
- Complete the College Placement Test and get a "C" or better in all required courses.
- Provide proof of high school graduation or GED.
- Provide college transcripts.
- Submit an official copy of the Test of Essential Academic Skills (TEAS V), a scholastic aptitude assessment in the areas of Reading, Math, Science, and English. A minimum score of 58.7% is required for admission. Results must be less than 2 years old and limited to 2 attempts 30 days apart in the application period and 4 lifetime attempts.
- Maintain a grade of C or better in all nursing courses.
- Maintain a grade of C or better in all pre-requisites courses.
- Pass a physical exam; provide a clear criminal background, clear urine drug screen, proof of various immunizations,

liability insurance, and health insurance.

- The above requirements are minimum and do not guarantee acceptance into the practical nursing program. Applicants must meet the nursing department's criteria to receive provisional acceptance and enter Phase 2 of the application process. Deadline for complete files is March 31st.

EMPLOYMENT OPPORTUNITIES

- Physicians' offices
- Residential care facilities
- Community care facilities
- Nursing care facilities
- Long-term care facilities
- Home healthcare services
- Rehabilitation facilities
- Outpatient care facilities

CONTACT PERSONS

Dr. Audrey Brooks, Director of Nursing Programs
(856) 227-7200, ext. 1228, or ext. 4359
email: abrooks@camdenc.edu

Highlight

Employment of LPN's is expected to grow much faster than average in response to an increasing number of older persons with functional disabilities, consumer preferences for care in the home and community, and technological advance that make it possible to bring increasingly complex treatments into the home and community.

ASSOCIATE IN APPLIED SCIENCE

Health Science

Surgical Technology Option

SRG.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Third Semester		
ENG-101	English Composition I	3	BIO-121	Basic Microbiology	4
BIO-117	Basic Anatomy & Physiology I	4	HPE-170	First Aid and Safety	3
PSY-101	Basic Psychology	3	HIT-120	Medical Terminology	3
.....	Diversity - Humanities General Education Elective	3	SOC-101	Introduction to Sociology	3
		13	HIT-132	Basic Pharmacology	3
Second Semester					16
ENG-102	English Composition II	3	Accredited Surgical Technology Program¹		20
BIO-118	Basic Anatomy & Physiology II	4	Total Minimum Credits		62
PHL-232	Biomedical Ethics	3			
MTH.....	Mathematics General Education Elective	3/4			
		13/14			

¹ Students will receive 20 credits for their post-secondary work from a CCC approved surgical technology program, plus must complete all Camden County College courses as listed above. Students in the curriculum must follow the college's residency requirement of taking a minimum of 30 college credits at Camden County College.

PROGRAM DESCRIPTION

Surgical technologists who are graduates of an approved surgical technology program are eligible to receive college credit for their post secondary education. All applicants to this program must take a required core of courses consisting of a minimum of 39-40 credits taken at Camden County College. Surgical technologists are eligible to apply for a maximum of 22 additional college credits toward an Associate in Applied Science Health Science degree: Surgical Technology Option, through portfolio assessment.

PROGRAM GOALS

- To expand career mobility by enhancing previously acquired technical skills with biological and social science based theoretical knowledge.
- To enhance earning potential in the surgical technology field as a result of academic degree attainment.
- To provide students with a foundation in general education.
- To earn an associate degree in applied science that enables the student to find employment as a surgical technician.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Communicate in both written and oral formats.
2. Apply the scientific method of inquiry to analyze problems and draw conclusions from evidence and data.
3. Identify resources, obtain and critically evaluate information.

SPECIAL ADMISSION REQUIREMENTS

- Submission of diploma or certificate from an approved surgical technology program.
- Interview with Surgical Technology Coordinator.
- CCC students must complete the SRG.CA curriculum (listed on page 146) to be eligible for the AAS degree.
- Must complete all basic skills requirements prior to beginning the program.

EMPLOYMENT OPPORTUNITIES

- Operating rooms in general and specialty hospitals
- Outpatient surgical centers
- Labor and delivery suites
- Hospital instrument processing departments

CONTACT PERSONS

Dr. David Pilla, Coordinator
(856) 227-7200, ext. 4566
email: dpilla@camdencc.edu

Susan Hansen, Secretary
(856) 227-7200, ext. 4359
email: shansen@camdencc.edu

CERTIFICATE OF ACHIEVEMENT

Surgical Technology

SRG.CA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Semester			Second Semester		
HIT-120	Medical Terminology	3	SRG-112	Surgical Procedures I	4
SRG-100	Surgical Technology ¹	2	BIO-118	Basic Anatomy & Physiology II	4
SRG-105	Principles of Surgical Technology ¹	4	BIO-121	Basic Microbiology	4
BIO-117	Basic Anatomy & Physiology I	4	HPE-181	Basic Life Supp C-AHA	1
		13			13
			Third-Semester		
			SRG-212	Surgical Procedures II	3
			SRG-218	Clinical Rotation ²	6
			ENG-101	English Composition I	3
					12
				Total Minimum Credits	38

¹ This course is only offered in the summer semester. Students should start program courses in the summer semester.

² The Surgical Technology Clinical Rotation SRG-218 requires 40 hours per week throughout a 15-week semester during the day at an accredited affiliate site. Clinical placements may be competitive and are contingent on student performance level and acceptable course grades. Students will provide their own transportation to the clinical affiliate.

NOTICE: Clinical placements are a required part of the curriculum and a requirement for graduation. Clinical placements may require a criminal background check, health clearance and/or drug testing before participation is allowed. Clinical sites may deny a student's participation in the event of a positive finding. Individuals who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding eligibility may be obtained from the appropriate credentialing body.

PROGRAM DESCRIPTION

This certificate program will prepare students for a career in surgical technology. Graduates will earn 38 credits and demonstrate entry-level knowledge and skill in surgical case preparation and peri-operative patient care. Graduates of the program will demonstrate technical skills by assembling and preparing common equipment, supplies and instrumentation used in surgical procedures.

PROGRAM GOALS

- To provide a concentration of course work appropriate for surgical technicians.
- To prepare students to qualify to take a national examination for certification in the surgical technology field.
- To prepare students for continued academic preparation in surgical technology at the associate degree level through the College.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Integrate ethical and professional behaviors in the operating room and sterilization/central supply.
2. Apply standard operating procedures and aseptic techniques in the practice of surgical technology.
3. Integrate and apply basic science, practical knowledge and skills in the performance of surgical technology.
4. Manage procedures and processes of inventory control in sterile environment.

PROGRAM INFORMATION

- Students must achieve a grade of "C" or better in all required courses and maintain an overall GPA of 2.0.
- Clinical rotations are conducted during the daytime and encompass a minimum of 300 hours of practice.

SPECIAL ADMISSION REQUIREMENTS

- Must complete all basic skills requirements prior to beginning the program.
- Interview with Surgical Technology Coordinator.
- To attend clinical rotations, students must provide documentation of current immunizations, medical clearance, negative, 2-step PPD, Hepatitis B series or signed waiver, and any other medical clearances that may be required from the various clinical sites.
- Criminal background check.
- Students are required to abide by all College and clinical facility rules and policies.
- This is a selective program. Please see the Surgical Technology Coordinator for admission criteria.

EMPLOYMENT OPPORTUNITIES

- Operating rooms in general and specialty hospitals
- Labor and delivery suites
- Outpatient surgical centers
- Private employment by physicians
- Hospital instrument processing departments

CONTACT PERSON

Dr. David Pilla, Coordinator
(856) 227-7200, ext. 4566
email: dpilla@camdenc.edu

Susan Hansen, Secretary
(856) 227-7200, ext. 4359
email: shansen@camdenc.edu

ASSOCIATE IN APPLIED SCIENCE

Veterinary Technology

ASC.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	ASC-292	Small Animal Co-op	3
BIO-111	Biology I-Science	4	ASC-213	Laboratory Animal Science	3
MTH-100	Algebraic Concepts	4	ASC-215	Farm Animal Nursing	1
CHM-101	General, Organic, & Biological Chemistry I	4	BIO-221	Microbiology I	4
		15	ASC-236	Radiology for Veterinary Technicians	2
			ASC-240	Parasitology	3
First Year/Second Semester			Second Year/ Second Semester		
ASC-106	Office Procedures for Veterinary Technicians	2	ASC-200	Dental Techniques for Veterinary Techs	1
ASC-107	Calculations for Veterinary Technicians	1	ASC-220	Hematology for Veterinary Technicians	3
ASC-111	Animal Biology	4	ASC-235	Clinical Laboratory for Veterinary Techs	2
ASC-115	Small Animal Nursing I for Veterinary Techs	3	ASC-261	Pathology for Veterinary Techs	2
ENG-102	English Composition II	13	ASC-270	Veterinary Pharmacology	2
			ASC-214	Small Animal Nursing II	2
First Year/Third Semester			.....	Diversity - Humanities General Education Elective or	
ASC-112	Principles of Animal Husbandry	2	.....	Diversity - Social Science General Education Elective	3
CSC-101	Computer Literacy	3			15
		5			64
Total Minimum Credits					64

NOTE: Clinical placements are a required part of the curriculum and a requirement for graduation. Clinical placements may require a criminal background check, health clearance and/or drug testing before participation is allowed. Clinical sites may deny a student's participation in the event of a positive finding. Individuals who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding eligibility may be obtained from the appropriate credentialing body.

PROGRAM DESCRIPTION

Veterinary technicians work under the supervision of a veterinarian, performing clinical laboratory, diagnostic, and nursing procedures for animals.

PROGRAM GOALS

- To prepare students for employment in various animal health fields, such as small animal practices, teaching hospitals, exotic practices, and veterinary offices.
- To provide students with a foundation in general education.
- To provide a concentration of course work appropriate for Veterinary Science students.
- To provide students with both theoretical knowledge and practical skills in veterinary technology.
- To provide students with the basic principles of nursing as it pertains to veterinary offices.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Integrate and apply science and veterinary science knowledge.
2. Practice basic veterinary nursing and non-invasive medical procedures.
3. Provide humane and compassionate care to patient.
4. Present patient information in both written and oral formats.

SPECIAL PROGRAM REQUIREMENTS

- Students must complete a 300-hour supervised co-op program.
- Maintain a grade of C or better in all Veterinary Technology courses.
- Achieve a grade of C or better in college-level biology, chemistry and algebraic concepts.
- Maintain a 2.6 GPA.

SPECIAL ADMISSION REQUIREMENTS

After completion of the prerequisites with a "C" or higher, applicants must submit an online application and select Veterinary Technology as the program of choice. The application and all official transcripts must be submitted to the Office of Records and Registration between September 1 and March 1 to be considered for fall acceptance. Students submitting applications between March 2 and August 31 will be considered for the following spring semester. Applications not approved for fall will be held for spring and applicants do not need to re-apply. One class will be accepted per semester. All prerequisite courses and all documentation, including evaluation of all high school and/or college transcripts must be completed prior to the deadlines. After applying the following will then occur:

1. Review of applications by the Veterinary Technology Program Director in March and August,
2. Candidates will receive written notification of the selection decision,
3. Accepted applicants are required to attend a program orientation session to review program requirements.

Admission to the program is on a competitive basis and the completion of prerequisites and core curricular courses does not guarantee admission to the program. Since there are more applicants than there are positions, admission points will be assigned according to the applicants documented record. Criteria for selection are based on past performance and grades on core curriculum requirements. Heavy emphasis will be placed on math and science courses where applicable. Science courses that were completed five or more years prior to enrollment in the vet tech program will not be accepted for credit. Students previously accepted into the program and have not enrolled in vet tech (ASC) courses since August 2012, will be required to re-apply for the program through the application process. Preference will be given to students who have completed their core curriculum requirements at Camden County College. Vet tech courses from colleges other than CCC will not be accepted.

For more information, contact Dru Jones-Edwards at (856)-227-7200, ext. 4037.

ACCREDITATION

The Veterinary Technology program is accredited by: The Committee on Veterinary Technician Education and Activities of the American Veterinary Medical Association 1931 North Meacham Road, Suite 100 Shamburg, IL 60173-4360 (708) 925-8070

EMPLOYMENT OPPORTUNITIES

- Animal hospitals
- Biomedical laboratories
- Animal health related fields
- Retail sales in animal care

CONTACT PERSON

Peggy Dorsey, Director
(856) 227-7200, ext. 4205
email: pdorsey@camdencc.edu

Recommendations

Applicants can complete the Veterinary Exam Room Assistant certificate program and receive a two credit course reduction for the Veterinary Technology Program. More information can be obtained through the Career & Technical Institute of Camden County College; tradetraining@camdencc.edu or by calling (856) 874-6004.

ASSOCIATE IN APPLIED SCIENCE

CIP Code 51.1801

Ophthalmic Science Technology

OPH.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	OPH-203	Ophthalmic Materials Laboratory III	2
CSC-101	Computer Literacy or		OPH-220	Optic Principles	3
CIS-101	Personal Computer Applications or		OPH-232	Contact Lens Fitting I	3
CSC-102	Information Literacy in a Digital Era	3	OPH-240	Ophthalmic Dispensing I	4
MTH-100	Algebraic Concepts	4	OPH-250	Ophthalmic Clinic I	1
OPH-104	Ophthalmic Lab I	3	OPH-260	Co-op I: Ophthalmic Science	1
OPH-111	Ophthalmic Materials Lecture I	3			14
OPH-130	Anatomy of the Eye	3	Second Semester		
		19	OPH-204	Ophthalmic Materials Laboratory IV	2
Second Semester			OPH-233	Contact Lens Fitting II	3
ENG-102	English Composition II	3	OPH-241	Ophthalmic Dispensing II	4
OPH-105	Ophthalmic Lab II	3	OPH-251	Ophthalmic Clinic II	1
OPH-112	Ophthalmic Materials Lecture II	3	OPH-261	Co-op II: Ophthalmic Science	1
OPH-131	Introduction to Contact Lenses	3	OPH-270	Ophthalmic Dispensing Office Procedures	3
.....	Laboratory Science General Education Elective	4	.....	Diversity: Social Science General Education Elective or	
		16	.....	Diversity: Humanities General Education Elective	3
					17
					66
				Total Minimum Credits	

NOTICE: Clinical placements are a required part of the curriculum and a requirement for graduation. Clinical placements may require a criminal background check, health clearance and/or drug testing before participation is allowed. Clinical sites may deny a student's participation in the event of a positive finding. Individuals who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding eligibility may be obtained from the appropriate credentialing body.

PROGRAM DESCRIPTION

Opticians dispense corrective lenses to aid patients in their visual needs. This is accomplished by using scientific and clinical procedures and applying learned skills needed to successfully produce and fit top quality eyewear.

PROGRAM GOALS

- To provide students with the skills and knowledge needed to successfully complete the New Jersey State Ophthalmic Dispensing Examination, the American Board of Opticianry Examination and the National Contact Lens Examination.
- To prepare students for employment opportunities within the optical profession.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Fabricate a complete pair of eyeglasses conforming to state and ANSI standards.
2. Interpret a doctor's prescription.
3. To dispense a complete pair of eyeglasses and contact lenses from a doctor's prescription.
4. Demonstrate knowledge of spectacle lens and contact lens design through mathematical calculations.

SPECIAL PROGRAM REQUIREMENTS

- The program has an open enrollment policy; however, any applicant who does not have college-level mathematics or English must achieve satisfactory scores on the College Placement Test.
- All prospective students must schedule an interview with the Ophthalmic Science program director.
- Due to the sequential nature of the specialty courses, admission is usually limited to September.

ACCREDITATION

The Ophthalmic Science program is accredited by the Commission on Opticianry Accreditation
P.O. Box 592
Canton, NY 13617
(703) 468-0566

EMPLOYMENT OPPORTUNITIES

- Private practice
- Clinical practice
- Optical sales
- Manufacturing
- Ophthalmic laboratory technician
- Contact lens technician

CONTACT PERSON

Daniel G. Banks, Coordinator
(856) 374-5058
email: dbanks@camdencc.edu

Career Highlights

Employment opportunities in this field are expected to increase. Over the next decade the number of the middle age and elderly will increase. Public awareness of the importance of good eyesight and vision screening programs in schools is likely to stimulate the demand for eyecare.

Alumni report 90-100% employment in the field within three months of graduation.

CERTIFICATE OF ACHIEVEMENT

Ophthalmic Science Apprentice

OPH.CA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Third Year/First Semester		
OPH-104	Ophthalmic Lab I ¹	3	OPH-240	Ophthalmic Dispensing I	4
OPH-111	Ophthalmic Materials Lecture I ¹	3			4
		6	Second Semester		
Second Semester			OPH-241	Ophthalmic Dispensing II	4
OPH-105	Ophthalmic Lab II ¹	3			4
OPH-112	Ophthalmic Materials Lecture II ¹	3	Total Minimum Credits		
		6			31
Second Year/First Semester					
OPH-130	Anatomy of the Eye	3			
OPH-220	Optic Principles	3			
		6			
Second Semester					
OPH-131	Introduction to Contact Lenses	3			
OPH-203	Ophthalmic Materials Laboratory III	2			
		5			

¹ Must be taken within the first 12 months of apprenticeship

Please Note: All candidates must take the College Placement Test and complete the required courses prior to beginning course work.

NOTICE: Clinical placements are a required part of the curriculum and a requirement for graduation. Clinical placements may require a criminal background check, health clearance and/or drug testing before participation is allowed. Clinical sites may deny a student's participation in the event of a positive finding. Individuals who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding eligibility may be obtained from the appropriate credentialing body.

PROGRAM DESCRIPTION

Opticians dispense corrective lenses to aid patients in their visual needs. This is accomplished by using scientific and clinical procedures and applying learned skills needed to produce and fit top quality eyewear successfully.

PROGRAM GOALS

- To prepare students to successfully complete the New Jersey State Ophthalmic Dispensing Examination, the American Board of Opticianry Examination and the National Contact Lens Examination
- To prepare students for employment opportunities within the optical profession.

PROGRAM STUDENT LEARNING OUTCOMES

1. Fabricate a complete pair of eyeglasses conforming to state and ANSI standards.
2. Interpret a doctor's prescription.
3. Dispense a complete pair of eyeglasses and contact lenses from a doctor's prescription.
4. Demonstrate knowledge of spectacle lens and contact lens design through mathematical calculations.

SPECIAL PROGRAM REQUIREMENTS

- The program has an open enrollment policy; however, any applicant who does not have college-level mathematics or English must achieve satisfactory scores in the College Placement Test.
- All prospective students must schedule an interview with the ophthalmic science program director.
- Due to the sequential nature of the specialty courses, admission is usually limited to September.

ACCREDITATION

The Ophthalmic Science program is accredited by the Commission on Opticianry Accreditation
P.O. Box 592, Canton, NY 13617
(703) 468-0566

EMPLOYMENT OPPORTUNITIES

- Private practice
- Clinical practice
- Optical sales
- Manufacturing
- Ophthalmic laboratory technician
- Contact lens technician

CONTACT PERSON

Daniel G. Banks, Coordinator
(856) 374-5058
email: dbanks@camdencc.edu

Highlights

Employment opportunities in this field are expected to increase. Over the next decade the number of the middle-aged and the elderly will increase. Public awareness of the importance of good eyesight and vision screening programs in schools is likely to stimulate the demand for eyecare.

Alumni report 90-100% employment in the field within three months of graduation.

CERTIFICATE OF ACHIEVEMENT

CIP Code 51.1803

Ophthalmic Medical Technician

OMT.CA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Semester		
BIO-103	Human Biology	3	OMT-201	Ocular Pharmacology	1
OMT-101	Medical History Taking	1	OMT-203	Clinical Rotation I	3
OMT-103	Ophthalmic Optics	4	OMT-204	Clinical Procedures II	3
OMT-104	Clinical Procedures I	3	OPH-131	Introduction to Contact Lenses	3
OPH-130	Anatomy of the Eye	3	PSY-101	Basic Psychology	3
		14			13
Winter Intersession			Third Semester		
HPE-181	Basic Life Support "C" - AHA or		OMT-213	Clinical Rotation II	4
HPE-180	Community CPR/ARC	1			4
		1		Total Minimum Credits	32

NOTICE: Clinical placements are a required part of the curriculum and a requirement for graduation. Clinical placements may require a criminal background check, health clearance and/or drug testing before participation is allowed. Clinical sites may deny a student's participation in the event of a positive finding. Individuals who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding eligibility may be obtained from the appropriate credentialing body.

PROGRAM DESCRIPTION

Ophthalmic Medical Technicians are optical professionals that assist ophthalmologists in medical offices and/or hospitals. They perform many skilled testing procedures that are part of a complete eye exam, including history taking, refractometry (for vision correction), tonometry (for glaucoma detection) and visual field testing. Sometimes they have more specialized duties, such as contact lens fitting, or assisting in surgery.

The program is twelve months long, running from September to August. All optical classes are held ONLY on Fridays and Saturdays in the Fall semester, and ONLY on Friday in the Spring. This allows students to continue working regular jobs while attending, as well as cutting down on travel and childcare. Clinical rotations are done in ophthalmology offices near you; 310 hours in the spring and 650 hours in the summer, finishing in late August.

PROGRAM GOALS

- To provide students with the skills and knowledge needed to successfully complete the national certification by the Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO) at the Certified Ophthalmic Technician (COT) level.
- To prepare students for entry-level employment as ophthalmic medical technicians.

PROGRAM STUDENT LEARNING OUTCOMES

1. Relate eye disorders to relevant ocular anatomy and physiology.
2. Demonstrate proficiency in medical history taking.
3. Display competency in ophthalmic testing procedures and instrument use.
4. Apply principles of optics to clinical situations.
5. Design contact lenses for patients.

SPECIAL PROGRAM REQUIREMENTS

- The program has an open enrollment policy; however, any applicant who does not have college-level mathematics or English must achieve satisfactory scores on the College Placement Test.
- Due to the sequential nature of the optical courses, admission is usually limited to September.
- A maximum of 18 students per year are admitted into the Ophthalmic Medical Technician program.

ACCREDITATION

The OMT program is nationally accredited by the Commission on Accreditation of Ophthalmic Medical Programs.

EMPLOYMENT OPPORTUNITIES

- Ophthalmology offices
- Eye clinics
- Hospital ophthalmic clinics/offices
- Universities
- Contact lens practices

CONTACT PERSON

Daniel G. Banks, Coordinator, Ophthalmic Science
(856) 374-5058
email: dbanks@camdencc.edu

Jessica Barr, Coordinator, Ophthalmic Medical Technician
jmbarr@faculty.camdencc.edu

Highlights

Ophthalmic medical personnel are in high demand. There are currently more opportunities for qualified individuals than there are people to fill them. Technological advances and the aging population have combined to create a steadily increasing demand for certified technicians.

Returning Healthcare Professionals

CTI

HEALTH SCIENCE

Allied health paraprofessionals who have earned a certificate or license may be eligible to receive college credit for their accredited, post secondary education. Students may transfer college credit to four- year institutions or use the degree for career advancement.

- Students may earn a minimum of 22 to a maximum of 28 credits for completing a post secondary, accredited allied health program.
- The credits awarded are based on the number of hours spent in training at an

- accredited allied health program recognized by Camden County College.
- To earn the Associate in Applied Science degree, students must complete the courses listed in the Health Science program curriculum at Camden County College.
 - Students must review their portfolio assessment with the coordinator to be eligible to be a health science major.

Lee Ann Havey, Administrative Associate (856) 227-7200, ext 4468
lhavey@camdencc.edu

Animal Care

CTI

VETERINARY EXAM ROOM ASSISTANT

This program is intended for anyone interested in the welfare of animals as well as those who wish to pursue exam room assisting as a career. Course content includes ethics, front desk operations, communication and client relations, medications and pharmacy protocol, exam room procedures, prep room protocols, small animal nursing, introduction to laboratory procedures and radiology.

The program also includes clinical hours each week at a local shelter.

This program is eligible for Camden County College credits, equivalent to Office Procedures for Veterinary Technicians (ASC-106) pending acceptance into the Veterinary Technician program and approval by the Director.

CE.PRO 122

Hours: 200

CEUs: 20.0

Healthcare

CTI

CERTIFIED/REGISTERED MEDICAL ASSISTANT

This 720 hour program at the Camden County Career Institute is structured to provide all of the competencies necessary to pass the RMA (Registered Medical Assistant) exam. This program is designed to train students as a multi-skilled person who will assist the physician in patient-care management and education. Students will learn to perform a variety of administrative and clinical duties. Venipuncture, vital signs, urinalysis procedures, sterilization techniques and hematology are examples of the clinical duties expected of a Medical Assistant. Administrative competencies such as, medical insurance management, and billing procedures are also a requirement of this occupation.

Students will learn:

- Anatomy and Physiology
- Medical Terminology
- Clinical Office Procedures
- Diagnostic Procedures
- Hematology
- Urinalysis
- Microbiology

Externship is an integral part of the program. Students are assigned to a clinical externship for five weeks. During this rotation, the student will use the skills and information learned in the classroom to work in actual clinical settings with real patients. There is no remuneration for externship. It is a continuation of class studies. The graduates of the Medical Assistant Program at the Career & Technical Institute will be eligible to take the RMA certification examination upon graduation. The RMA (Registered Medical Assistant) is administered by American Medical Technologists (AMT), who are accredited by the National Commission for Certifying Agencies (NCCA), a recognition only given to organizations meeting rigorous NCCA Standards. All AMT members are considered "certified" once they receive a passing grade on the certification exam. Upon successful completion of the program students may seek employment as a Medical

Assistant in a doctor's office or hospital-based practice, as a multi-skilled health care provider in a hospital, as a medical receptionist, or hospital admissions or record room clerk Employment may also be found in a pharmaceutical company or insurance company.

This program is articulated with Camden County College's Associates in Applied Science - Certified Medical Assistant Option (CMA.AAS). Students, who success fully complete this program and earn their MA Certification, are eligible to apply for up to 23 credits, via portfolio assessment, toward the CCC associates in health science degree.

Admission Requirements:

- Students must come into Career & Technical Institute's Office to pick up a registration packet. Online registration will not be accepted for this program.
- Students must be high school graduates or possess a GED to enroll in the program.
- Students must be proficient in Word Processing.
- Students must obtain a flu shot and show proof of the date the shot was administered.
- Students must have a 2-step PPD and a note from their doctor indicating they are in good health. The College cannot accept testing that was completed over six months ago.
- CPR Certification is mandatory and is included as part of the program.
- Students must be able to pass a criminal background check prior to externship.
- No information session required for admission

Location: Camden County College, Camden Campus

CE.TRD-030

Hours: 720

CEUs: 72.0

DIALYSIS TECHNICIAN

This 600 hour program is designed to prepare the student for an entry-level position as a Hemodialysis Technician trainee. The program will allow the graduate to progress through a standard dialysis facility orientation program at an accelerated rate by providing an extensive theoretical knowledge base and clinical/technical practice in a laboratory setting. Dialysis clinic visitations will be scheduled for the purpose of observation and clinical conference. Courses to provide basic knowledge related to Nursing Principles and Practice, Anatomy and Physiology and Medical Terminology will be included in the curriculum as well. The Hemodialysis Technician is an important member of the Renal Care Team. Responsibilities include performance of routine dialysis procedures and patient care under the direction of a Nephrologist and supervision of an R.N.

Students will learn:

- Renal Theory
- Clinical Renal Practice ~ Lab
- Nursing Principles for Dialysis Technicians
- Anatomy and Physiology
- Medical Terminology
- Phlebotomy
- EKG

Graduates of the Dialysis Technician program at the Career & Technical Institute of Camden County College are eligible to take the internationally recognized CHT (Certified Hemodialysis Technician) exam through BONENT, no externship or work experience is required for this certification for graduates of CTI of CCC's Dialysis Technician program. In addition, students are eligible to take the CCHT (Certified Clinical Hemodialysis Technician) exam, through the Nephrology Nursing Certification Commission (NNCC) upon completion of externship or work experience.

Upon successful completion of the program, students may seek employment in dialysis facilities, hospitals and ambulatory centers. Employment with vendors who provide dialysis products is possible as well.

In addition, students will be considered for inclusion in an unpaid externship, where they will have the opportunity to gain work-place experience at one of the industry's leading dialysis centers. Acceptance into the externship program will be determined following a standard interview process. Please note: placement is not guaranteed and will be awarded per the discretion of the dialysis facility.

This program is articulated with Camden County College's Associates in Applied Science- Health Science Option (HSC.AAS). Students, who successfully complete this program, are eligible to apply for up to 28 credits, via portfolio assessment, toward the CCC associates in science degree.

Admission Requirements

- Students must come into Camden County College's office of Workforce Training & Continuing Education to pick up a registration packet. Online registration will not be accepted for this program.
- Students must be high school graduates or possess a GED to enroll in the program. Prior to enrollment, students must provide proof of one of the following: High School diploma, GED, High School transcript with graduation date noted, or college transcript.
- Students must have a 2-step PPD and a note from their doctor indicating they are in good health. The College cannot accept testing that was completed over six months ago.
- Students must have a Titers Test for Hepatitis B and Hepatitis C.
- CPR Certification is mandatory and is included as part of the program.
- Students must be able to pass a Criminal background check prior to externship, if selected.
- No information session is required for admission to this program.

Location: Camden County College Regional Emergency Training Center, Blackwood and Camden County Technical School, Sicklerville Campus

CE.TRD-070

Hours: 650

CEUs: 65.0

PATIENT CARE TECHNICIAN (FORMERLY MST)

The Patient Care Technician Program focuses on building a complete and solid foundation for students in classroom theory, lab, and hands-on clinical components. Students will become competent in basic patient care skills; learn basic review the key concepts of anatomy and physiology; cardiac function; performing EKG; phlebotomy; basic nursing care; nutrition; therapeutic communication; and critical thinking. Individuals prepared through the Patient Care Technician program may seek employment in acute care hospitals, sub-acute care facilities, outpatient laboratories, cardiac rehabilitation centers, and various medical providers.

Admission requirements (to be completed prior to registration):

- Students must come in to Camden County College's office of Workforce Training & Continuing Education to pick-up a registration packet. Online registration will not be accepted for this program.
 - Students must be high school graduates or possess a GED
 - Students must be 18 years of age
 - Students must maintain their own health insurance.
- FORMS FOR PHYSICAL/IMMUNITIES/BACKGROUND CHECK/LIABILITY WILL BE PROVIDED AT THE SCHEDULED INFORMATION SESSION
- Students will maintain their own liability insurance.
 - Student physical must be completed by doctor or nurse practitioner indicating they are in good health and meet the requirements for the course. We cannot accept physicals that were completed over six months ago.
 - Students are expected to have several immunizations or be immune prior to registration.

This can be done at your doctor's office.

- Students must have a 7 panel drug test completed prior to registration.
- Students must have a 2-step PPD. The PPD must consist of the following: students must go to the doctor to receive the first injection and then return within 48-72 hours to have it read by their practitioner. The second PPD must be completed within 7-21 days after the 1st and read within 48-72 hours. There must be proof from your doctor's office of completion of both. PPD's are good for one year.
- Students must pass criminal background check.
- Students are required to attend every class, lab and every clinical. Exceptions cannot be made nor are refunds given to those who violate this requirement.
- In addition to class time, clinical is pre-scheduled and must be completed. Clinical may be at a different day or time than the class hours and students must be flexible in meeting this requirement.
- Students are responsible in purchasing the required textbook and uniform. Details will be given on these requirements at the time of registration.
- Students are expected to be professional while attending class, lab and clinical setting. Inappropriate behavior will not be tolerated and will result in the student being removed from the class, lab and clinical site and the program without refund.
- No information session is required for admission to this program.

CE.ALH 056

Hours: 183

CEUs: 18.3

Please note: clinical placement is not guaranteed and will be awarded per the discretion of the clinical facility.

CERTIFIED NURSING AIDE (CNA)

The New Jersey Department of Health and Senior Services regulates this professional certification program, which is designed to instruct students in the fundamentals of nursing care and philosophy. The program follows a series of modules designed to build skill competency and theory within the nurse aide student. Certified Nurse Aides (CNAs) may practice in long-term care facilities, hospitals, rehabilitation centers, and sub-acute facilities. Both the classroom theory and practicum components incorporate such topics as health and disease processes, therapeutic and technical procedures, vital signs, hygiene and grooming care, nutrition and hydration, infection control, restorative care, observation and reporting, psychosocial care skills, caring for residents with Alzheimer's Disease and ethical behavior.

Admission requirements (to be completed prior to registration):

- Students must be high school graduates or possess a GED
 - Students must be 18 years of age
 - Students must maintain their own health insurance.
- FORMS FOR PHYSICAL/IMMUNITIES/BACKGROUND CHECK/LIABILITY WILL BE PROVIDED AT THE SCHEDULED INFORMATION SESSION
- Students will maintain their own liability insurance.
 - Student physical must be completed by doctor or nurse practitioner indicating they are in good health and meet the requirements for the course. We cannot accept physicals that were completed over six months ago.
 - Students are expected to have several immunizations or be immune prior to registration.
- This can be done at your doctor's office.
- Students must have a 9 panel drug test.
 - Students must have a 2-step PPD. The PPD must consist of the following: students must go to the doctor to receive the first injection and then return within 48-72 hours to have it read by their practitioner. The second PPD must be completed within 7-21 days after the 1st and read within 48-72 hours. There must be proof from your doctor's office of completion of both. PPD's are good for one year.
 - Students must pass criminal background checks.
 - Students are required to attend every class, lab and every clinical. Exceptions cannot be made nor are refunds given to those who violate this requirement.
 - Students must complete each module in order to progress to the next module.
 - In addition to class time, clinical pre-scheduled and must be completed. Clinical schedule will be announced at the start of class.
 - Students are expected to be professional while attending class, lab and clinical setting. Inappropriate behavior will not be tolerated and will result in the student being removed from the class, lab and clinical site and the program without refund.
 - Students are also expected to purchase the required textbook and uniform. Details will be given on these requirements at the time of registration.

Students can pick up a packet at the Camden Campus in College Hall, suite 228 or at the Blackwood Campus in Halpern Hall, suite 117. Information sessions are held through the semester. At these sessions the students get valuable information on the program as well as a packet with guidance. It is highly recommended that a student attend one of these sessions. Students are expected to be professional in class, lab and clinical setting. Inappropriate behavior will not be tolerated and will result in the student being removed from the program without refund. After successful completion of the program, students are eligible to take the skills and written test for state certification. The \$76.00 certification fee is separate from program's tuition.

The CNA registration packet is available at the Information Session. Completed packets should be returned to: College Hall if taking the course in Camden or Kevin G. Halpern Hall for Science & Health Education, Room 329 if taking the course in Blackwood.

4 college credits apply.

ALH 122

Hours: 90

PHARMACY TECHNICIAN

Upon completion of this course, students will be prepared to sit for the Pharmacy Technician Certification Board exam as well as be in a competitive position to seek employment in the field. Course content will include pharmacy law, interpreting prescriptions and computer entry, defining drugs by brand and generic names, ethics, inventory control, routes of administration, and side effects of medications. This course will also focus on mathematic calculations as they relate to dosage conversations and calculations and IV flow rates. It is suggested that individuals have a high school diploma or GED to enter the program due to the reading and math requirements of the course. Students are asked to bring a calculator to class.

CE.ALH 009

Hours: 72

CEUs: 7.2

CRITICAL CARE TECHNICIAN

Taking patient care technicians to a more intense level by preparing graduates to work in an ICU environment. Students can expect to learn: Arterial and Central Venous pressure line set-up, Ventriculostomy set-up, swan-ganz catheter set-up, advanced airway and infection control, advanced wound staging and care, drips and drugs used in critical care, arctic sun and zoll hypothermia set-up, and theory for invasive hemodynamic monitoring.

Prerequisite:

Minimum requirements - HS Diploma or GED and successful completion of one of the following programs: Certified/Registered Medical Assistant, Dialysis Technician, Multi Skilled Technician, Patient Care Technician or hold the affiliated certifications.

CE.TRD 035

Hours: 49

CEUs: 4.9

CAREER & TECHNICAL INSTITUTE OF CAMDEN COUNTY COLLEGE

856-874-6004

tradetraining@camdenc.edu

www.camdenc.edu/ce

Human Services: Development Disabilities Option

DEV.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	HSR-102	Social Work Processes	3
HSR-101	Introduction to Human Services	3	HSR-103	Introduction to Counseling	3
PSY-101	Basic Psychology	3	HSR-152	Health Issues Across The Life Span	3
SOC-101	Introduction to Sociology	3	HPE-180	Community CPR/American Red Cross	1
.....	Humanities General Education Elective ¹	3	MTH.....	Mathematics General Education Elective ² or	
		15	.....	Laboratory Science General Education Elective or	
			.....	Technology General Education Elective	3/4
			.....	Diversity General Education Elective ⁴	3
Second Semester			Second Semester		
ENG-102	English Composition II	3	HSR-105	Group Dynamics	3
HSR-151	Survey in Developmental Disability	3	HSR-107	Field Work ⁵	3
MTH...	Mathematics General Education Elective ²	3	HSR-153	Developmental Disabilities Program Planning	3
.....	Humanities General Education Elective ¹	3	HSR-154	Critical Issues in Developmental Disabilities	3
.....	Laboratory Science General Education Elective ³	4	POL-101	Introduction to Political Science or	
		16	POL-103	American Federal Government	3
					15
					62
				Total Minimum Credits	

¹ 1 Language General Education Elective Recommended for Students transferring to Rutgers School of Social Work & Richard Stockton College

² MTH-111 & MTH-107 Recommended for Students transferring to Rutgers School of Social Work & Richard Stockton. (MTH-111 is a prerequisite for Rutgers School of Social Work)

³ BIO-111 is recommended for Richard Stockton College

⁴ ENG-271 or HIS-101 is recommended for Rutgers School of Social Work and Richard Stockton College.

⁵ Students must get permission from coordinator before registering for this course. This course will place students in a clinical setting and must be taken in their last semester prior to graduation.

NOTICE: Clinical placements are a required part of the curriculum and a requirement for graduation. Clinical placements may require a criminal background check, health clearance and/or drug testing before participation is allowed. Clinical sites may deny a student's participation in the event of a positive finding. Individuals who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding eligibility may be obtained from the appropriate credentialing body.

PROGRAM DESCRIPTION

The Option program in Developmental Disabilities (DEV.AS) is designed for students who are presently working for agencies who provide services to the developmentally disabled, such as Bancroft Neuro-Health facilities or for the student who has a desire to pursue a career working with this population. This curriculum partners with the Bancroft Neuro-Health Clinical Facility to prepare students with clinical and educational skills to be able to work directly with children and adults who suffer from physical and mental disabilities, such as Autism, Asperger's, Rett's, Childhood Disintegrative, Attention-Deficit and Disruptive Behavior Disorders. Students who graduate with this associate degree may have opportunities to work in public and private schools or rehabilitation therapy centers.

PROGRAM GOALS

- To prepare students to transfer to a four-year program at colleges such as Stockton and Rutgers Camden. Articulation agreements will be developed with both schools.
- To provide a foundation of knowledge and skills required to work at an entry-level neuro-clinical facility such as Bancroft and in other related field areas working with developmentally disabled clients.
- To enhance and expand skills and knowledge for those currently employed in a clinical setting.
- To prepare students without working experience for a career working with the developmentally disabled.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Demonstrate knowledge of the federal disability laws pertaining to persons with developmental disabilities.
 2. Identify age appropriate behavior including social, educational and occupational skills, pertaining to physical and mental disabilities.
 3. Apply treatment and rehabilitation effort for individual clients based on their personal histories, developmental factors, and current medical – psychiatric condition.
 4. Demonstrate the ability to behave in a professional and ethical manner.

SPECIAL PROGRAM REQUIREMENT

- All applicants must:
- Complete an application for Camden County College
 - Complete all basic skills requirements
 - Physical examination and background check may be required for some field work placement
 - Students must successfully complete HSR-101 and HSR-103 prior to registering for HSR-107

EMPLOYMENT OPPORTUNITIES

- NeuroHealth public and private facilities
- Teacher's assistants in schools of special education
- Rehabilitation therapy assistants
- Recreation facilities
- Rehabilitation centers

TRANSFER OPPORTUNITIES

Students in this program transfer to many institutions including:
 Rutgers University School of Social Work
 Thomas Edison State College of New Jersey
 University of Nevada
 Niagara University Developmental Disabilities Online
 Minot State University

CONTACT PERSON

Professor Fatemah Sedighi, Coordinator
 (856) 227-7200, ext. 4535
 email: fsedighi@camdencc.edu

Note

Students should contact coordinator of Human Services for advisement and selection of general education electives to assure ease of transfer.

Human Services

HSR.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	HSR-102	Social Work Processes	3
HSR-101	Introduction to Human Services	3	HSR-103	Introduction to Counseling	3
PSY-101	Basic Psychology	3	MTH....	Mathematics General Education Elective ² or	
SOC-101	Introduction to Sociology	3	.....	Laboratory Science General Education Elective or	
.....	Humanities General Education Elective ¹	3	.....	Technology General Education Elective	3/4
		15	.....	General Education Elective ⁴	3
Second Semester			.....	Diversity General Education Elective ⁵	3
ENG-102	English Composition II	3	HPE....	Health & Exercise Science Elective	1
HSR-104	Contemporary Issues in Social Welfare	3			16/17
MTH...	Mathematics General Education Elective ²	3	Second Semester		
.....	Humanities General Education Elective ¹	3	HSR-105	Group Dynamics	3
.....	Laboratory Science General Education Elective ³	4	HSR-107	Field Work ⁶	3
		16	POL-101	Introduction to Political Science or	
			POL-103	American Federal Government	3
			.....	General Education Elective ⁷	3
			.....	General Education Elective ⁷	3
					15
					62
			Total Minimum Credits		

¹ Language General Education Elective Recommended for Students transferring to Rutgers School of Social Work & Richard Stockton College.

² MTH-111 & MTH-107 Recommended for Students transferring to Rutgers School of Social Work & Richard Stockton. (MTH-111 is a prerequisite for Rutgers School of Social Work)

³ BIO-111 is recommended for Richard Stockton College

⁴ BIO-103 is a prerequisite for Rutgers School of Social Work.

⁵ ENG-271 or HIS-101 is recommended for Rutgers School of Social Work and Richard Stockton College.

⁶ Students should only register for this course in their last semester prior to graduation.

⁷ HIS-101 or HIS-102, or ART Gen Ed. Elective, or PHL-101, 131, 232 are recommended courses

NOTICE: Clinical placements are a required part of the curriculum and a requirement for graduation. Clinical placements may require a criminal background check, health clearance and/or drug testing before participation is allowed. Clinical sites may deny a student's participation in the event of a positive finding. Individuals who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding eligibility may be obtained from the appropriate credentialing body.

PROGRAM DESCRIPTION

Human services encompass a wide spectrum of community work designed to help people. Human services professionals work in mental health organizations, developmental disability services, substance abuse programs and multi-service centers.

PROGRAM GOALS

- To prepare students to qualify for transfer to various baccalaureate programs in human services or other related social service fields.
- To provide students with the beginning competencies in the field of human services.
- To prepare students to work with specific population groups and in different practice situations.
- To provide students with the knowledge of available human services delivery systems in the community where the student works and lives.
- To prepare the student to demonstrate a commitment to the promotion of the human services field while maintaining the integrity of a professional according to the ethical codes of the human services professional organizations.
- To provide the students with communication and listening skills to help clarify client's needs as well as oral and written communication skills to enhance agency, institution, and community needs.
- To prepare the students to link the community systems with people systems that provide them with resources, services, and opportunities for improving social functioning.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Analyze contemporary social welfare issues affecting American society.
2. Behave in a professional and ethical manner.
3. Explain and use elements of effective working relationships encompassing the ideals of empathy, positive communication and active listening.
4. Differentiate between various types of services within the social welfare system.

TRANSFER OPPORTUNITIES

Many of our students go on to earn bachelor's degrees in human services. Students transferring to Rutgers University and expecting to major in social work will need to also apply separately to the School of Social Work. Students will be required to do a 120-hour internship with a social welfare agency during the second year, second semester. The most popular transfer destinations include:

- Rutgers University School of Social Work
- Rutgers University Liberal Arts Program
- New Jersey City University
- Rowan University
- The Richard Stockton College of New Jersey
- Thomas Edison State College of New Jersey

EMPLOYMENT OPPORTUNITIES

- Social service
- Early childhood
- Community work
- Probation
- Rehabilitation
- Mental health
- Gerontology
- Corrections
- Addictions

CONTACT PERSON

Professor Fatemah Sedighi, Coordinator
(856) 227-7200, ext. 4535
email: fsedighi@camdenc.c.edu

Highlights

The courses transfer to baccalaureate programs in human services or other related social service fields.

Over 50% of human services students get hired as a result of their internship in social welfare agencies throughout the Delaware Valley.

Liberal Arts and Science: Psychology Option

PSY.AA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	SPE-102	Public Speaking	3
HIS-111	Western Civilization I or		PSY....	Psychology Course ³	3
HIS-101	World Civilization I	3	.....	Laboratory Science General Education Elective ⁴	4
MTH-107	Mathematics for Liberal Arts ¹ or		.....	Diversity General Education Elective	3
MTH-114	College Algebra for Business & Social Science ¹ or		.....	Social Sciences General Education Elective (Not a Psychology course)	3
MTH-123	Precalculus Mathematics I ¹	3/4			
PSY-101	Basic Psychology	3			
.....	Language General Education Elective ²	3			
		15/16			16
Second Semester			Second Semester		
ENG-102	English Composition II	3	MTH-111	Introduction to Statistics I or	
HIS-112	Western Civilization II or		MTH-171	Statistics I ¹	3
HIS-102	World Civilization II or		PSY....	Psychology Course ³	3
HIS-103	World Civilization III	3	.....	Humanities General Education Elective ⁵ (Not a History or Language course)	3
PSY....	Psychology Course ³	3	.....	Free Elective	3
.....	Technology General Education Elective	3	.....	Free Elective	3
.....	Language General Education Elective ²	3			
HPE....	Health & Exercise Science Elective	1			
		16		Total Minimum Credits	62

¹ Students are advised to check with their transfer institution or an advisor to determine proper math sequence for transfer.

² French, German, Italian, Russian or Spanish Elective is recommended. See Course Descriptions for requisites on placement.

³ Any Psychology course other than PSY-101

⁴ The following laboratory science courses are recommended for non-science majors: BIO-106, BIO-130, BIO-140, CHM-140, PHY-103

⁵ ENG-271-World Literature I is recommended.

PROGRAM DESCRIPTION

This program provides students with a concentration of course work in the science of psychology appropriate for a psychology major in addition to a foundation in general education.

PROGRAM GOALS

- To provide students with a foundation in general education.
- To provide a concentration of course work appropriate for a psychology major.
- To ensure transferability of course work to four-year colleges and universities.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Describe major historical contributors to the discipline of psychology.
 2. Compare and contrast different schools of psychology.
 3. Apply elements of non-verbal communication
 4. Describe the methods of research used in psychology.

SPECIAL PROGRAM INFORMATION

Students in this program may select any psychology course to fulfill a psychology elective or they may select a thematic cluster of courses such as:
 Life-Span-related courses (PSY 105,-106,-107,-108),
 Mental Health-related courses (PSY 102,-104,-108);
 or, Work-related courses (PSY 110,-111,-112).

CONTACT PERSONS

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Dr. Marie English
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 email: menglish@camdencc.edu

Dr. Frank Mitchell
 (856) 227-7200, ext. 4482
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Dr. Allyson Meloni
 (856) 227-7200, ext. 4331
 email: ameloni1@camdencc.edu

Highlights

Qualified students in the program are encouraged to join the College's Chapter of the Psi Beta National Honor Society in Psychology which is a member of the Association of College Honor Societies.

Addictions Counseling

ADD.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ADD-101	Introduction to Addictions*	3	ADD-111	Psycho-Social Aspects of Alcoholism & Drug Addiction*	3
ENG-101	English Composition I	3	HSR-102	Social Work Processes*	3
HSR-101	Introduction to Human Services*	3	HSR-105	Group Dynamics*	3
PSY-101	Basic Psychology	3	PSY-104	Abnormal Psychology	3
SOC-101	Introduction to Sociology	3	HPE.....	Health & Exercise Science Elective	3
		15			15
Second Semester			Second Semester		
ADD-102	Professional Development in Addictions Counseling *	3	ADD-112	Assessment & Treatment of Alcoholism & Drug Addiction*	3
ENG-102	English Composition II	3	HSR-107	Field Work ¹	3
HSR-103	Introduction to Counseling*	3	.....	Diversity General Education Elective	3
MTH....	Mathematics General Education Elective or Laboratory Science General Education Elective	3/4	.....	Free Elective	3
.....	General Education Elective	3	.....	Free Elective	3
		15/16			15
			Total Minimum Credits		60

* These 8 courses meet educational requirements for NJ State Certifications and Licensing in Alcohol and Drug Counseling.

¹ Field Work (HSR-107) should only be taken in the last semester before graduating.

PROGRAM DESCRIPTION

Addiction counselors help individuals and families to deal with alcohol and drug treatment issues through services such as case management, assessment, prevention education, crisis intervention, community resource referrals, individual and group counseling, stress management and relapse prevention.

PROGRAM GOALS

- To provide a formal educational path within higher education for students who want a human services career in addictions counseling.
- To provide training in order to facilitate entry-level employment.
- To upgrade the marketable skills of students in the addictions field.
- To provide a credential in the form of an academic degree to those students who complete the program.
- To prepare students to apply for licensure as a Clinical Alcohol and Drug Counselor or certification as an Alcohol and Drug Counselor (ADC) granted by the NJ State Board of Marriage and Family Therapy.
- To provide a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Analyze contemporary preventative assessment and treatment strategies for licit and illicit substance use.
2. Imitate evidence of professional and ethical behavior in the field of addictions counseling.
3. Explain and use elements of effective working relationships encompassing the ideals of empathy, positive communication and active listening.

ACCREDITATION

The Addictions Counseling program is an approved educational provider through:

The Addictions Professional Certification Board of New Jersey, Inc.
 4 Cornwall Drive, Suite 103
 East Brunswick, New Jersey 08816
 Phone: (732) 390-5900
 email: info@certbd.com

TRANSFER OPPORTUNITIES

Earn both associate and bachelor's degree (A.A.S. and B.S.H.S.): Students in this special program offered in partnership with **Thomas Edison State College of New Jersey** complete a maximum of 80 credits here in specified courses and the remaining 40 credits through Thomas Edison State College. The latter can be completed in different formats, such as at-home guided study courses, N.J. Public TV courses, on-line courses and contract learning courses with individual faculty.
 Contact: (888) 442-8372 (toll free) or (609) 984-1150
 email: info@tesc.edu

MCP Hahnemann University also accepts students into their Bachelor of Science degree programs in Behavioral and Addictions Counseling. Contact: (888) 442-8372 or (215) 762-7000 for more details.

Students may transfer up to 91 credits to Bachelor of Science Degree in Behavioral Health Counseling at **Drexel University**.
 Dr. Ron Comer, Department Chair
 (267) 359-5569, email: rc37@drexel.edu
 Drexel University College of Nursing and Health Professions Behavioral Health Counseling Department

EMPLOYMENT OPPORTUNITIES

Graduates of the program will be able to find employment opportunities in a variety of settings, to include:

- Caseworker/Case manager
- Community organizer
- Crisis intervention worker
- Drug and alcohol counselors
- Group facilitator
- Human services worker
- Intake worker
- Job coach counselors
- Life skills counselors
- Outreach worker
- Public health educator
- Rehabilitation counselor
- Residential counselor
- Social worker's aide
- Youth worker counselor

CONTACT PERSON

Professor LeRoy Stanford, Coordinator
 (856) 227-7200, ext. 4546
 email: lstanford@camdencc.edu

Highlights

Certified alcohol and drug counselors are critical members of both mental health and educational teams.

Addictions Counseling

ADD.CA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Semester		
ADD-101	Introduction to Addictions	3	ADD-102	Professional Development in Addictions Counseling	3
HSR-101	Introduction to Human Services	3	ADD-111	Psycho-Social Aspects of Alcoholism & Drug Addiction	3
HSR-103	Introduction to Counseling	3	ADD-112	Assessment & Treatment of Alcoholism & Drug Addiction	3
HSR-105	Group Dynamics	3	HSR-102	Social Work Processes	3
		12			12
				Total Minimum Credits	24

These 8 courses meet educational requirements for NJ State Certification and Licensing in Alcohol and Drug Counseling.

PROGRAM DESCRIPTION

Addiction counselors help individuals and families to deal with alcohol and drug treatment through services such as management, assessment, prevention education, crisis intervention, community resource referrals, individual/group counseling, stress management and relapse prevention.

PROGRAM GOALS

- To provide a formal educational path within higher education for students who want a human service career in addictions counseling.
- To provide training in order to facilitate entry-level employment.
- To upgrade the marketability skills of students in the addictions field.
- To prepare students to apply for licensure as a Clinical Alcohol and Drug Counselor (CADC) granted by the N.J. State Board of Marriage and Family Therapy.

ACCREDITATION

The addictions counseling program is an approved educational provider through: The Addiction Professional Certification Board of New Jersey, Inc. 4 Cornwall Drive, Suite 103 East Brunswick, NJ 08816 Phone: (732) 390-5900 email: info@certbd.com

EMPLOYMENT OPPORTUNITIES

- Drug and alcohol counselor
- Job coach
- Intake worker
- Public health educator
- Rehabilitation counselor
- Crisis intervention worker
- Group facilitator
- Life skills counselor
- Youth worker counselor
- Caseworker/Case manager

CONTACT PERSON

Professor LeRoy Stanford, Coordinator
(856) 227-7200, ext. 4546
email: lstanford@camdencc.edu

Highlights

Certified Alcohol and Drug Counselors are critical members of both mental health and educational teams.

Social Services

SSR.CT

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year / First Semester			Second Year/First Semester		
ENG-101	English Composition	3	HSR-104	Contemporary Issues (3 credits) or	
HSR-101	Introduction to Human Services	3	BHC-104	Family, Community & the Law ¹ (1 credit) or	
PSY-101	Basic Psychology	3	HSR-154	Critical Issues in Developmental Disabilities ² (3 credits)	1/3
BHC-101	Brain Function, Injuries, and Treatment ¹ or		HSR-107	Field Work	3
HSR-151	Survey in Developmental Disability ²	3			4/6
		12		Total Minimum Credits	28
First Year/Second Semester					
HSR-105	Group Dynamics	3			
HSR-103	Introduction to Counseling	3			
BHC-103	Applied Behavioral Analysis ¹	3			
HSR-102	Social Work Processes or				
BHC-102	Emotional and Behavioral Disorders ¹ or				
HSR-152	Health Issues Across the Life Span ²	3			
SOC-101	Introduction to Sociology or				
BHC-103	Applied Behavioral Analysis ¹				
HSR-153	Developmental Disabilities Program Planning ²	3			
		12/15			

¹ Students who are focused on Behavioral Health Care will required to take BHC-101, BHC-102, BHC-103 and BHC-104.

² Students who are focused on Developmental Disabilities are required to take HSR-151, HSR-152, HSR-153 and HSR-154.

Note: This Certificate Program is open to all applicants.

Note: Courses from this program may be used toward the completion of the following degrees: HSR.AS, DEV.AS, and ADD.AAS.

Candidates who have a DHS Certificate of Competency in Child Protective Services should contact the coordinator of this program.

NOTICE: Clinical placements are a required part of the curriculum and a requirement for graduation. Clinical placements may require a criminal background check, health clearance and/or drug testing before participation is allowed. Clinical sites may deny a student's participation in the event of a positive finding. Individuals who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding eligibility may be obtained from the appropriate credentialing body.

PROGRAM DESCRIPTION

The certificate program is designed for students who are seeking careers in the social services field including developmental disabilities and Behavioral Health care.

PROGRAM GOALS

- To provide educational and clinical skills for students who do not have prior experience in the field of social services including developmental disabilities and behavioral health care, and for current caregivers who plan to continue working in the social services field and in related areas.
- To provide transfer credits into associate and/or baccalaureate level programs in related fields.
- To prepare students to show evidence of professional, legal and ethical behavior in the field of social services.
- To provide students with General Education courses.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of program the graduate will be able to:

1. Adapt individualized care plans based on the clients' emotional and physical needs.
2. Demonstrate understanding of the professional Code of Ethics in the role of a Human Services worker.
3. Demonstrate knowledge of governmental laws and policies pertaining to social services field.
4. Demonstrate and use empathy, active listening, and helpful intervention with clients.

CONTACT PERSON

Professor Fatemah Sedighi, Coordinator
 (856) 227-7200, ext. 4535
 Email: fsedighi@camdencc.edu

Liberal Arts and Science: English Option

ENG.AA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	ENG-271	World Literature I or	
HIS-101	World Civilization I or		ENG-272	World Literature II	3
HIS-111	Western Civilization I	3	ENG-281	American Literature I or	
MTH....	Mathematics General Education Elective	3	ENG-282	American Literature II	3
.....	Language General Education Elective ¹	3	SPE-102	Public Speaking	3
.....	Social Science General Education Elective	3	.....	Laboratory Science General Education Elective ²	4
		15	.....	Social Science General Education Elective	3
					16
Second Semester			Second Semester		
ENG-102	English Composition II	3	ENG-131	Shakespeare	3
ENG-210	English Grammar	3	ENG-261	English Literature I or	
HIS-102	World Civilization II or		ENG-262	English Literature II	3
HIS-103	World Civilization III or		MTH....	Mathematics General Education Elective or	
HIS-112	Western Civilization II	3	.....	Science General Education Elective	3/4
.....	Technology General Education Elective	3	.....	Diversity General Education Elective	3
.....	Language General Education Elective ¹	3	.....	Humanities General Education	3
HPE....	Health and Exercise Science Elective	1	.....	(not a History or Language course)	
		16			15/16
				Total Minimum Credits	62

¹ Students must take six credits of one language. See Course Descriptions for requisites on placement.

² The following laboratory science courses are recommended for non-science majors: BIO-106, BIO-130, BIO-140, CHM-140, PHY-103

PROGRAM DESCRIPTION

The program is designed to constitute the first two years of a baccalaureate degree in English. It prepares a student for transfer to the junior year at a four-year college or university.

PROGRAM GOALS

- To provide students with a foundation in English literary study
- To provide a concentration of course work appropriate for an English major.
- To insure transferability of course work to four-year colleges and universities.
- To provide a broad perspective to the students' education with an emphasis on the ways in which literature includes and promotes study in history, language and culture in America as well as the world.
- To develop students' proficiency in critical analysis, reading and writing.
- To develop a familiarity with research techniques.
- To develop insight into the nature of studying within the humanities.
- To provide a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Discuss and write about literature.
 2. Use the nomenclature of literary study to analyze literature.
 3. Research and address literary topics.
 4. Analyze the grammar of the sentence (beyond that required in composition courses).

SPECIAL PROGRAM INFORMATION

As soon as possible, students are recommended to access curriculum requirements of possible transfer institutions.

EMPLOYMENT OPPORTUNITIES

- Teaching
- Writing
- Editing

CONTACT PERSONS

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(856) 227-7200, ext. 4373
email: aspatola@camdencc.edu

Professor Claire Berger
(856) 227-7200, ext. 4713
email: cberger@camdencc.edu

Note

While many colleges and universities accept most if not all of the literature courses the student chooses to take toward his or her major, there are some institutions that will only accept courses in World Literature and Shakespeare.

Liberal Arts and Science: History Option

HST.AA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	HIS-121	United States History I	3
HIS-101	World Civilization I	3	HIS....	History General Education Elective	3
MTH....	Mathematics General Education Elective	3	SPE-102	Public Speaking	
.....	Language General Education Elective ¹	3	.....	Laboratory Science General Education Elective ²	4
.....	Social Science General Education Elective	3	.....	Social Science General Education Elective	3
		15			16
Second Semester			Second Semester		
ENG-102	English Composition II	3	HIS-122	United States History II	3
HIS-102	World Civilization II	3	HIS-150	Topics in History or	
.....	Technology General Education Elective	3	.....	History General Education Elective	3
.....	Language General Education Elective ¹	3	MTH....	Mathematics General Education Elective or	
.....	Humanities General Education Elective	3	.....	Science General Education Elective ²	3/4
	(not a History or Language course)		.....	Diversity General Education Elective	3
HPE....	Health & Exercise Science Elective	1	.....	Free Elective	3
		16			15/16
				Total Minimum Credits	62

¹ Students must take six credits of one language. See Course Descriptions for requisites on placement.

² The following laboratory science courses are recommended for non-science majors: BIO-106, BIO-130, BIO-140, CHM-140, PHY-103

PROGRAM DESCRIPTION

This program is designed for those students who wish to transfer to a four-year school where they will major in history.

PROGRAM GOALS

- To introduce students to a broader exposure of historical periods and areas beyond the basic general education requirements for an Associate in Arts degree.
- To prepare students for transfer as history majors to a four-year institution.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Identify and describe the major figures, ideas and events in Western/World/American Civilizations
 2. Analyze major movements, trends and developments in Western/World/American Civilizations
 3. Construct an historical essay that presents a clear argument and uses detailed historical evidence

SPECIAL PROGRAM INFORMATION

As soon as possible students are recommended to access curriculum requirements of possible transfer institutions. This program provides numerous electives which can be used to tailor student needs to that transfer institution.

CONTACT PERSON

Dr. Patrick Hughes
 (856) 227-7200, ext. 4319
 email: phughes@camdencc.edu

Liberal Arts and Science: Law, Government & Politics Option

GOV.AA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	HIS-121	U.S. History I	3
HIS-101	World Civilization I	3	SPE-102	Public Speaking	3
POL-101	Introduction to Political Science	3	.....	Laboratory Science General Education Elective ²	4
MTH....	Mathematics General Education Elective	3	.....	Technology General Education Elective	3
.....	Language General Education Elective ¹	3	.....	Free Elective	3
		15			16
First Year/Second Semester			Second Year/Second Semester		
ENG-102	English Composition II	3	HIS-122	U.S. History II	3
HIS-102	World Civilization II	3	POL....	Political Science Course or	
POL-103	American Federal Government	3	POL-121	Political Science Co-op	3
.....	Language General Education Elective ¹	3	MTH....	Mathematics General Education Elective or	
.....	Humanities General Education Elective (not a History or Language course)	3	.....	Science General Education Elective	3/4
HPE....	Health & Exercise Science Elective	1	.....	Diversity General Education Elective	3
		16	.....	Free Elective	3
					15/16
				Total Minimum Credits	63

¹ Students must take six credits of one language. See Course Descriptions for requisites on placement.

² The following laboratory science courses are recommended for non-science majors: BIO-106, BIO-130, BIO-140, CHM-140, PHY-103

PROGRAM DESCRIPTION

This program is designed especially for those students who wish to pursue a career in the law, politics, or public service. As part of the program, internships are available to provide on-site training and experience in local government offices. As a transfer curriculum, this option provides the first two years of a traditional four-year baccalaureate program.

PROGRAM GOALS

- To provide students with a foundation in general education.
- To provide a concentration of course work appropriate for a law, government, politics major.
- To ensure transferability of course work to four-year colleges and universities.
- To provide a program for students who are planning to major in pre-law or government at a four-year school.
- To provide students with an opportunity to get experience in local government offices if they choose to do so.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Discuss the structure, function, history and operations of government institutions at the international, state and local levels.
 2. Compare and contrast the different motivations and constraints underlying political behavior.
 3. Explain the difference between developed and developing countries, the challenges they face and formulate predictions of their future behavior.

SPECIAL PROGRAM INFORMATION

As soon as possible students are recommended to access curriculum requirements of possible transfer institutions. This program provides numerous electives which can be used to tailor student needs to that transfer institution.

CONTACT PERSONS

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Liberal Arts and Science: Languages and International Studies Option INT.AA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	COM-145	Intercultural Communications	3
HIS-111	Western Civilization I or HIS-101 World Civilization I	3	GEO-101	Cultural Geography	3
MTH....	Mathematics General Education Elective	3	SPE-102	Public Speaking	3
.....	Language General Education Elective ¹	3	.....	Language General Education Elective ³	3
SOC-101	Introduction to Sociology	3	.....	Laboratory Science General Education Elective ⁴	4
		15			16
Second Semester			Second Semester		
ENG-102	English Composition II	3	MTH.....	Mathematics General Education Elective or Science General Education Elective	3/4
HIS-112	Western Civilization II or HIS-102 World Civilization II or HIS-103 World Civilization III	3	.....	Language General Education Elective ³	3
.....	Technology General Education Elective	3	.....	Language General Education Elective ³	3
.....	Language General Education Elective ¹	3	ENG-271	World Literature I or ENG-272 World Literature II	3
.....	Humanities General Education Elective ² (not a History or Language course)	3	POL-108	Introduction to International Relations	3
HPE....	Health & Exercise Science Elective	1			
		16		Total Minimum Credits	15/16 62

¹ Students must take six credits of one language. See Course Descriptions for requisites on placement.

² Recommended course Art Appreciation or Art History I or Music Appreciation I or Music History I.

³ Students must complete the Intermediate level II (if the student completed the Intermediate level after the first year, another language must be taken in the first and second semester of the second year).

⁴ The following laboratory science courses are recommended for non-science majors: BIO-106, BIO-130, BIO-140, CHM-140, PHY-103

PROGRAM DESCRIPTION

This program is designed for people who desire an international perspective and have an interest in foreign languages. Employment opportunities for such people are rising steadily. Thus, degrees in this program may lead to careers in international and cross-cultural settings, language translating, communications, and teaching.

PROGRAM GOALS

- To provide students with a foundation in general education.
- To provide a concentration of course work appropriate for an international studies major or language major.
- To ensure transferability of course work to four-year colleges and universities.
- To provide an international perspective to the student's education with an emphasis on world history, world literature, language and culture, and courses which contain a strong international focus.
- To develop in students a facility and proficiency in the target language.
- To develop in students an awareness and compliant response to the target culture.
- To develop insight into the nature of language and culture.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Speak and write a language other than English.
2. Interpret written and orally presented information in a language other than English.
3. Identify and/or demonstrate an understanding of the importance of a global perspective and culturally diverse people.

SPECIAL PROGRAM REQUIREMENT

Students must complete an intermediate II level of a foreign language prior to graduation.

EMPLOYMENT OPPORTUNITIES

- Communications
- Cross-cultural counseling
- Foreign Service
- International business and affairs
- Translations
- Teaching

CONTACT PERSON

Professor Martine Howard, Coordinator
(856) 227-7200, ext. 4744
email: mhoward@camdencc.edu

Liberal Arts and Science: Deaf Studies / Pre-Interpreting Option

SLS.AA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	ASL-201	American Sign Language III	3
HIS-111	Western Civilization I or		ASL-200	ASL Essentials	3
HIS-101	World Civilization I	3	SPE-102	Public Speaking	3
ASL-101	American Sign Language I	3	MTH....	Mathematics General Education Elective	3
SLS-202	American Deaf Culture	3	.....	Laboratory Science General Education Elective ²	4
.....	Social Science General Education Elective ¹	3			16
		15	Second Semester		
Second Semester			ASL-202	American Sign Language IV	3
ENG-102	English Composition II	3	SLS-201	ASL Linguistics	3
HIS-112	Western Civilization II or		.....	Technology General Education Elective	3
HIS-102	World Civilization II or		MTH....	Mathematics General Education Elective or	
HIS-103	World Civilization III	3	.....	Science General Education Elective	3/4
ASL-102	American Sign Language II	3	.....	Humanities General Education Elective	3
ASL-103	Fingerspelling	3		(not a History or Language course)	
.....	Social Science General Education Elective ¹	3			15/16
		15	Total Minimum Credits		61/62

¹ Recommended PSY-101 Basic Psychology and SOC-101 Introduction to Sociology

² The following laboratory science courses are recommended for non-science majors: BIO-106, BIO-130, BIO-140, CHM-140, PHY-103

PROGRAM DESCRIPTION

This option is designed to meet the needs of students who wish to learn about Deafness and American Sign Language and want to pursue a career working directly with deaf and hard of hearing individuals. Although the Deaf Studies Option is similar to the ASL and English Interpreting degree, it does not require that students take courses specifically designed to enhance or teach interpreting skills. Instead, the Deaf Studies Option offers a more general education in liberal arts.

PROGRAM GOALS

- To instruct students to communicate in American Sign Language with a high degree of fluency.
- To familiarize students with the Deaf Community and support services for deaf and hard of hearing.
- To encourage students to become life-long learners by participating in deaf-related events and activities.
- To foster in students the commitment to empower deaf people in society through support service initiatives.
- To provide students with a broad knowledge base in deafness and sign language in order to become employed in deafness-related professions.
- To provide students with a General Education foundation.
- To prepare students to transfer to a four-year institution.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Use American Sign Language fluently and express knowledge of ASL Linguistics.
 2. Describe the common practices, perspectives, and behaviors patterns of Deaf people and members of the Deaf Community in the Deaf Culture.
 3. Participate in deaf-related events and activities and with members of the Deaf Community.

SPECIAL PROGRAM REQUIREMENTS

Students with signing experience and wishing to enter a higher-level ASL course may take the ASL Placement Test. Contact the Sally Ann H. Emilius to make an appointment via email.

EMPLOYMENT OPPORTUNITIES

Though this curriculum does not prepare students for specific careers after graduation, the broad liberal arts background assists students in pursuing careers in deafness which require advanced degrees. These careers include education, counseling for the deaf, audiology, teaching, social work, finance and real estate.

CONTACT PERSONS

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ASL classes & ASL assessment

Professor Diane Falvo
(856) 227-7200, ext. 4540
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Interpreting & EIPA information

Registration & Advisement
(856) 227-7200, ext. 4506

Recommendations

A general education background prepares students for transfer to upper level institutions in fields relating to the deaf. Specialization within the option increases opportunities for employment in a variety of emerging professions serving the deaf and hard of hearing.

American Sign Language

SLS.CA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year /First Semester		
ASL-101	American Sign Language I	3	ASL-201	American Sign Language III	3
SLS-202	American Deaf Culture	3	ASL-200	ASL Essentials	3
		6			6
First Year /Second Semester			Second Year / Second Semester		
ASL-102	American Sign Language II	3	ASL-202	American Sign Language IV	3
ASL-103	Fingerspelling	3	SLS-201	ASL Linguistics	3
		6			6
			Total Minimum Credits		24

PROGRAM DESCRIPTION

This option is designed to meet the needs of students who wish to learn about deafness and sign language in-depth but to may or may not wish to become professional interpreters. This option prepares students to communicate directly with deaf and hard of hearing individuals.

PROGRAM GOALS

- To instruct students to communicate in American Sign Language with a high degree of fluency.
- To familiarize students with the Deaf Community and support services for deaf and hard of hearing individuals.
- To provide students with a broad knowledge base in deafness and sign language in order to become employed in deafness-related professions.
- To encourage students to become life-long learners by participating in deaf-related events and activities.
- To foster in students the commitment to empower deaf people in society through support-service initiatives.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Use American Sign Language fluently and express knowledge of ASL Linguistics.
 2. Describe the common practices, perspectives, and behavior patterns of Deaf people and members of the Deaf Community in the Deaf Culture.
 3. Generalize on the ongoing need to participate in deaf-related events and activities and with members of the Deaf Community.

SPECIAL PROGRAM REQUIREMENT

Student must obtain proof of an AA/AS degree, BA/BS degree or higher.

EMPLOYMENT OPPORTUNITIES

The program is designed for students to complement their degree with this ASL certificate. Students can utilize their signing skills on their existing job or in a job where the client is deaf.

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 Interpreting & EIPA information

Registration and Advisement
 (856) 227-7200, ext. 4506

ASL and English Interpreting

SLA.CA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year /First Semester		
IEP-201	ASL for Interpreters ¹	3	IEP-203	Simultaneous Interpreting ¹	3
IEP-209	Interpreting in Specialized Settings ¹	3	IEP-205	Voicing ¹	3
SLS 203	Intro to the Interpreting Profession	3			6
		9	Second Year / Second Semester		
First Year /Second Semester			IEP-206	Interpreting Lab ¹	3
IEP-202	Consecutive Interpreting ¹	3	IEP-207	Interpreting Practicum ¹	3
IEP-204	Interpreting Seminar ¹	3			6
		6	Total Minimum Credits		
					27

¹ Must pass the Proficiency Interview for entrance into the IEP courses

PROGRAM DESCRIPTION

This program teaches students to become communication facilitators between deaf and hearing people so that Deaf Community members can interact fully within society. The program provides specialized-skill courses along with supervised practicum opportunities.

PROGRAM GOALS

- To ensure that students can demonstrate an appropriate level of fluency in American Sign Language as well as a range of signing modalities for entry-level interpreting.
- To prepare students to convey accurately a spoken English message into American Sign Language or a form of English signing (voice to sign interpreting) as requested by the Deaf consumer.
- To prepare students to voice accurately a signed message from American Sign Language or a form of English signing (sign to voice interpreting) into spoken English.
- To familiarize students with the Code of Professional Conduct (CPC) set forth by the National Association of the Deaf (NAD) and the Registry of Interpreters for the Deaf (RID) used in the interpreting profession.
- To instruct students in the roles, responsibilities, and function of a professional interpreter and be able to apply that knowledge to varied interpreting situations.
- To provide students with the knowledge to assess consumer needs, language level or preference, and environmental constraints.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Show an understanding of Deaf Culture, the Deaf Community, and the interpreting profession.
2. Use American Sign Language fluently and express knowledge of ASL linguistics.
3. Analyze source language texts, and express them appropriately in the target language.
4. Interpret spoken messages appropriately into ASL, both consecutively and simultaneously (voice-to-sign interpreting).
5. Interpret signed messages appropriately into spoken English, using grammatically correct English structures (sign-to-voice interpreting).

SPECIAL PROGRAM REQUIREMENT

Students must obtain an AA/AS in a Deaf Studies program or a related study, or a BA/BS degree. The student needs to take the Proficiency Interview in the ASL/English Interpreting department to gain entrance into the program.

EMPLOYMENT OPPORTUNITIES

The student can utilize the certificate with their associate's or bachelor's degree to gain interpreting positions that do not require national certification. After gaining experience and becoming certified, more job opportunities would exist.

CONTACT PERSONS

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(856) 227-7200, ext. 4506

Dietetic Technology

DTT.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year /First Semester		
ENG-101	English Composition I	3	CHM-160	Fundamentals of Food Science	4
FNS-100	Dietetic Foundations	3	FNS-200	Community Nutrition Rotation	3
FNS-106	Foundations of Nutritional Science	3	FNS-210	Food Service Operations	3
FNS-110	Food Service Management	3	FNS-211	Therapeutic Nutrition I	3
MTH...	Mathematics General Education Elective	3	.....	Diversity: Humanities General Education Elective	3
		15			16
Second Semester			Second Semester		
ENG-102	English Composition II	3	FNS-212	Therapeutic Nutrition II	3
CHM-101	General, Organic & Biological Chemistry I	4	FNS-221	Quantity Food Production	4
FNS-130	Life Cycle Nutrition	3	FNS-240	Food Service Rotation	3
HPE-102	Health and Wellness	3	.....	Laboratory Science General Education Elective ¹	4
PSY-101	Basic Psychology	3			14
		16	Summer Semester		
			FNS-250	Clinical Nutrition Rotation	3
					3
			Total Minimum Credits		
					64

¹ See Program Advisor for appropriate Laboratory Science General Education elective

NOTE: Clinical placements may be a required part of the curriculum and a requirement for graduation. Clinical placements may require a criminal background check, health clearance and/or drug testing before participation is allowed. Clinical sites may deny a student's participation in the event of a positive finding. Individuals who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding eligibility may be obtained from the appropriate credentialing body.

PROGRAM DESCRIPTION

Dietetic technicians work in many interesting places, such as hospitals, long-term care/assisted living facilities, health clubs, community programs, food companies, research labs, and restaurants. They assist dietitians/nutritionists and other health professionals in a variety of ways, such as teaching and counseling people about proper nutrition, planning menus, preparing budgets, purchasing foods and supplies, and maintaining food safety and sanitation.

PROGRAM GOALS

- To provide an affordable entry-level dietetic education to all students enrolled in program to maximize student success.
- To provide a general education and technical experience to adequately prepare students to become Dietetic Technicians Registered, for entry-level employment in the area of food, and nutrition, while fostering attitudes and behaviors consistent with ethical and professional practice.
- To provide a foundation for student transfers to a four-year dietetics, food and nutrition and/or food service management program as a means of establishing an education ladder for all graduates of the dietetic program.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Demonstrate scientific and evidence base of practice with a general understanding of scientific information and research related to the dietetic technician level of practice.
 2. Implement professional practice expectations: beliefs, values, attitudes and behaviors for the dietetic technician level of practice.
 3. Perform clinical and customer services: development and delivery of information, products and services to individuals, groups and populations at the dietetic technician level of practice.

4. Practice management and use of resources defined as application of principles of management and systems in the provision of clinical and customer services to individuals and organizations at the dietetic technician level of practice.
5. Apply concepts of chemistry, physiology, microbiology related to food safety, mathematics, fundamentals of nutrition and nutrition across the life span at the dietetic technician level of practice.

SPECIAL PROGRAM REQUIREMENTS

- High School Preparatory Diploma or equivalent.
- Placement into college level English and math.
- An interview with the Program Director is required.
- 450 hours of supervised field experience is required prior to graduation.
- Students are required to purchase labcoats, aprons, and scrubs for field experiences, maintain student health insurance and provide reliable transportation to field sites.
- Field sites require a criminal background check.
- All program major courses have a no "D" grade policy.
- Academy of Nutrition and Dietetic Association student membership.
- Minimum cumulative grade point average of 3.0 for application to the Commission on Dietetic Registration Exam.

ACCREDITATION

The Dietetic Technology program is accredited by: The Accreditation Council for Education in Nutrition and Dietetics (ACEND), formerly known as the Commission on Accreditation for Dietetics Education (CADE)
 120 South Riverside Plaza Suite 200
 Chicago, Ill 60606-6995
 Phone: 1-800-877-1600

EMPLOYMENT OPPORTUNITIES

- Dietetic Technician Registered
- Dietetic/Nutrition Counselor
- Certified Dietary Manager
- Food Service Director
- Food Production Manager
- Dietary Supervisor
- Public Health Educator

CONTACT PERSON

Professor Marsha Patrick, MS, RD, FAND, Coordinator
 (856) 227-7200, ext. 4665
 email: mpatrick@camdencc.edu

Recommendations

High school biology and chemistry are highly recommended.

Nutrition Care Manager

NCM.CT

CODE	COURSE	CREDITS
First Semester		
ENG-101	English Composition I	3
FNS-100	Dietetic Foundations	3
FNS-106	Foundations in Nutritional Science	3
FNS-110	Food Service Management	3
		12
Second Semester		
FNS-130	Life Cycle Nutrition	3
FNS-210	Food Service Operations	3
PSY-101	Basic Psychology	3
MTH...	Mathematics General Education Elective	3/4
		12/13
Third Semester		
FNS-221	Quantity Food Production ¹	4
FNS-211	Therapeutic Nutrition I ¹	3
FNS-245	Nutrition Manager Rotation	3
		10
	Total Minimum Credits	34

¹ Approval from Program Coordinator required.

PROGRAM DESCRIPTION

This certificate in dietary management will prepare students for career advancement in the food service industry, specifically in long-term care.

EMPLOYMENT OPPORTUNITIES

- Health care facilities
- Community feeding centers

CONTACT PERSON

Professor Marsha Patrick, MS, RD, Coordinator
 (856) 227-7200, ext 4665
 email: mpatrick@camdencc.edu

PROGRAM GOALS

- To provide a concentration of course work appropriate for a nutrition care manager.
- To prepare students for entry-level employment in the food service industry.
- To prepare students to advance their education and careers to enter the Dietetic Technology AAS degree program.
- To provide students with General Education courses.

Hospitality Technology

HTS.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	BIO-140	The Microbial World	4
CSC-101	Computer Literacy	3	MKT-101	Principles of Marketing	3
FNS-105	Introduction to Nutrition	3	PSY-101	Basic Psychology	3
HTS-101	Introduction to Hospitality	3	SPE-102	Public Speaking	3
MTH.....	Mathematics General Education Elective	3	.....	Program Elective ¹	3/4
		15			16
First Year/Second Semester			Second Year/Second Semester		
ENG-102	English Composition II	3	HTS-115	Food Safety Training	1
ACC-104	Financial Accounting	3	BUS-201	Business Co-op or	
HPE-102	Health and Wellness or		FNS-230	Culinary Technology Rotation	3
HPE-106	Stress Management	3	GEO-101	Cultural Geography	3
MGT-102	Introduction to Management	3	LAW-104	Hospitality Law	3
.....	Program Elective ¹	3/4	.....	Humanities General Education Elective	3
		15	.....	Social Science General Education Elective	3
					16
				Total Minimum Credits	62

¹ Program Electives:

- FNS-110 Food Service Management
- FNS-210 Food Service Operations
- FNS-221 Quantity Food Production
- HTS-105 Housekeeping Management
- HTS-201 Front Desk Management
- HTS-205 Meeting and Special Event Planning

Note: Graduates of an approved culinary program may receive up to 12 transfer credits which must be approved by the Program Coordinator.

PROGRAM DESCRIPTION

The hospitality industry, including hotels, food service establishments, lodging, meeting venues and resorts, is growing faster than most other industries. Hospitality technicians work in many interesting places, such as cruise ships, casinos, corporate offices, hotels, restaurants and other food service venues.

PROGRAM GOALS

- To provide general education courses along with technical courses and experiences that will enable students to work effectively within the hospitality industry.
- To develop the hospitality technology student's competence to seek employment in the various segments of the local hospitality industry.
- To provide a foundation for articulation with four-year institutions for those who wish to further their education.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Analyze needs of industry using demographics and consumer trends.
 2. Demonstrate leadership skills needed in the hospitality industry.
 3. Apply core knowledge of hospitality industry including terminology and regulation compliance.
 4. Recognize the importance of effective planning and communication in the delivery of services in the hospitality industry.

SPECIAL PROGRAM REQUIREMENTS

- High School Preparatory Diploma or equivalent
- Placement into college level English and math
- Some programs require health exam and background check
- An interview with program coordinator

EMPLOYMENT OPPORTUNITIES

- Food production manager
- Dietary department supervisor
- Meeting and event planner
- Hotel management
- Resort management
- Special event catering

RECOMMENDATIONS

Schedule an appointment with program coordinator to develop schedule.

CONTACT PERSON

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 (856) 227-7200, ext. 4665
 email: mpatrick@camdenc.edu

Culinary Certificate

CUL.CA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Semester			Second Semester		
FNS-105	Introduction to Nutrition	3	FNS-210	Food Service Operations	3
FNS-110	Food Service Management	3	FNS-230	Culinary Technology Rotation	3
HTS-101	Introduction to Hospitality	3	HTS-205	Meeting & Special Event Planning	3
		9			9
				Approved Culinary Credits^{1,2}	12
				Total Minimum Credits	30

¹ Students must receive prior approval from the Hospitality Technology advisor to transfer culinary credits.

² Students will receive 12 culinary credits after completing the 18 credits in this certificate.

Note: Students need to be prepared for college level math, reading and writing.

PROGRAM DESCRIPTION

This certificate of achievement prepares students for entry-level positions in the food service industry, which includes restaurants, long-term care facilities, child care centers, community centers, hotels and casinos.

PROGRAM GOALS

- To prepare students to seek entry-level employment in the food service industry.
- To prepare students to pursue an associate degree for those who wish to further their education.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Analyze the needs of clients via use of pertinent information such as demographics and health concerns.
 2. Identify and apply appropriate and reliable sources of information in regards to food safety and sanitation.
 3. Describe skills needed to be an effective manager and culinary professional.
 4. Demonstrate the leadership skills that are necessary to supervise employees in the culinary industry.
 5. Apply basic core knowledge of hospitality industry including terminology and techniques used by culinary professionals.

SPECIAL PROGRAM INFORMATION

Schedule an appointment with program coordinator for course selection.

EMPLOYMENT OPPORTUNITIES

This certificate of achievement prepares students for entry level positions in the food service industry, which includes restaurants, long-term care facilities, child care centers, community centers, hotels and casinos.

CONTACT PERSON

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THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

Highlights

According to the Occupational Outlook Handbook, occupations in culinary areas will have the largest new job growth through 2016. The median annual salary for a professional in the culinary field was 34,347.

Culinary Arts/Restaurant Operations

CTI

CULINARY ARTS / RESTAURANT OPERATIONS

Throughout the program, students will gain the ability to perform successfully in the Culinary Arts/Food service industry. Specific areas of training are: safety and sanitation, equipment and food identification, cooking methods and food preparation, nutrition ,soups and sauces, salads and appetizers, baking and customer service. During the spring semester, students are given the opportunity to gain real world experience by working at our “Blackwood Bistro” Restaurant, which is open to the public on Thursday evenings at the Camden County Technical School location. In addition, students will receive the industry recognized ServSafe Certification as a result of their training. **This program is articulated with Camden County College’s Culinary Certificate program for college credit.** Students, who successfully complete this program, will earn **12 college credits** toward completion of the Culinary Certificate Program.

Students will learn:

- Back of the House Operations
- Front of the House Operations
- Food Preparation Technology
- Nutrition Principles
- Recipe Interpretation & Calculation
- Equipment Use & Identification
- Food Safety & Sanitation
- Menu Planning & Development

Upon successful completion of this course, students may seek employment as: Sauté Cook, Broiler Cook, Fry Cook, Garde Manager, Waiter/Waitress, Prep Cook and many other entry-level culinary or food service related positions.

Admission Requirements: There are no special requirements for this program. However, a basic comprehension of reading and math is expected.

CE.TRD-050

Hours: 420

CEUs: 42.0

BAKING & PASTRY

The Baking & Pastry Arts program at CCC is designed to teach an overview of the baking industry from the ground up. Students will be given training in the basics including: equipment identification, safety and sanitation, proper product usage, mixing methods for dough/batter preparation, cookie make-up methods, fillings & mousses, baking science & math, breakfast pastries, cake decorating, bread production, as well as production of chocolates, candies, and confections.

CE.TRD 051

Hours: 272

CEUs: 27.2

CAREER & TECHNICAL INSTITUTE OF CAMDEN COUNTY COLLEGE

856-874-6004
tradetraining@camdencc.edu
www.camdencc.edu/ce

Criminal Justice

CRJ.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	SOC-101	Introduction to Sociology	3
PSY-101	Introduction to Psychology	3	SPE-102	Public Speaking	3
CSC-101	Computer Literacy	3	PHL-131	Introduction to Ethics	3
CRJ-101	Administration of Justice	3	CRJ-103	Legal Systems	3
CRJ-105	Criminal Law	3	CRJ-203	Principles of Investigation	3
		15			15
Second Semester			Second Semester		
ENG-102	English Composition II	3	SOC-205	Social Diversity	3
MTH-107	Liberal Arts Math	3	.....	Laboratory Science General Education Elective	4
POL-103	American Federal Government	3	CRJ-108	Community Policing	3
CRJ-104	Juvenile Delinquency	3	CRJ-107	Introduction to Probation & Parole	3
CRJ-106	Contemporary Corrections	3	CRJ-207	Terrorism or	
		15	CRJ-230	Victimology	
			CRJ-120	Intro to Homeland Security	3
					16
					61
				Total Minimum Credits	61

PROGRAM DESCRIPTION

The Criminal Justice program prepares students for employment with municipal, county, state and federal law enforcement agencies. This program has both a career and a transfer component.

PROGRAM GOALS

- To prepare students to transfer to various colleges offering baccalaureate degrees in criminal justice and the social sciences.
- To prepare student to demonstrate a working knowledge of the components of the criminal justice system and the various types of agencies involved in the administration of criminal justice.
- To prepare students to apply critical thinking skills to resolve criminal justice practitioner problems with the public.
- To prepare students to develop a system of self assessment and establish personal career goals and objectives to enhance personal growth.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Discuss the concepts involving the Bill of Rights of the United States, as measured by student performance on test questions.
 2. Compare and contrast the components of the criminal justice system and the various types of agencies involved in the administration of justice, as measured by student performance on test questions.
 3. Extrapolate local criminal justice issues to global justice and security issues in regards to narcotic and human trafficking, as measured by student performance on test questions.
 4. Analyze criminal justice practitioner problems with current events such as profiling, use of force and civil rights, as measured by student performance on test questions.

EMPLOYMENT OPPORTUNITIES

- Law enforcement officer at the municipal, county, and state levels
- Correctional officer
- Investigator within the county, state, and federal governments
- Probation aide

TRANSFER OPPORTUNITIES:

Students in this program transfer to many institutions including:
 Rutgers University
 Rowan University
 Temple University
 Pierce College
 Seton Hall University

CONTACT PERSON

Professor Thomas Riddle, Coordinator
 (856) 227-7200, ext. 4779
 email: triddle@camdencc.edu

Highlights

Students are able to transfer to various colleges offering degrees in criminal justice.

Fire Science Administration

FRA.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	FIR-201	Fire Protection Systems	3
FIR-101	Fundamentals of Fire Protection	3	FIR-211	Building Construction for Fire Service	3
FIR-102	Fundamentals of Fire Prevention/Fire Inspector I	3	FIR-225	Hydraulics	3
CSC-101	Computer Literacy	3	SOC-101	Introduction to Sociology	3
CHM-120	Chemistry for Fire Protection	4	MTH-111	Introduction to Statistics	3
		16			15
First Year/Second Semester			Second Year/Second Semester		
ENG-102	English Composition II	3	FIR-252	Arson/Law and Court Procedures	3
MTH...	Mathematics General Education Elective	3/4	FIR-231	Organization & Management of Fire Departments or	
FIR-125	Fire Fighter Safety and Survival	3	FIR-235	NJ Fire Officer I	3
FIR-202	Fire Investigation	3	POL-103	American Federal Government	3
FIR-222	Fire Inspector II	3	PHL-131	Introduction to Ethics	3
		15/16	.....	Diversity: Humanities General Education Elective or	
			.....	Diversity: Social Science General Education Elective	3
					15
				Total Minimum Credits	61

PROGRAM DESCRIPTION

The Fire Science Administration option is intended for those who seek to transfer to a four year institution for the purpose of earning a Bachelor of Science in Fire Science. The program adheres to the core requirements of the Department of Homeland Security guidelines for fire science in the Fire and Emergency Service Higher Education (FESHE) model curriculum. Students completing this program may also earn certifications in Fire Code Enforcement and Emergency Medical Service. Students transferring to a four year school offering a bachelor of Fire Science will be entering the third year program and will have the ability to complete the degree on a four year plan.

PROGRAM GOALS

- To prepare students to transfer to colleges and universities that offer Baccalaureate degrees in fire science.
- To prepare students to successfully pass the New Jersey state certification exams in Fire Prevention and Code enforcement.
- To prepare students to understand the role construction and code compliance play in fire prevention and suppression.
- To provide a degree platform that meets the national DHS model for higher education in emergency services.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Explain the method by which fire and building codes enhance fire prevention and overall safety to building occupants.
 2. Discuss how organization structure in a fire or emergency department is used to deliver effective services for prevention, suppression and emergency operations.
 3. Understand the key benefits for investigating fire losses and how that applies to legal requirements under state law.
 4. Demonstrate knowledge of hazard and risk exposure caused by fire and the methods used by management for effectively controlling this exposure to avoid or minimize unnecessary safety and health risks.

PROGRAM INFORMATION

Upon completion of the degree the students will have earned a minimum of 31 credits in General Education and 31 credits in technical content. Student will receive a certificate of completion for the educational requirement that meets New Jersey Uniform Fire Code certification requirements.

EMPLOYMENT OPPORTUNITIES

- Positions in municipal fire departments as career firefighters or support staff
- Positions in fire inspection and code enforcement
- Positions with fire alarm or sprinkler supply companies providing equipment and service for companies in need of such systems to comply with construction and use codes
- Positions in the insurance industry in risk reduction and/or post incident investigation

TRANSFER OPPORTUNITIES:

Students in this program transfer to many institutions including:
 New Jersey City University
 Holy Family University
 University of Maryland

CONTACT PERSON

Professor Patrick Bigoss, Coordinator
 (856) 227-7200 ext. 4024
 email: pbigoss@camdencc.edu

Fire Science Technology

FIR.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	FIR-202	Fire Investigation	3
FIR-101	Fundamentals of Fire Behavior/Protection	3	FIR-211	Building Construction for Fire Service	3
FIR-102	Fundamentals of Fire Prevention/Fire Inspector I	3	FIR-225	Hydraulics	3
CHM-120	Chemistry for Fire Protection	4	FIR-251	Fire Service Instruction Techniques & Methods or	
PSY-101	Basic Psychology or		FIR-212	Fire Official	3
SOC-101	Introduction to Sociology	3	FIR-121	Fire Fighting Tactics and Strategy or	
		16	FIR-106	NJ Firefighter II	3
Second Semester			Second Semester		
ENG-102	English Composition II	3	FIR-201	Fire Protection Systems	3
EMT-101	Emergency Medical Technician ¹	6	FIR-252	Arson/Law & Court Procedures	3
MTH-111	Introduction to Statistics	3	PHL-131	Introduction to Ethics	3
FIR-222	Fire Inspector II	3	FIR-231	Organization & Management of Fire Departments or	
FIR-125	Firefighter Safety and Survival	3	FIR-235	NJ Fire Officer I	3
		18	.....	Diversity General Education Elective	3
					15
					64
				Total Minimum Credits	

¹ ALH-171 and ALH-172 may be substituted for EMT-101

PROGRAM DESCRIPTION

The Fire Science Technology program follows the (FEMA) national curriculum based on the National Fire Academy FESHE (Fire and Emergency Services Higher Education) model for professional training and education in fire science. This program provides advanced education for people seeking careers in the fire service and related fields. Students who are matriculated in this program may receive up to 27 credits for prior learning documented by New Jersey state certifications in prevention, suppression and Emergency Medical Services (EMS) programs.

PROGRAM GOALS

- To prepare students to understand building construction techniques and code requirements and the relationship of both to fire prevention and suppression.
- To prepare students to understand fire department organization and management models applied in effective emergency service organizations.
- To understand the chemistry of fire and hazardous materials and apply that knowledge to increased safe practices in emergency operations.
- To prepare students to be able to train others in the fire service so that injuries and deaths are eliminated from fire operations.
- To prepare students to understand the principles of fire investigation and how to apply that knowledge toward creating a more fire safe community.
- To prepare students to transfer to partner colleges and universities to continue their education.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Explain the organization and function of a fire department with emphasis on staffing and other critical resources to efficiently deliver services.
 2. Articulate how the basic principles of chemistry and hazardous materials determine acceptable and effective strategy and tactics for suppressing fires.
 3. Analyze the impact that construction and building codes have in determining acceptable strategies and tactics for suppressing fires.
 4. Describe how effective fire investigation leads to origin and cause determination and the role of the firefighter in the process.

PROGRAM INFORMATION

Students will earn certificates for the completion of each professional course that meets New Jersey Uniform Fire Code certification requirements in prevention and suppression.

EMPLOYMENT OPPORTUNITIES

- Municipal fire departments
- Fire alarm and fire suppression systems industry
- Industrial fire protection and insurance/loss prevention industry

CONTACT PERSON

Professor Patrick Bigoss, Coordinator
 (856) 227-7200, ext. 4024
 email: pbigoss@camdencc.edu

Corrections

COR.CA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Semester					
CRJ-101	Administration of Justice	3			
CRJ-106	Contemporary Corrections	3			
HPE-109	Physical Conditioning/Police Recruits	3			
HPE-170	First Aid, Safety, and Prevention of Injury	3			
	Total Minimum Credits	12			

PROGRAM DESCRIPTION

The Camden County Correctional Academy program prepares recruits for entry-level positions as a county correctional officer and juvenile correctional officer. Correctional Officers Recruit Training Program purpose also is to prepare recruits to develop skills and knowledge of the fundamentals of dealing with inmates within penal institutions.

PROGRAM GOALS

- To prepare recruits to transfer into a 2-year Criminal Justice, CRJ.AS program.
- To prepare recruits to demonstrate a working knowledge of constitutional concepts applicable to caring for those incarcerated.
- To prepare recruits to apply critical thinking skills to resolve problems with inmates.
- To prepare recruits to demonstrate skills necessary for safety and prevention of injury to correctional staff, clients and other inmates.
- To prepare recruits to establish career goals and objectives to enhance personal growth.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the recruit will be able to:
1. Discuss concepts of the Constitution of the United States.
 2. Compare and contrast the components of the criminal justice system and various agencies involved in the administration of justice.
 3. Extrapolate local criminal justice issues to global justice and security issues.
 4. Analyze criminal justice practitioner problems with the public.

ADMISSION REQUIREMENTS

Recruits who enter the Camden County Correctional Academy as a correctional officer must be sponsored by county enforcement agency, which have been selected as a recruit by their standards or procedures and have assumed all costs of training, uniforms, salary, etc.

CONTACT PERSON

Orlando Cuevas
 (856) 227-7200, ext. 4874
 email: ocuevas@camdenc.c.edu

Police Academy
 (856) 374-4950

THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID.

Emergency & Disaster Management

EDM.CA

CODE	COURSE	CREDITS
First Year/First Semester		
EDM-110	Introduction to Public Safety	3
EDM-240	Introduction to Emergency and Disaster Management	3
EDM-241	Operational Security	3
CRJ-207	Terrorism	3
		12
Second Semester		
EMT-101	Emergency Medical Technician	6
.....	Free Elective ¹	3
		9
	Total Minimum Credits	21

¹ An elective selected by the student that permits the student to focus on a specialty of their choosing. This is done with the advice of a program faculty member and must be approved by a program coordinator of their designee.

<p>PROGRAM DESCRIPTION</p> <p>The Emergency and Disaster Management program's primary mission is to educate first responders, those managing first responders, and other interested individuals in basic emergency management practice and theory.</p> <p>PROGRAM GOALS</p> <ul style="list-style-type: none"> • To provide students with an overview of how the fire, law enforcement and emergency medical services operate during a disaster. • To provide students with an understanding of interagency cooperation. 	<p>EMPLOYMENT OPPORTUNITIES</p> <p>The study of emergency and disaster management is emerging rapidly as the threat of major emergencies and disasters becomes part of America's post 9/11 way of life. The demands made on local emergency management service require more frequent, complex, and timely responses to the unique and complex problems that occur when disaster strikes a community. The individuals in the following career areas will enhance their knowledge and skills by successfully completing the Emergency and Disaster Management certificate:</p> <ul style="list-style-type: none"> • Fire fighter • Fire line officer • Fire administrator • Fire official • Police officer • Police supervisor • Police administrator • Paramedic • Emergency medical technician • EMS supervisor • Local emergency management coordinator • Security officer • Security administrator 	<p>CONTACT PERSONS</p> <p>Professor Patrick Bigoss, Coordinator (856) 227-7200, ext. 4633 Email: pbigoss@camdencc.edu</p> <p>THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID</p>
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Fundamentals of Policing

FOP.CA

CODE	COURSE	CREDITS
CRJ-101	Administration of Justice	3
CRJ-105	Criminal Law	3
HPE-109	Physical Conditioning/Police Recruits	3
HPE-171	Emergency Response	6
	Total Minimum Credits	15

PROGRAM DESCRIPTION

The Camden County College Police Academy program prepares recruits for entry-level positions as a certified police officer or Special Law Enforcement Officer II (SLEO II). Recruits will develop skills and knowledge of the New Jersey criminal penal code and traffic enforcement statutes, Constitutional Amendments dealing with individual and civil rights, contemporary issues in policing, rules of evidence and criminal procedural investigation as well as other facets of law enforcement.

PROGRAM GOALS

- To prepare recruits to transfer into a 2-year Criminal Justice, CRJ.AS program.
- To prepare recruits to demonstrate a working knowledge of components of the criminal justice system and various types of law enforcement agencies.
- To prepare recruits to apply critical thinking skills to resolve criminal justice practitioner problems with the public.
- To prepare recruits to establish career goals and objectives to enhance personal growth.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the recruit will be able to:
1. Discuss concepts of the Constitution of the United States.
 2. Compare and contrast the components of the criminal justice system and various agencies involved in the administration of justice.
 3. Extrapolate local criminal justice issues to global justice and security issues.
 4. Analyze criminal justice practitioner problems with the public.

SPECIAL ADMISSION REQUIREMENTS

Recruits who enter the Camden County Police Academy as a certified police officer or SLEO II must be sponsored by county or municipal law enforcement agency, which have been selected as a recruit by their standards or procedures and have assumed all costs of training, uniforms, salary, etc. Those individuals who have not been sponsored by a county or municipal law enforcement agency may apply for the Camden County College Police Academy Alternate Route program. Requirements are the following: must be 18 years of age but not over 35 at the completion of the program; must have completed 60 college credits or 2 years of active military service, or 1 year of active military service and 30 college credits; must be a citizen of the United States and resident of the state of New Jersey; must be of good moral character and not convicted of any criminal offense; must be able read, write and speak the English language; and must have medical insurance. All cost is the responsibility of candidate.

APPLICATIONS

Applications are available at the Camden County Police Academy located at the Regional Emergency Training Center (RETC), 420 Woodbury-Turnersville Road, Blackwood, New Jersey 08012. Interested persons should also refer to the Camden County College, Police Academy website for application announcements and requirements.

EMPLOYMENT OPPORTUNITIES

- Police Officer

CONTACT PERSON

Orlando Cuevas
 (856) 227-7200, ext. 4874
 email: ocuevas@camdenccc.edu

Police Academy
 (856) 374-4950

THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

CAMDEN COUNTY COLLEGE DOES NOT GUARANTEE EMPLOYMENT UPON GRADUATION

Liberal Arts and Science: Biology Option

BIO.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	PHY-101	Physics I or	
BIO-111	Biology I - Science	4	PHY-201	Physics III	4
CHM-111	Chemistry I - Science	4	BIO-2....	200 Level Biology Laboratory Science Course ^{1,3}	4
MTH-140	Calculus I	4	.....-2....	200 Level Lab Science Gen Ed Elective ^{1,2,3,4}	4
		15	.....	Humanities General Education Elective ¹	3
Second Semester			Second Semester		
ENG-102	English Composition II	3	BIO-255	Research Experience in Biology	3
BIO-112	Biology II - Science	4	HIS-101	World Civilization I	3
CHM-112	Chemistry II - Science	4	PHY-102	Physics II or	
MTH-150	Calculus II or		PHY-202	Physics IV ⁴	4
MTH-134	Biostatistics	4	.....-2....	200 Level Lab Science Gen Ed Elective ^{1,2,3}	4
.....	Social Science General Education Elective ¹	3	HPE....	Health & Exercise Science Elective	1
		18			15
Total Minimum Credits					63

¹ Students should choose electives based on the requirements of the transfer institution.

² Students who are planning to enter professional schools for degrees in Medicine, Chiropractic Medicine, Veterinary Medicine, Pharmacy, Dentistry, Physical Therapy or Physician's Assistant programs should choose CHM-221 (Organic Chemistry I) and CHM-222 (Organic Chemistry II) as their 200 level Laboratory Science General Education Electives

³ All students should meet with an advisor from the Biology department to choose Laboratory Science General Education Electives

⁴ Biology majors can get credit for PHY-101 and PHY-102 or PHY-201 and PHY-202. Students who have taken PHY-101 and PHY-102 cannot use PHY-201 or PHY-202 to fulfill the 200 Level Laboratory Science Education Electives.

PROGRAM DESCRIPTION

This transfer program is designed for students who have a strong interest in biology and who plan to major in biology at a four-year college or university.

PROGRAM GOALS

- To prepare students for entry-level positions in science-related fields that require an associate in science degree such as: research assistant in pharmaceutical, biomedical, or academic research laboratories and laboratory technician.
- To provide students with a foundation in general education.
- To provide a concentration of course work appropriate for the biological sciences.
- To ensure transferability of course work to a baccalaureate program in biology, pre-professional programs such as pre-med or pre-veterinary science or science education.
- To prepare students to enter pre-professional programs for careers such as medicine, dentistry or veterinary medicine.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Explain the principle of evolution as the major unifying theme of biology.
 2. Explain cellular structure and physiology.
 3. Explain the basic principles of molecular biology and genetics.
 4. Apply the scientific method to conduct experiments.
 5. Analyze cells and tissues using a microscope.
 6. Utilize primary and secondary sources in the scientific literature to obtain biological information.

EMPLOYMENT OPPORTUNITIES

- Researcher in pharmaceutical and biomedical laboratories
- Laboratory technician
- Preparation for pre-professional careers such as medicine, dentistry or veterinary medicine

CONTACT PERSON

Professor Rita Connolly, Chair
 (856) 227-7200, ext. 4462, or 4467
 email: rconnolly@camdencc.edu

Highlights

Graduates have successfully transferred to Rutgers University, Cornell University, Richard Stockton College of New Jersey, Thomas Jefferson University and other four-year institutions.

Liberal Arts and Science: Chemistry Option **CHM.AS**

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	CHM-221	Organic Chemistry I	4
CHM-111	Chemistry I - Science	4	BIO-111	Biology I: Science	4
MTH-140	Calculus I	4	MTH-210	Calculus III	4
PHY-201	Physics III	4	.....	Social Science General Education Elective ¹	3
HIS-101	World Civilization I or		HPE....	Health & Exercise Science Elective	1
ENG-271	World Literature I	3			16
		18	Second Semester		
Second Semester			CHM-222	Organic Chemistry II	4
ENG-102	English Composition II	3	BIO-112	Biology II: Science	4
CHM-112	Chemistry II - Science	4	....-2....	Any 200-level Biology, Chemistry, or Biotechnology course ²	4
MTH-150	Calculus II	4	.....	Social Science General Education Elective ¹	3
PHY-202	Physics IV	4			15
		15	Total Minimum Credits		
					64

¹ Secondary education majors should take Basic Psychology (PSY-101) for one of the electives

² Check with transferring institution.

PROGRAM DESCRIPTION

This course of study is designed for students who have a strong interest in chemistry and who plan to work toward a major in chemistry or a related field. Chemistry majors perform laboratory procedures in biotechnological, health care and other related fields. They also enter ancillary fields such as forensic science, engineering and education.

PROGRAM GOALS

- To prepare graduates for entry-level positions in science related fields that require an associate in science degree such as: laboratory technicians or research assistants in pharmaceutical, biomedical, or academic research laboratories.
- To provide students with a foundation in general education.
- To provide a concentration of course work appropriate for chemistry and basic chemistry instrumentation.
- To ensure transferability of course work to a baccalaureate program in chemistry or science education.
- To prepare graduates to enter pre-professional programs in careers such as chemical engineer, laboratory technician, physician's assistant, physician and physical therapist.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Use the scientific method to design and perform experiments in the chemistry laboratory.
 2. Explain the fundamental concepts of chemistry.
 3. Analyze data using mathematical and chemical principles and present in multiple formats.

EMPLOYMENT OPPORTUNITIES

- Chemist
- Laboratory technician
- Physician
- Physical therapist
- Physician's assistant

TRANSFER OPPORTUNITIES:

Students in this program transfer to many institutions including:
 Rutgers-Camden University
 Rutgers-New Brunswick University
 Rowan University

CONTACT PERSON

Dr. Teresa A. Smith, Chair
 (856) 227-7200, ext. 4479
 email: tasmith@camdencc.edu

Recommendation

Preparation for Chemistry (CHM-010) is required for those who have not had high school chemistry. Students should select courses according to the needs of the transferring institution.

Liberal Arts and Science: Environmental Science Option

ENV.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	ANT-102	Introduction to Physical Anthropology	3
BIO-111	Biology I - Science	4	BIO-206	Environmental Science: Theory & Applications	4
CHM-111	Chemistry I - Science	4	BIO-225	Introduction to Plant Biology	4
MTH-140	Calculus I	4	PHY-101	Physics I or	
		15	PHY-201	Physics III	4
Second Semester			Second Semester		
ENG-102	English Composition II	3	BIO-221	Microbiology I	4
BIO-112	Biology II - Science	4	BIO-255	Research Experience in Biology or	
CHM-112	Chemistry II - Science	4	BIO-250	Co-op I: Science	3
MTH-150	Calculus II or		GEO-101	Cultural Geography	3
MTH-134	Biostatistics	4	PHY-102	Physics II or	
		15	PHY-202	Physics IV	4
			.....	Humanities General Education Elective ¹	3
					17
				Total Minimum Credits	62

¹ Select elective based on requirements of Transfer Institution

PROGRAM DESCRIPTION

This transfer program is designed for students who have a strong interest in environmental science and plan to major in environmental science, ecology or biology at a four-year college or university

PROGRAM GOALS

- To prepare students for entry-level positions in environmental science related fields that require an associate in science degree such as: environmental laboratory technician, water quality technician or research assistant in an environmental or ecology academic research laboratory.
- To provide students with a foundation in general education.
- To provide a concentration of course work appropriate for the biological sciences, focusing on environmental studies.
- To ensure transferability of course work to a baccalaureate program in biology, environmental science, ecology or science education.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Utilize primary and secondary sources in the scientific literature to obtain information pertaining to environmental science.
 2. Apply the scientific method to conduct experiments and analyze data.
 3. Describe the important chemical and physical factors that have major effects on ecosystems.
 4. Discuss the four scientific principles of sustainability
 5. Summarize the root causes of the major environmental problems.
 6. Describe the four major components of biodiversity and the importance of maintaining biodiversity.

EMPLOYMENT OPPORTUNITIES

- Environmental laboratory technician
- Water quality technician
- Research assistant in an environmental or ecology academic research laboratory
- Preparation for research work in environmental science, ecology, field or conservation biology
- Preparation for careers in environmental related technologies.
- Education

CONTACT PERSON

Professor Rita Connolly, Chair
(856) 227-7200, ext. 4462 or 4467
email: rconnolly@camdenc.edu

Liberal Arts and Science: Physics Option

PHY.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	PHY-201	Physics III	4
HIS-101	World Civilization I	3	MTH-210	Calculus III	4
PHY-101	Physics I ¹ or		LFO-101	Introduction to Photonics & Photonics Safety	4
CSC-101	Computer Literacy	3/4	.....	Social Science General Education Elective	3
MTH-140	Calculus I	4	HPE....	Health & Exercise Science Elective	1
.....	Social Sciences General Education Elective	3			16
		16/17	Second Semester		
Second Semester			PHY-202	Physics IV	4
ENG-102	English Composition II	3	MTH-220	Differential Equations	4
PHY-102	Physics II ¹ or		CHM-112	Chemistry II - Science or	
CIS-206	Advanced Computer Concepts/Applications	3/4	BIO-112	Biology II - Science	4
MTH-150	Calculus II	4	.....	Humanities General Education Elective	3
CHM-111	Chemistry I - Science or		HPE....	Health & Exercise Science Elective	1
BIO-111	Biology I - Science	4			16
		14/15	Total Minimum Credits		
					62

¹ A student who has completed 2 years of high school physics should select an alternate course.

PROGRAM DESCRIPTION

This program is designed for students with a strong interest either in physics, engineering, or photonics. The credits in this program are transferable to four-year colleges for majors in physics and any branch of engineering.

PROGRAM GOALS

- To provide students with a foundation in science with a concentration of course work appropriate for a physics major.
- To prepare students to use theoretical principles and experimental equipment and to apply them to solve specific problems in physics and related areas.
- To instill in the students a commitment to lifelong learning which fosters in them a desire to transfer credits to a baccalaureate program in physics, astronomy or any branch of engineering.
- To provide students with a General Education foundation.

SPECIAL COURSE REQUIREMENT

Mathematics at the level of Intermediate Algebra (MTH-109) is a prerequisite for this program.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Explain the fundamental concepts of physics.
2. Design and conduct experiments demonstrating physics principles.
3. Apply mathematics to solve physics application problems.

EMPLOYMENT OPPORTUNITIES

- Advanced physics
- Astronomy
- Biophysics
- Biotechnology
- Chemical engineering
- Electrical, optical engineering
- Material science
- Lasers
- Fiber optics
- Education

TRANSFER OPPORTUNITIES:

Students in this program transfer to many institutions including:
 Drexel University
 Rowan University
 Rutgers University
 Temple University

CONTACT PERSON

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Liberal Arts and Science: Pre-Pharmacy Option

PPH.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	BIO-212	Anatomy & Physiology II	4
BIO-111	Biology I - Science	4	CHM-221	Organic Chemistry I	4
CHM-111	Chemistry I - Science	4	PHY-101	Physics I ¹ or	
MTH-140	Calculus I	4	PHY-201	Physics III ¹	4
		15	HIS-101	World Civilization I or	
			ENG-271	World Literature I	3
Second Semester			HPE....	Health & Exercise Science Elective	1
ENG-102	English Composition II	3			16
BIO-112	Biology II - Science	4	Second Semester		
BIO-211	Anatomy & Physiology I	4	CHM-222	Organic Chemistry II	4
CHM-112	Chemistry II - Science	4	PHY-102	Physics II ¹ or	
.....	Humanities General Education Elective	3	PHY-202	Physics IV ¹	4
		18	PSY-101	Basic Psychology	3
			.....	Social Science General Education Elective	3
			HPE....	Health & Exercise Science Elective	1
					15
					64
				Total Minimum Credits	

¹ Consult with Transfer Institution.

PROGRAM DESCRIPTION

Prospective pharmacists should have scientific aptitude, good communication skills, and a desire to help others. They also must be conscientious and pay close attention to detail because the decisions they make affect human lives.

Employment is expected to increase much faster than average through 2016. This is because the number of degrees granted in pharmacy are expected to be less than the number of job openings created by employment growth and the need to replace pharmacists who retire or otherwise leave the occupation. Recently, enrollments in pharmacy programs are rising as more students are attracted by high salaries and good job prospects. Despite this increase in enrollments, pharmacist jobs should still be more numerous than those seeking employment.

Pharmacy, a rapidly growing profession, is an integral part of today's health care programs. Pharmacists work in both commercial pharmacies, as well as hospital pharmacies. Pharmacists counsel patients on the proper use of medication and are aware of potentially dangerous drug interactions. The pharmacist also plays a critical role in communicating the action and side effects of medication.

PROGRAM GOALS

- To provide students with a foundation in general education.
- To provide a concentration of course work in biology and chemistry.
- To ensure transferability of course work to a baccalaureate program for continuing study of the pharmacy profession.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Analyze and synthesize data to form a conclusion.
 2. Apply the basic concepts of chemistry, including the structure and function of molecules.
 3. Explain how pharmaceutical agents effect human physiology.
 4. Communicate scientific information in both written and oral formats.

EMPLOYMENT OPPORTUNITIES

- Hospital pharmacy
- Pharmaceutical industry
- Retail pharmacy

TRANSFER OPPORTUNITIES:

Students in this program transfer to many institutions including:
 Temple University
 University of the Sciences
 Thomas Jefferson University

CONTACT PERSON

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Liberal Arts and Science: Mathematics Option

MTH.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	MTH-145	Linear Algebra	4
BIO-111	Biology I - Science or		MTH-210	Calculus III	4
CHM-111	Chemistry I Science	4	PHY-201	Physics III	4
HIS-101	World Civilization I	3	HPE....	Health & Exercise Science Elective	1
MTH-140	Calculus I	4			13
.....	Social Science General Education Elective	3	Second Semester		
		17	CSC-121	Structured Programming (C++)	3
Second Semester			MTH-220	Differential Equations	4
ENG-102	English Composition II	3	PHY-202	Physics IV	4
BIO-112	Biology II - Science or		.....	Free Elective	3
CHM-112	Chemistry II Science	4			14
MTH-129	Discrete Mathematics	4	Total Minimum Credits		
MTH-150	Calculus II	4			62
.....	Humanities General Education Elective	3			
		18			

PROGRAM DESCRIPTION

This program constitutes the first two years of a traditional four-year curriculum. It is designed for students with a strong interest in mathematics and its applications, who plan to transfer to a four-year college or university as a mathematics major or a related field. Students gain experience in the use of graphing calculators and computer software. Graduates are highly competitive as mathematics majors at four-year institutions.

PROGRAM GOALS

- To provide students with a foundation in general education.
- To provide a concentration of course work appropriate for mathematics.
- To ensure transferability of course work to a baccalaureate program in mathematics, engineering, computer science or math education.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Utilize computational and analytical skills in conjunction with mathematical concepts to solve abstract mathematics problems and applied problems in the fields of science, business, engineering and technology.
 2. Use technological tools, such as graphing calculators or computers, to analyze and solve mathematical and applied problems.
 3. Follow a logical, symbolic argument and apply the concept of proof, as it relates to mathematical results.

PROGRAM INFORMATION

The entry-level math course for the Mathematics Option is Calculus I (MTH-140). Please note that a solid foundation in algebra and trigonometry is essential for success in Calculus I. Students in need of additional training prior to Calculus I have the option of taking the Precalculus Mathematics I (MTH-123) and Precalculus Mathematics II (MTH-124) sequence, or the faster paced Accelerated Precalculus (MTH-125).

GRADUATION REQUIREMENTS

Mathematics majors must earn a grade of C or better in all mathematics courses to be eligible for graduation.

EMPLOYMENT OPPORTUNITIES

- Computer science
- Economics and actuarial sciences
- Engineering
- Management science and operations research
- Natural sciences

TRANSFER OPPORTUNITIES:

Students in this program transfer to many institutions including:
 Rowan University
 Rutgers University
 Rider University
 The College of New Jersey
 Stockton University
 Fairleigh Dickinson University
 Drexel University
 Temple University

CONTACT PERSON

Professor Joseph Diaco, Chair
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*Students interested in teaching high school Mathematics should enroll in the Secondary Education in Mathematics (SEM.AS) degree.

Highlights

Transfer institutions may specify individual requirements. Faculty advisors in Math are available to you in Halpern Hall 117. Visit our website at www.camdencc.edu/departments/math

Biotechnology

BIT.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	BIO-240	Genetics	4
BIO-111	Biology I: Science	4	BIT-201	Applications in Biotechnology	4
BIT-102	Introduction to Biotechnology	1	CHM-221	Organic Chemistry I	4
MTH-125	Accelerated Precalculus	4	HIS-101	World Civilization I or	
		12	ENG-271	World Literature I	3
Second Semester			Second Semester		
ENG 102	English Composition II	3	BIT-202	Instrumental Analysis	4
BIO-221	Microbiology I	4	BIT-200	Fundamentals of Biochemistry	4
CHM-111	Chemistry I: Science	4	PHL-232	Biomedical Ethics	3
MTH-171	Statistics I or		.....	Social Science General Education Elective	3
MTH-134	Biostatistics ¹	3/4			14
HPE.....	Health & Exercise Science Elective	1			
		15/16	Summer Semester		
Summer Semester			BIT-205	Biotechnology Internship	3
CHM-112	Chemistry II: Science	4			3
		4	Total Minimum Credits		
					63

¹ Biostatistics: MTH-140 (Calculus) pre-requisite or permission from Chair of Math Department.

PROGRAM DESCRIPTION

Biological technicians work with scientists studying living organisms. Many assist scientists who conduct medical research helping to find a cure for cancer or AIDS, for example. Those who work in pharmaceutical companies help develop and manufacture medicinal and pharmaceutical preparations. Those working in the field of microbiology generally work as lab assistants and studying living organisms and infectious agents. Biological technicians also analyze organic substances, such as blood, food and drugs, and some examine evidence in a forensic science laboratory. Biological technicians, working in biotechnology labs, use the knowledge and techniques gained from basic research by scientists, including gene splicing and recombinant DNA, and apply them in product development.

The Biotechnology program will prepare students for entry-level positions in industries involving the field of biotechnology. These industries include pharmaceuticals, university and private research laboratories, medical technology and biotechnology companies. Biotechnology companies need associate degree-trained technicians to work in the laboratories and help in the preparation and documentation of laboratory experiments and their results. These technicians must have knowledge of the workings of a laboratory and how to conduct and work with equipment used in the biotechnology field.

PROGRAM GOALS

- To provide a concentration of course work appropriate for biotechnology students.
- To prepare students for entry-level employment as a technician in the biopharma field.
- To demonstrate the basic techniques used in the biotechnology industry.
- To provide students with a General Education foundation.

PROGRAM STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able to:

1. Work safely in a laboratory.
2. Analyze samples using modern computer interfaced instrumentation.
3. Analyze and present data in multiple formats (graphic, oral and written).
4. Explain the fundamental concepts of biology and chemistry.

SPECIAL PROGRAM REQUIREMENT

Before graduation, students must complete a supervised, internship program at an approved biotechnology location or a research project under the direction of College faculty. A student in the biotechnology curriculum must earn a grade of "C" or better in all science and biotechnology courses to be eligible for the BIT.AAS degree.

EMPLOYMENT OPPORTUNITIES

- Entry-level position in Biotechnology industries
- Research laboratories
- Pharmaceutical industry
- Laboratory technician

CONTACT PERSON

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Biotechnology: Forensic Science Option

FSC.AAS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	BIT-201	Applications in Biotechnology	4
BIO-111	Biology I: Science	4	BIO-240	Genetics	4
BIT-102	Introduction to Biotechnology	1	CHM-221	Organic Chemistry I	4
CHM-145	Introduction to Forensic Science	4	.....	Diversity - Social Science General Education Elective	3
MTH-125	Accelerated Precalculus	4			
		16			15
Second Semester			Second Semester		
ENG-102	English Composition II	3	BIT-202	Instrumental Analysis	4
BIO-221	Microbiology I	4	BIT-200	Fundamentals of Biochemistry	4
CHM-111	Chemistry I: Science	4	FSC-120	Introduction to Forensic Toxicology	4
FSC-110	Introduction to Forensic Osteology	4	HPE.....	Health & Exercise Science Elective	1
		15			13
Summer Semester			Summer Semester		
CHM-112	Chemistry II: Science	4	BIT-205	Biotechnology Internship	3
		4			3
				Total Minimum Credits	66

PROGRAM DESCRIPTION

This curriculum will provide students the opportunity to concentrate in the area of forensic science. The techniques and instrumentation used in a forensics lab are identical to those used in a biotechnology laboratory; the difference is in the application. The courses will provide students with the understanding of these applications and experience using the instrumentation for this purpose. Forensic science technicians investigate crimes by analyzing physical evidence. Often they specialize in areas such as DNA analysis or firearm examination, performing tests on weapons or substances such as fiber, hair, tissue, or body fluids to determine significance to the investigation. They also prepare reports to document their findings and the laboratory techniques used and may provide information and expert opinion to investigators.

PROGRAM GOALS

- To provide students with a foundation in general education.
- To provide a concentration of course work appropriate for forensic science students.
- To prepare students for entry-level employment as a technician in the biopharma/forensic science field.
- To demonstrate the basic techniques used in the biotechnology/forensic science industry.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Analyze data using mathematical and fundamental forensic science principles.
 2. Explain the principles of forensic science in both written and oral formats.
 3. Use computer integrated instrumentation to analyze forensic evidence.

SPECIAL PROGRAM REQUIREMENT

A student in the biotechnology Forensic Science Option must earn a grade of "C" or better in all science, biotechnology and forensics courses to be eligible for the FSC.AAS degree.

EMPLOYMENT OPPORTUNITIES

- Crime lab
- Biotech lab
- Pharmaceutical lab

CONTACT PERSON

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Liberal Arts and Science

LAS.AA

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-101	English Composition I	3	SPE-102	Public Speaking	3
HIS-111	Western Civilization I or		.....	Laboratory Science General Education Elective ²	4
HIS-101	World Civilization I	3	.....	Diversity General Education Elective	3
MTH....	Mathematics General Education Elective	3	.....	Social Science General Education Elective	3
.....	Language General Education Elective ¹	3	.....	Liberal Arts Elective	3
.....	Social Science General Education Elective	3			16
		15	Second Semester		
Second Semester			MTH.....	Mathematics General Education Elective or	
ENG-102	English Composition II	3	.....	Science General Education Elective	3/4
HIS-112	Western Civilization II or		.....	Liberal Arts Elective	3
HIS-102	World Civilization II or		.....	Liberal Arts Elective	3
HIS-103	World Civilization III	3	.....	Free Elective	3
.....	Technology General Education Elective	3	.....	Free Elective	3
.....	Language General Education Elective ¹	3			15/16
.....	Humanities General Education Elective (not a History or Language course)	3	Total Minimum Credits		62
HPE....	Health & Exercise Science Elective	1			
		16			

¹ Students must take six credits of one language. See Course Descriptions for requisites on placement.

² The following laboratory science courses are recommended for non-science majors: BIO-106, BIO-140, CHM-140, PHY-103.

PROGRAM DESCRIPTION

The program prepares students for transfer into four-year colleges or universities, primarily for majors in the arts, humanities or social sciences.

PROGRAM GOALS

- To provide students with a foundation in general education.
- To provide flexibility for students to choose courses suitable for their future major.
- To prepare students for transfer to a baccalaureate program.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Utilize tools of written and oral expression.
 2. Analyze the historical process and the interaction of political, social and economic institutions that affect change in world civilization through time.
 3. Speak, write, read and comprehend a foreign language and describe the cultural context for that language.
 4. Utilize the vocabulary and tools for inquiry in introductory courses in a variety of academic areas, including math, science and technology.

SPECIAL PROGRAM INFORMATION

As soon as possible students are recommended to access curriculum requirements of possible transfer institutions. This program provides numerous electives which can be used to tailor student needs to that transfer institution.

CONTACT PERSON

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Liberal Arts and Science

LAS.AS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
Choose two of the following Laboratory Sciences:			MTH....	Mathematics General Education Elective or	
BIO-111	Biology I - Science or		.....	Lab Science General Education Elective	3/4
CHM-111	Chemistry I - Science or		MTH....	Mathematics General Education Elective or	
PHY-101	Physics I or		.....	Lab Science General Education Elective	3/4
PHY-201	Physics III	8	.....	Social Science General Education Elective ¹	3
MTH-125	Accelerated Precalculus or		.....	Diversity - Humanities General Education Elective ¹	3
MTH-140	Calculus I	4	HIS....	History General Education Elective ¹	3
ENG-101	English Composition I	3			
		15			15/17
Second Semester			Second Semester		
Choose two of the following Laboratory Sciences:			MTH....	Mathematics General Education Elective or	
BIO-112	Biology II - Science or		.....	Lab Science General Education Elective or	
CHM-112	Chemistry II - Science or		.....	Free Elective ¹	3/4
PHY-102	Physics II or		MTH....	Mathematics General Education Elective or	
PHY-202	Physics IV	8	.....	Lab Science General Education Elective or	
MTH-140	Calculus I or		.....	Free Elective ¹	3/4
MTH-150	Calculus II	4	.....	Social Science General Education Elective	3
ENG-102	English Composition II	3	.....	General Education Elective ¹	3
		15	.....	Humanities General Education Elective ¹	3
					15/17
				Total Minimum Credits	60

¹ Select electives based on requirements of Transfer Institution

PROGRAM DESCRIPTION

This transfer program is for students with a high interest in and an aptitude for science and mathematics. The program prepares students for transfer into four-year colleges or universities primarily as preparation for a pre-professional course of study in such areas as medicine, dentistry, veterinary medicine and physical therapy.

PROGRAM GOALS

- To provide students with a foundation in general education.
- To provide a concentration of course work in mathematics and science.
- To ensure transferability of course work to a baccalaureate program.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
1. Utilize tools of written and oral expression.
 2. Execute basic laboratory techniques.
 3. Apply mathematical skills to data interpretation and problem solving.
 4. Explain scientific principles and apply scientific reasoning.

EMPLOYMENT OPPORTUNITIES

- Education
- Natural sciences
- Engineering
- Decision science and operations research
- Transfer opportunities in pure and applied mathematics, statistics, biology and chemistry
- Transfer health career programs such as pre-medical, pre-dental and physical therapy

TRANSFER OPPORTUNITIES:

Students in this program transfer to many institutions including:
 Rowan University
 Rutgers University
 Rider University
 The College of New Jersey
 Stockton University
 Fairleigh Dickinson University
 Drexel University
 Temple University
 University of the Sciences
 Thomas Jefferson University

CONTACT PERSON

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Recommendations

Students should select courses according to the requirements of the transferring institution.

Vocational Studies

VOC.CPS

CODE	COURSE	CREDITS	CODE	COURSE	CREDITS
First Year/First Semester			Second Year/First Semester		
ENG-005	Pathways to Reading & Writing or		HSR-030	Career Exploration	3
ENG-012	Reading Skills II or		HSR-033	Advanced Social Interaction I	3
ENG-022	Writing Skills II	3	CIS-005	Computer Fundamentals	3
MTH-005	Consumer Math or		HPE-142	Intermediate Hatha Yoga	1
MTH-011	Prealgebra Traditional	3	HSR-035	Career Development	2
HSR-010	Life Skills I	3			12
HSR-015	Academic Development	2	Second Semester		
		11	HSR-040	Introduction to Careers	3
Second Semester			HSR-001	Self Advocacy	3
HSR-020	Life Skills II	3	HSR-045	Advocacy Development	2
HSR-022	Employment Basics I	3	HSR-050	Vocational Practicum	1
HSR-023	Introduction to Social Interaction I	3			9
HPE-141	Hatha Yoga	1	Total Minimum Credits		
HSR-025	Employment Development	2			44
		12			

All students are required to complete **240 hours** of Vocational/technical work and/or internship hours over the course of the two years to receive their certificate.

PROGRAM DESCRIPTION

The purpose of this certificate is to provide students with intellectual and/or cognitive disabilities an experience of college life while engaging in the opportunity to participate in a career training program at the College. Students will work on increasing their self resilience, self advocacy and learning to reach their potentials regarding career, social and life choices. The purpose of the program is to assist the individual student in becoming gainfully employed while increasing his/her independence in life skills necessary to be a contributing member of society.

The program includes classes that focus on literacy, numeracy, time management, life skills, and self-advocacy as well as career classes. Students will be required to complete all aspects of the program in order to receive the certificate of post secondary studies.

PROGRAM GOALS

- To integrate intellectually disabled and non-disabled students.
- To demonstrate increases in literacy and numeracy for all students.
- To lead the student to a certificate in post secondary studies.
- To give the student skills applicable to gainful employment.
- To expand the infrastructure for serving students with disabilities.

PROGRAM STUDENT LEARNING OUTCOMES

- At the end of the program, the graduate will be able to:
- Manage daily activities through the application of life skills.
 - Self-determination both personal and career goals.
 - Navigate services and supports available in their communities.
 - Perform employable skills.
 - Self-advocate.

EMPLOYMENT OPPORTUNITIES

- Entry-level positions in a variety of fields:
- Retail
 - Food service
 - Clerical

Garden State Pathways (GSP)

This Program is designed for students seeking to build and develop vocational goals and personal skills, while experiencing a college campus. Students seeking admission must meet certain criteria which include documentation of an intellectual or cognitive disability, a high school diploma or equivalent to a diploma and have received or been eligible for IDEA funding while in school. Interested students should have appropriate and recent documentation when applying.

GSP students will gain valuable expertise in self awareness, daily life/independent living skills, and career skills. At the same time students will enjoy the opportunity to socially engage in college life on a close to home, friendly college campus. Several support services are provided to insure student progress. These services include personalized advisement, mentors, tutors, job coaches, and more.

GSP students attend the program five days a week for two years. After successful completion of all required courses and internships, the student receives a certificate of postsecondary studies.

CONTACT PERSON

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Course Descriptions

CODE	DESCRIPTION.....	PAGE #	CODE	DESCRIPTION.....	PAGE #
ACC	ACCOUNTING.....	129	FSC	FORENSIC SCIENCE.....	165
ADD	ADDICTIONS.....	129	GEO	GEOGRAPHY.....	165
ALH	ALLIED HEALTH.....	129	GER	GERMAN.....	165
ANT	ANTHROPOLOGY.....	131	GRK	GREEK.....	165
ARA	ARABIC.....	131	HIS	HISTORY.....	165
ART	ART.....	131	HIT	HEALTH INFORMATION TECHNOLOGY.....	166
ASC	VETERINARY SCIENCE.....	133	HPE	HEALTH & EXERCISE SCIENCE.....	167
ASL	AMERICAN SIGN LANGUAGE.....	134	HSR	HUMAN SERVICES.....	170
AUT	AUTOMOTIVE.....	135	HTS	HOSPITALITY TECHNOLOGY.....	172
BHC	BEHAVIORAL HEALTH CARE.....	136	IDY	LIBERAL STUDIES/INTERDISCIPLINARY.....	173
BIO	BIOLOGY.....	136	IEP	INTERPRETER EDUCATION.....	173
BIT	BIOTECHNOLOGY.....	138	ITA	ITALIAN.....	174
BMT	BUSINESS MATHEMATICS.....	139	LAT	LATIN.....	174
BUS	BUSINESS.....	139	LAW	LAW.....	174
CAD	COMPUTER AIDED DRAFTING & DESIGN.....	139	LFO	PHOTONICS (LASER & FIBER OPTICS).....	174
CGR	COMPUTER GRAPHICS.....	140	MAS	MASSAGE THERAPY.....	175
CHI	CHINESE.....	142	MET	MECHANICAL ENGINEERING TECHNOLOGY.....	177
CHM	CHEMISTRY.....	142	MGT	MANAGEMENT.....	177
CIM	COMPUTER INTEGRATED MANUFACTURING.....	144	MKT	MARKETING.....	178
CIS	COMPUTER INFORMATION SYSTEMS.....	145	MTH	ACADEMIC SKILLS – MATHEMATICS.....	178
COL	COLLEGE SUCCESS.....	148	MTH	MATHEMATICS.....	179
COM	COMMUNICATIONS.....	148	MUS	MUSIC.....	181
CRJ	CRIMINAL JUSTICE.....	149	NOL	NURSING: OUR LADY OF LOURDES.....	184
CSC	COMPUTER SCIENCE.....	149	NUR	NURSING.....	185
CST	COMPUTER SYSTEMS TECHNOLOGY.....	151	OMT	OPHTHALMIC MEDICAL TECHNICIAN.....	186
DAS	DENTAL ASSISTING.....	152	OPH	OPHTHALMIC SCIENCE.....	187
DHY	DENTAL HYGIENE.....	153	OST	OFFICE SYSTEMS TECHNOLOGY.....	188
ECO	ECONOMICS.....	155	PAR	PARALEGAL STUDIES.....	189
EDM	EMERGENCY DISASTER MANAGEMENT.....	155	PEM	PARAMEDIC EDUCATION & MANAGEMENT.....	190
EDU	ELEMENTARY / SECONDARY EDUCATION.....	155	PHL	PHILOSOPHY.....	190
EED	EARLY CHILDHOOD EDUCATION.....	155	PHO	PHOTOGRAPHY.....	190
EET	ELECTRICAL ELECTRONIC ENGINEERING.....	156	PHY	PHYSICS.....	191
EGR	ENGINEERING SCIENCE.....	157	POL	POLITICAL SCIENCE.....	191
EMT	EMERGENCY MEDICAL TECHNICIAN.....	157	PRM	PARAMEDIC SCIENCE.....	192
ENG	ACADEMIC SKILLS – ENGLISH.....	157	PSY	PSYCHOLOGY.....	194
ENG	ENGLISH.....	158	RUS	RUSSIAN.....	195
ESL	ENGLISH AS A SECOND LANGUAGE.....	160	SLS	SIGN LANGUAGE.....	195
FIN	FINANCE.....	161	SOC	SOCIOLOGY.....	195
FIR	FIRE SCIENCE.....	161	SPA	SPANISH.....	196
FLM	FILM.....	162	SPE	SPEECH.....	196
FNS	FOOD & NUTRITION SCIENCE.....	163	SRG	SURGICAL TECHNOLOGY.....	197
FRE	FRENCH.....	164	THE	THEATRE.....	197

ACCOUNTING

ACC-104 Financial Accounting (3.00 cr.)

This course is a study of financial accounting emphasizing the accounting cycle, merchandising accounting, income measurement, valuation of assets, internal controls, accounting for long-lived assets, financial statement presentation and interpretation and accounting for stockholders' equity.

Lecture (45.00)

Prerequisites: MTH-029

ACC-105 Managerial Accounting (3.00 cr.)

This course presents a study of cost systems used by management to control a business and to assist in improving operating results by use of cost accounting methods. The job order and process system will be studied as well as budgets, standard costs, cost estimates and direct costing techniques.

Lecture (45.00)

Prerequisites: ACC-101 or ACC-104

ACC-213 Computerized Accounting (3.00 cr.)

This course introduces the student to the basic concepts and principles of the components of a computerized accounting system which utilizes the general ledger, accounts receivable and accounts payable as applied to a sole proprietorship form of business enterprise (both a service and a merchandise firm.) The student will be exposed to a basic computerized payroll system, various depreciation schedules and a system of financial analysis. The course is also intended to reinforce and/or enhance present knowledge of accounting concepts and principles through a final practice set.

Lecture (45.00)

Prerequisites: ACC-101 or ACC-104

ACC-214 Intermediate Accounting I (3.00 cr.)

This course continues the study of accounting, including financial statements, analysis of working assets, fixed assets, investments, liabilities, reserves, net income determination, application of funds, and cash-flow reporting.

Lecture (45.00)

Prerequisites: ACC-102 or ACC-105

ACC-216 Intermediate Accounting II (3.00 cr.)

This course continues and treats in depth the material covered in Intermediate Accounting I.

Lecture (45.00)

Prerequisites: ACC-214

ACC-223 Income Tax Accounting I (3.00 cr.)

This course presents the study of the Internal Revenue Code and its rules and regulations as they apply to individuals, partnerships, and corporations. Accounting problems arising from the laws are emphasized and illustrated through the preparation of income tax returns and tax research. Also included is an analysis of returns and tax research. An analysis of income tax returns, corporate distributions, liquidations, reorganizations, unreasonable accumulation of earnings, and other corporate, estate and gift tax problems are studied.

Lecture (45.00)

Prerequisites: ACC-101 or ACC-104

ACC-224 Income Tax Accounting II (3.00 cr.)

This course continues Income Tax Accounting I with emphasis on researching sophisticated tax problems.

Lecture (45.00)

Prerequisites: ACC-223

ACC-225 Auditing (3.00 cr.)

This course presents a study in the examination and evaluation of financial records to determine if these records present information fairly and uniformly with generally accepted accounting principles.

Lecture (45.00)

Prerequisites: ACC-214

ADDICTIONS

ADD-101 Introduction to Addictions (3.00 cr.)

This introductory course is designed to provide the student with basic knowledge about alcoholism and drug abuse, related community resources and social agency networks, legal and ethical, issues in treatment and research, and prevention programming. An overview of bio-psychosocial issues, theories and scientific research findings about addictive disorders will be reviewed. Open to all students.

Lecture (45.00)

ADD-102 Prof Development /Addictions Counseling (3.00 cr.)

This course focuses on the development of self-regulation skills and the sharpening of time management skills in order to support the recovery process from an addiction. Scientific research and theories related to the psychology of stress will be reviewed as well as the addiction recovery process. Psychological, medical, and socio-cultural education as well as legal aspects of alcohol and drug addiction will also be studied.

Lecture (45.00)

ADD-111 Psych-Soc Asp/Alcohol & Drug Addictions (3.00 cr.)

This course studies the interaction among family psychodynamics, gender, race, class issues, and the dynamics of addictive behavior. Techniques from several distinct schools of family therapy are described as appropriate for the treatment of addicted families. Alcohol and other drug addictions among various special populations will also be discussed.

Lecture (45.00)

Prerequisites: ADD-101

ADD-112 Assess/Treatment Alcoh & Drug Addictions (3.00 cr.)

This course provides an overview of basic issues in the bio-psychosocial treatment and counseling of the alcohol/drug addict. Topics covered include ethical issues in counseling, information concerning the theory and practice of individual, group, family therapy with addicts, treatment planning and case management, as well as the role of resistance and denial in recovery.

Lecture (45.00)

Prerequisites: ADD-101

ALLIED HEALTH

ALH-100 Introduction to Health Care Professions (3.00 cr.)

This course is designed for students who have an interest in health care professions. The course will provide students with an overview of the health care industry. Content will include an overview of careers, salary, professional organizations, educational preparation, credentialing, career mobility, and employment projections for the various health care professions. In addition, students will receive techniques to improve study and test taking skills. Students will explore health care ethics, legal responsibilities, health care reform and health care organizations. Health care providers from a variety of professions will share their expertise with students.

Lecture (45.00)

ALH-105 Electrocardiography (1.00 cr.)

This course will provide the skills and knowledge for course participants to perform basic EKG testing. It will include content specific medical terminology, human structure and function, placement of leads, and equipment use and supplies. Classroom lab experience will expose students to skills necessary to perform as EKG technicians. This course is restricted to those students in the Multi-Skilled Technician (MST.CA) certificate program.

Laboratory (30.00)

ALH-110 Waived Laboratory Testing (1.00 cr.)

This course is designed to educate the student in application of waived laboratory testing performed in laboratories and other medical facilities that perform laboratory testing. The designated laboratory testing is not required to be performed by a certified laboratory professional. The student will study the medical significance of the procedure, appropriate specimen collection, and the technical performance of such procedures.

Laboratory (30.00)

ALH-115 Basic Phlebotomy Techniques (1.00 cr.)

This course is designed to educate the student in theoretical and technical aspects of the art and science of phlebotomy. A combination of lectures, demonstrations, and a student laboratory application, includes the focus of study on blood specimen collection, adult and pediatric venipuncture, and capillary collection. The student will have the knowledge to apply to a clinical experience not included in this course. This course does not result in phlebotomy certification. It is intended for Health Care students that will have venipuncture as a possible part of their profession. Examples of such persons are, but not limited to: nurses, medical laboratory technologists and radiologic technologists.

Laboratory (30.00)

ALH-116 Phlebotomy Clinical Practicum (2.00 cr.)

This is a selective course based on the student's academic performance and a recommendation by the instructor in the pre-requisite course, ALH-115. Non-native, English-speaking applicants must have completed an approved ESL program and received an iBT TOEFL score of no less than 20 in each section of the examination. This course will include 15 hours of didactic material and the passing of a comprehensive examination. It will be followed by a 3 week, Monday through Friday daytime clinical rotation at an assigned affiliated institution. This rotation is required for the student of phlebotomy to successfully complete a 120-hour clinical assignment with a described number of successful phlebotomies; where the student will establish competency in accordance with the National Accrediting Agency of Clinical Laboratory Science's program approval committee for Camden County College's phlebotomy program. An 80% passing grade of a comprehensive academic examination is required prior to clinical practicum placement.

Lecture (15.00)

Clinical (120.00)

Prerequisites: ALH-115 and ESL-027

ALH-119 Nurse Aide Skills (3.00 cr.)

This course provides students with the basic knowledge and practical skills for the nurse aide personnel in long-term care facilities and in home care settings. It consists mainly of lecture and simulated laboratory. Universal precautions, patient rights, patient safety and addressing the psycho-social, physical and spiritual needs of the patient in the different settings are some of the areas covered in this course. Practical skills training will be introduced to support patient care needs. No certification or license is available with this course.

Lecture (30.00)

Laboratory (30.00)

ALH-121 Basic Skills/Allied Health Professionals (3.00 cr.)

This introductory course presents the many facets of allied health and the diverse roles of the allied health professional and responsibilities of care within the healthcare delivery systems. The fundamental elements of the allied health professional will be covered, including: effective communication and education, professional conduct and presentation, and the skills required to perform effectively in multiple health settings. Some of the basic skills include: patient vital signs, blood pressure, temperature, respirations, pulse, and pain management. This course is restricted to those students in the Multi-Skilled Technician (MST. CA) certificate program.

Lecture (30.00)

Laboratory (30.00)

ALH-122 Certified Nurse Aide (4.00 cr.)

This course uses the mandated New Jersey curriculum for nurse aide personnel in long-term care facilities, designed and regulated by the New Jersey Department of Health. The 90-hour course consists of lecture, simulated laboratory and clinical exposure. This course exposes the student to long-term care settings that will enable them to assist residents under the direct supervision of a registered nurse.

Lecture (30.00)

Laboratory (30.00)

Clinical (45.00)

ALH-135 Homemaker Home Health Aide (1.00 cr.)

This lecture only course is designed to expand the knowledge base of our Certified Nurse Aides (CNAs) to include the duties of the Homemaker Home Health Aide. It will include, but is not limited to, providing personal care and homemaking services essential to the patient; health care and comfort at home,

including shopping, errands, laundry, meal planning and preparation, activities of daily living (ADLs). The successful completion of this course will allow the student to seek certification through the NJ Board of Nursing (BON) as a Certified Homemaker Home Health Aide. The Board Of Nursing requires applicants to show proof of offer of employment with the application for certification - CHHHA.

Lecture (15.00)

Prerequisites: ALH-122 and HPE-181

ALH-140 Sterile Processing & Distribution Tech (5.00 cr.)

This course prepares its graduates for work in a sterile processing area in the operating room, hospital or any other facility performing cleaning, decontamination, packaging and sterilization services; including doctor's and dental offices. The New Jersey State Department of Health and Human Services requires certification for personnel performing sterile processing functions. Upon completion of this course students will be eligible to sit for the certification exam for personnel performing sterile processing functions. The Certification Board for Sterile Processing and Distribution (CBSPD) and the International Association of Healthcare Central Service Materiel Management (IAHCSMM) provide the certification exam for the Certified Sterile Processing and Distribution Technician credential.

Lecture (45.00)

Laboratory (30.00)

Clinical (45.00)

Prerequisites: MTH-029, (ENG-013 and ENG-023) or ENG-046 and HPE-181 or approval from Allied Health Program Director.

ALH-145 Introduction to Public Health (3.00 cr.)

This course introduces students interested in health care professions, i.e. Pre-Nursing and Allied Health, to current issues in public health today from a local perspective to a global perspective. It includes such areas as community health, communicable disease control, common health indicators for measuring population and community health, the public health response to bioterrorism and the roles of public health professionals including nursing.

Lecture (45.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

ALH-171 Health & Safety: Part I (4.00 cr.)

The primary focus of Health and Safety Part I is to provide basic emergency medical care for critical and emergent patients who access the emergency medical system. This individual possesses the basic knowledge and skills necessary to provide patient care. The healthcare provider functions as part of a comprehensive EMS response, under medical oversight. Healthcare providers perform interventions with the basic equipment typically found on a fire engine or first responder apparatus. The healthcare provider is a link from the scene to the emergency health care system. This course is required in the Fire Science Technology program to satisfy the health and safety goals of the Federal Emergency Management Agency (FEMA) Fire and Emergency Services Higher Education (FESHE) model.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: HPE-181

ALH-172 Health & Safety: Part II (5.00 cr.)

The primary focus of Health and Safety Part II is to provide basic emergency medical care for critical and emergent patients who access the emergency medical system. This individual possesses the basic knowledge and skills necessary to provide patient care. The healthcare provider functions as part of a comprehensive EMS response, under medical oversight. Healthcare providers perform interventions with the basic equipment typically found on a fire engine or first responder apparatus. The healthcare provider is a link from the scene to the emergency health care system. This course represents the second part of a two-course series to complete Health & Safety training. At the end of this course the student will be eligible to take the NJ State Department of Health and Senior Services certification exam for Emergency Medical Technician.

Lecture (45.00)

Laboratory (45.00)

Clinical (60.00)

Prerequisites: ALH-171

ALH-210 Co-op I: Allied Health (3.00 cr.)

Cooperative Education is a program designed to award academic credit for work related to a student's major. The learning experience is defined as a combination of professional work experience, the development of measurable learning objectives based on the job description, and the completion of individually tailored co-op assignments. A Co-op advisor is assigned to each student to establish the academic validity of the cooperative education credits.

Co-Op (135.00)

ALH-212 Co-op II: Allied Health (3.00 cr.)

This is a continuation of CO-OP I, (ALH-210) and is designed to afford the student three additional credits for work experience. A co-op advisor is assigned to each student to establish the academic validity of the cooperative education credits.

Co-Op (135.00)

ANTHROPOLOGY**ANT-101 General Anthropology (3.00 cr.)**

This course is an introduction to the four subdivisions of anthropology, which are physical anthropology, archeology, linguistics, and ethnology. This course will study the evolution of humankind, its achievements, the capacity for, and use of, language, and the nature of culture and its variations.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

ANT-101H Honors General Anthropology (3.00 cr.)

This course is an introduction to the four subdivisions of anthropology, which are physical anthropology, archeology, linguistics, and ethnology. This course will study the evolution of humankind, its achievements, the capacity for, and use of, language, and the nature of culture and its variations. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

ANT-102 Introduction to Physical Anthropology (3.00 cr.)

This course studies the origin and evolution of humankind and its relationships to other species. Topics include heredity and principles of evolutionary change, fossil evidence of humankind, differences in modern humankind, and the origin and adaptive value of culture in humankind's evolutionary process.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

ANT-201 African Cultures (3.00 cr.)

This course is designed to show the social, political, economic, and religious diversity in the cultures on the African continent and their essential interrelationships.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

ARABIC**ARA-101 Elementary Arabic I (3.00 cr.)**

This course introduces the student to the language and culture of the Arabic speaking world. It provides the student with grammatical terms and a wide variety of exercises to reinforce grammar points, vocabulary learning and communicative strategies. All four skills will be emphasized (listening, speaking, reading and writing) in order to interact and communicate with others while gaining a greater understanding of and respect for the cultural perspectives, practices and products of different cultures. This course is not intended for native speakers.

Lecture (45.00)

Prerequisites: ENG-012 and ENG-022

ARA-102 Elementary Arabic II (3.00 cr.)

This course is a continuation of Elementary Arabic I. It will expose the students to a larger quantity of aural and written texts, as well as, grammar and sentence structure. The focus of this course is on the meaning of sentences rather than words. The course will include new vocabulary, a variety of drills and audio/video

that will help the students gain a better understanding for Arabic languages and culture. This course is not intended for native speakers.

Lecture (45.00)

Prerequisites: ENG-012, ENG-022 and ARA-101 or two years of high school Arabic

ART**ART-101 Art Appreciation (3.00 cr.)**

The aim of this course is to provide students with the critical abilities to appreciate art, its production, function/purpose, and aesthetic value. Students will develop an understanding of the visual language artists employ and the variety of mediums they use. During the course students will learn how to write descriptive analysis of works of art that includes both its form (visual elements and design principles) and content (iconography, themes and purposes). At the completion of the course students will be able to enter any artistic environment (gallery or museum, etc.) and apply the classroom methodologies.

Lecture (45.00)

ART-103 Visual Culture (3.00 cr.)

This course will focus on aspects of culture that rely on visual images: the fine arts, photography, advertising, comic books, film, television and the Internet. The proliferation of visual media and the blurring of boundaries between high and low art demand active rather passive participants. The course is organized thematically and designed to encourage students to engage with a number of questions and issues that are critical to living in today's increasingly visual age. For instance do all cultures rely upon the same battery of concepts to define the aesthetic? How are perceptions of visual culture and of art shaped not only by culture but also by history? In addition students will explore connections between visual media and imagery as it relates to cultural, social, religious, political and aesthetic change.

Lecture (45.00)

Prerequisites: ENG-101

ART-103H Honors Visual Culture (3.00 cr.)

This course will focus on aspects of culture that rely on visual images: the fine arts, photography, advertising, comic books, film, television and the Internet. The proliferation of visual media and the blurring of boundaries between high and low art demand active rather passive participants. The course is organized thematically and designed to encourage students to engage with a number of questions and issues that are critical to living in today's increasingly visual age. For instance do all cultures rely upon the same battery of concepts to define the aesthetic? How are perceptions of visual culture and of art shaped not only by culture but also by history? In addition students will explore connections between visual media and imagery as it relates to cultural, social, religious, political and aesthetic change. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.

Lecture (45.00)

Prerequisites: ENG-101

ART-104 Introduction to Visual Arts (3.00 cr.)

This course is an introduction to the visual arts for the non-art major and is broad-based in nature. Students will learn how cultures from ancient to modern times have expressed themselves in the visual arts: painting, drawing, sculpture, installation, craft and graphic design. Concepts, materials and processes will be explored through lecture, individual and collaborative projects with a hands-on component to reinforce and expand learning.

Lecture (45.00)

ART-111 Art History I (3.00 cr.)

This course will begin with the prehistoric age and end with Gothic art. Each time frame will be discussed from a visual art point-of-view relating art to its political, social, economic, philosophical and aesthetic foundation taking a global position.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

ART-112 Art History II (3.00 cr.)

This course will cover different time periods commencing with the Romantic, Neo-classic, Naturalistic movements of the 18th Century. The student will be required to write two thematic research papers, visit 3 museums and answer an

examination final which will emphasize art's relationship to the time frame of its creation. Each time frame will be discussed from the visual arts point-of-view relating art to its political, social, philosophical, economical and aesthetic foundation. The final, thematic papers, museum visits will aid the student in developing a definition of art for his/her personal use.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

ART-121 Basic Drawing I (3.00 cr.)

This course is intended for the non-art major and is a broad based, introductory course in the language of observational drawing. Students will study master drawing works to gain an aesthetic appreciation, become familiar with drawing materials and methods and learn how to translate what they see onto a two-dimensional surface. The course focuses on the history of drawing while teaching fundamental drawing skills through various lecture, demonstration and studio experiences.

Lecture (30.00)

Laboratory (30.00)

ART-123 Basic Drawing I - AFA (3.00 cr.)

This course is intended primarily for students pursuing the Associate in Fine Art (AFA) degree in studio art. One additional hour of instruction per week is required so that students may be exposed to a more intense studio experience. This is an introductory course that is part of any foundation for studying art. It focuses on the mastery of fundamental drawing skills through various studio experiences. It encompasses perceptual and some conceptual drawing problems, concentrating on still life subject matter. Areas of concentration include composition and the use of charcoal media.

Lecture (30.00)

Laboratory (30.00)

ART-124 Basic Drawing II - AFA (3.00 cr.)

This course is intended primarily for students pursuing the Associate in Fine Art (AFA) degree in studio art. This course builds on what was accomplished in Basic Drawing I and leads the student to further explore the drawing medium. Greater depth of ideas and more sophisticated technical execution are emphasized.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: ART-123 or ART-121

ART-134 Life Drawing I (3.00 cr.)

This is a foundation course that provides instruction in drawing the human form. Dynamics, proportion, anatomy, volume and structure are investigated through various drawing methods and selected materials. Students work from a live model.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: ART-121 or ART-123

ART-136 Watercolor (3.00 cr.)

This course will explore the watercolor media. We will study and carry out both traditional and non-traditional watercolor paintings using paper as our surface. We will work from the still life set up, as well as our imagination. Students will also have the opportunity to use mixed media techniques on paper in conjunction with the watercolor media. The last several weeks of the course will introduce the student to a simple paper book structure and allow them to carry out their own independent project involving the watercolor medium.

Lecture (30.00)

Laboratory (30.00)

ART-139 Mural Painting (3.00 cr.)

This course builds on what was mastered in Basic Drawing I or Painting I. Students will apply their knowledge of drawing and painting to design and create a mural for a non-profit organization. They will assist the instructor with organizing and planning the project and take a leadership role in working with the Art Coop students. Students will leave the course with professional sample

boards, preliminary sketches, a written proposal, and photographs of the project and samples of other work completed in Painting I.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: ART-121 or ART-123 or ART-145

ART-143 Sculpture I - AFA (3.00 cr.)

This course focuses on teaching students about a number of fundamental processes and materials related to the three-dimensional fine arts. Students will be given technical instruction in such areas as modeling, mold making, casting, construction and carving while working with materials such as clay, plaster, wood, wire, and metal. An emphasis will be placed on process oriented projects that underline the importance of technical accomplishment and excellent craft. These projects are also designed to expand the student's aesthetic and conceptual understanding of sculpture. Group and individual critiques along with additional lecture material will combine to further develop each student's ability to plan, execute, discuss and analyze three dimensional arts.

Lecture (30.00)

Laboratory (30.00)

ART-144 Sculpture II - AFA (3.00 cr.)

This course focuses on teaching students about a number of fundamental concepts and processes related to the three-dimensional fine arts. An emphasis will be placed on concept oriented projects that underline the importance of materials and format in the realization and communication of ideas. Technical instruction will be given in such areas as wood working and construction, assemblage, fabrication, modeling, mold making, casting, and carving (when applicable). In addition, the projects are also designed to expand the student's aesthetic and conceptual understanding of sculpture. Group and individual critiques along with additional lecture material will combine to further develop each student's ability to plan, execute, discuss and analyze three dimensional arts.

Lecture (30.00)

Laboratory (30.00)

ART-145 Painting I - AFA (3.00 cr.)

This course is intended primarily for students pursuing the Associate in Fine Art (AFA) degree in studio art. One additional hour of instruction per week is required so that students may be exposed to a more intense studio experience. This course will teach the student the use of painting materials and methods using oil or acrylic paint. They will work from the still life to aid them in perfecting their methodology.

Lecture (30.00)

Laboratory (30.00)

ART-146 Painting II - AFA (3.00 cr.)

This course is intended primarily for students pursuing the Associate in Fine Art (AFA) degree in studio art or those visually oriented students. One additional hour of instruction per week is required so that students may be exposed to a more intense studio experience. The student will be working from models, still life set ups and begin to work in a more conceptual manner with different painting mediums and mixed media materials. Demonstrations and individual instruction will be given at appropriate intervals. Emphasis will be placed on student portfolio development as well as the development of a personal style. Student individuality will be emphasized.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: ART-145

ART-151 Ceramics & Pottery I (3.00 cr.)

This course is a broad based introductory class in ceramics designed to introduce students to both the elements of art and the principles of design while also exploring historical contexts and the work of professional ceramicists. Time will be spent working on hand-building projects as well as working with the potter's wheel. Projects and techniques that will be covered in this course include, but are not limited to: pinch pots, coil building, slab building, extruding, glazing, firing, wheel throwing, and functional vs. sculptural approaches to clay. We will examine the history of ceramics and use that knowledge to inform the work that is made. By studying historical and contemporary work, students will begin to

discriminate between aesthetic value and personal preference in their own work, and in the work of their fellow students.

Lecture (30.00)

Laboratory (30.00)

ART-153 Ceramics & Pottery I - AFA (3.00 cr.)

This course is a broad based introductory class in ceramics designed to introduce students to both the elements of art and the principles of design while also exploring historical contexts and the work of professional ceramists. Time will be spent working on hand-building projects as well as working with the potter's wheel. Projects and techniques that will be covered in this course include, but are not limited to: pinch pots, coil building, slab building, extruding, glazing, firing, wheel throwing, and functional vs. sculptural approaches to clay. We will examine the history of ceramics and use that knowledge to inform the work that is made. By studying historical and contemporary work, students will begin to discriminate between aesthetic value and personal preference in their own work, and in the work of their fellow students.

Lecture (30.00)

Laboratory (30.00)

ART-154 Ceramics & Pottery II - AFA (3.00 cr.)

This course is intended primarily for students pursuing the Associate in Fine Art (AFA) degree in studio art. One additional hour of instruction per week is required so that students may be exposed to a more intense studio experience. Students will work with clay in a controlled and self-directed way. The last seven weeks of the semester, students will select either throwing or hand-building technique, and devote most of that semester's time to a particular ceramic forming process.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: ART-153 or ART-151

ART-165 Color: Theory and Practice (3.00 cr.)

This course will expand the student's understanding of color through a thorough exploration of Johannes Itten's fundamental color theory principles. Through lecture, demonstration, studio projects, reading assignments and analysis of work by some of the great masters of Western painting, the student will learn about the color circle and the seven color contrasts. Subjective feeling and objective color principles will also be addressed.

Lecture (30.00)

Laboratory (30.00)

ART-166 Two Dimensional Design - AFA Majors (3.00 cr.)

This course focuses on the development of a fundamental visual art vocabulary based on design elements such as the use of line, shape, value, form, and color. An emphasis is placed on projects designed to demonstrate design principles, expose students to a variety of media, and to challenge one's conceptual and creative problem solving abilities. Accompanying the practical application of design principles to specific design problems, reading assignments, group and individual critiques and additional lecture material will combine to further develop each student's ability to plan, execute, discuss and analyze both formal and conceptual models in the visual arts.

Lecture (30.00)

Laboratory (30.00)

ART-167 Three Dimensional Design - AFA Majors (3.00 cr.)

This course focuses on teaching students a number of fundamental principles and processes related to the three-dimensional arts. An emphasis will be placed on planning and translating work from the two dimensional to the three dimensional. Each project will explore aspects of design such as working with form, volume, space, planes, texture, and composition. Demonstrations and technical instruction will be given on the use of different tools, processes, and materials. The projects will also work to expand each student's aesthetic and conceptual understanding of sculpture. Group and individual critiques along with additional lecture material will combine to further develop each student's ability to plan, execute, discuss and analyze three dimensional art.

Lecture (30.00)

Laboratory (30.00)

ART-168 Arts and the Community (3.00 cr.)

The social construct of art can give students experiences that connect practice with reflection, the personal with the social, and "enable them to confront otherness." This course has a large service-learning component that incorporates the arts. The course encourages students to connect meaningfully with the community and understand arts power to communicate a social, political, spiritual and cultural message. Students will collaborate to create a piece of art for a non-profit organization located in under-served communities. This art can take numerous forms, from paint to mosaics to installation. A central objective of this course is to provide students with experiences and reflection opportunities that allow them to deepen their understanding of both their own community and communities around them.

Lecture (45.00)

VETERINARY SCIENCE

ASC-106 Office Procedures for Vet Techs (2.00 cr.)

This is an introductory-level course that will allow the student to communicate effectively with the veterinary client, to obtain pertinent information concerning the patient in order to facilitate the veterinarian/client/patient relationship and to ensure optimal patient care. Students will learn how to communicate with the hospital staff concerning patient care, hospital procedures and to maintain efficient hospital operations. Students will learn to document medical activities and to maintain and preserve hospital, patient, and quality assurance records to comply with financial and legal requirements.

Lecture (30.00)

Prerequisites: BIO-111, CHM-101, ENG-101 and MTH-100

Corequisites: ENG-102

ASC-107 Calculations for Veterinary Technicians (1.00 cr.)

This course will provide the veterinary technology students experience in algebraic skills, dosage calculations, concentrations, fluid therapy, flow rates, rates, measurements, solutions, rate infusions, dilutions and parental medications.

Lecture (15.00)

Prerequisites: BIO-111, CHM-101, ENG-101 and MTH-100

ASC-111 Animal Biology (4.00 cr.)

Anatomy and physiology as a background for animal disease treatment and control; the normal function of the organs and systems of the body; and symptoms, causes, and preventive treatment of common ailments of animals are the topics covered in this course.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: BIO-111, CHM-101, ENG-101 and MTH-100

ASC-112 Principles of Animal Husbandry (2.00 cr.)

Principles of animal care and management for domestic and farm animals encountered in veterinary practice are covered in this course, including: recognition of the functions performed by the breeds and types of domestic animals; principles of nutrition with emphasis on practical aspects of feeding; principles of breeding and reproductive cycles, including care of pregnant females, care of the sire, preparations for birth of the young, postnatal care, management practices during lactation, and weaning procedures.

Lecture (30.00)

Prerequisites: ASC-106, ASC-107, ASC-111, ASC-115 and ENG-102

ASC-115 Small Animal Nursing I for Vet Techs (3.00 cr.)

This is an introductory, technician-level course that will prepare students for the summer externship. Lectures will cover general and emergency small animal medical nursing. Laboratory sessions will provide hands-on, clinical experience in basic medical procedures and surgical nursing care.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: BIO-111, CHM-101, ENG-101 and MTH-100

Corequisites: ASC-106, ASC-107 and ENG-102

ASC-200 Dental Techniques for Veterinary Techs (1.00 cr.)

Dental Techniques for Veterinary Technicians is an introductory level course which will allow the student an opportunity to gain knowledge and understanding in clinical instrumentation for canine and feline. Through the use of lectures, demonstrations, audiovisuals, class activities and practical (“hands on”) experience, the student will develop his/her skills in the following areas: Infection control basics; Dental anatomy for canines and felines; Charting and documentation; Basic instrumentation skills for the mirror, explorer, probe, scalers, curets, and ultrasonics; Maintenance and care of instruments; homecare/plaque control for canines and felines.

Lecture (15.00)**Laboratory (15.00)****Prerequisites: ASC-111****ASC-208 Veterinary Technician Seminar (1.00 cr.)**

This course will provide the veterinary technology students with information on related veterinary topics from a variety of disciplines. Guest speakers and the instructor will demonstrate hands-on techniques and/or lecture on material required by the accrediting body.

Lecture (15.00)**Prerequisites: ASC-111 and ASC-115****ASC-213 Laboratory Animal Science (3.00 cr.)**

This course offers an introduction to the husbandry and medical care of common laboratory animals. This course includes extension study in the anatomy, physiology, and common diseases of the mouse, rat, guinea pig and rabbit. Course work also includes the laws that regulate the use of animals in research to insure they are treated humanely, including the Federal Animal Welfare Act and the USDA inspection process. Students that complete this course qualify for employment in the biomedical sector.

Lecture (30.00)**Laboratory (30.00)****Prerequisites: ASC-111, ASC-115 and ENG-102****ASC-214 Small Animal Nursing II (2.00 cr.)**

This course is an intermediate level course that will prepare students for the administration of anesthesia and assisting with surgery. The laboratory sessions are held at a clinical site and will provide students with the opportunity to induce anesthesia and assist with surgery.

Lecture (15.00)**Laboratory (30.00)****Prerequisites: ASC-115, ASC-292 and ENG-102****ASC-215 Farm Animal Nursing (1.00 cr.)**

This course is designed to provide students with hands on experience with farm animals and will include visits to off-campus farms and farm animal veterinary hospitals. Students may incur travel expenses. Students will be required to dress appropriately for the farm and weather conditions as necessary. The schedule of farm visits may vary but is usually coordinated with Small Nursing II.

Laboratory (30.00)**Prerequisites: ASC-111, ASC-112 and ASC-115****ASC-220 Hematology for Veterinary Technicians (3.00 cr.)**

This course covers the basic principles and procedures necessary for hematological analysis. Topics will include the complete blood count, coagulation, anticoagulants, and morphology of normal and abnormal blood cells.

Lecture (15.00)**Laboratory (60.00)****Prerequisites: ASC-111, ASC-115, ENG-102 and MTH-100****ASC-234 Radiology & Ultrasound (2.00 cr.)**

This course is a technician level course that will prepare students for producing radiographic and ultrasound images of the veterinary patient. The laboratory sessions are held at a clinical site and will provide students with the opportunity to induce anesthesia and assist with surgery.

Lecture (15.00)**Laboratory (30.00)****Prerequisites: ASC-115****ASC-235 Clinical Lab for Veterinary Technicians (2.00 cr.)**

This course covers the principles of and procedures for laboratory techniques involved in the analysis of blood and body fluids. Emphasis is placed on techniques, manual skill development, instrumentation and quality control.

Lecture (15.00)**Laboratory (30.00)****Prerequisites: ASC-111, ASC-115, CHM-101, ENG-102 and MTH-100****ASC-236 Radiology for Veterinary Technicians (2.00 cr.)**

This course is a technician level course that will prepare students for producing radiographic images of the veterinary patient. The laboratory sessions will provide students with the opportunity to assist in radiology. This course is not transferable.

Lecture (15.00)**Laboratory (45.00)****Prerequisites: ASC-115 and ENG-102****ASC-240 Parasitology (3.00 cr.)**

Principles of parasitology, morphology; the life cycle, recognition and identification of representative parasites of animals are covered.

Lecture (30.00)**Laboratory (30.00)****Prerequisites: ASC-111 and ENG-102****ASC-261 Pathology for Veterinary Technicians (2.00 cr.)**

This lecture course covers basic pathological concepts and ends with specific diseases of organs and systems of domestic animals.

Lecture (30.00)**Prerequisites: ASC-111, ASC-115 and ENG-102****ASC-270 Veterinary Pharmacology (2.00 cr.)**

This course introduces the student to frequently prescribed medications, their uses, actions and common side effects. The Animal Science Technician students will become familiar with Veterinary Pharmacology and Pharmacy. The student will learn about the various drugs used in the Veterinary profession and the responsibility of the Animal Science Technician in the dispensing of these various drugs.

Lecture (30.00)**Prerequisites: ASC-111, ASC-115, CHM-101 and ENG-102****ASC-292 Small Animal Co-op (3.00 cr.)**

ASC-292 is a cooperative clinical course. This course awards academic credit for work related learning experience validated by a co-op advisor and veterinary site supervisor. There is no designated class attendance required. As a requirement of the AVMA, a minimum of 300 hours work experience is needed to earn 3 credits.

Co-Op (300.00)**Prerequisites: ASC-106, ASC-107, ASC-111, ASC-115 and ENG-102****AMERICAN SIGN LANGUAGE****ASL-101 American Sign Language I (3.00 cr.)**

This is an introduction to American Sign Language (ASL) as used in the deaf community. There will be a general discussion of ASL structure and an introduction to a variety of manual communication systems and philosophies. Information about the history of sign language and its existence in society today is also included. Skill focus will be on building a basic vocabulary of approximately 300 signs, both receptively and expressively, and the manual alphabet. This course requires 10 contact hours with people who are deaf.

Lecture (45.00)**ASL-102 American Sign Language II (3.00 cr.)**

This class is a continuation of the basic course; expanding sign skills and exploring ASL idioms. Emphasis will be on increasing speed and fluency. This course requires 10 contact hours with people who are deaf.

Lecture (45.00)**Prerequisites: ASL-101**

ASL-103 Fingerspelling (3.00 cr.)

This course is designed to enhance students' understanding and use of fingerspelling with American Sign Language. Both expressive and receptive skills will be emphasized. This course will be taught in American Sign Language and has the secondary objective of enhancing general signing skills.

Lecture (45.00)

Prerequisites: ASL-101

Corequisites: ASL-102

ASL-200 ASL Essentials (3.00 cr.)

The course is an intensive overview of American Sign Language through the use of conversations. The student will focus vocabulary, classifiers, role shifting, spatial relationships, indicating verbs, the formation of signs, non-manual signals and sentence structure.

Lecture (45.00)

Prerequisites: ASL-102

Corequisites: ASL-201

ASL-201 American Sign Language III (3.00 cr.)

This course is designed to increase receptive and expressive skills in dialogue communications. Further study of the complexities within the language will be pursued. This course requires 10 contact hours with people who are deaf.

Lecture (45.00)

Prerequisites: ASL-102

ASL-202 American Sign Language IV (3.00 cr.)

This course is a course designed to enhance students' communicative skills in American Sign Language in preparation for the Sign Language Studies Program. Students will be given opportunities to expand their vocabulary related to common experiences (both informal and formal settings with Deaf people). The student will utilize what they learned about ASL in class activities, video segments, dialogues, short stories, general conversations and class discussions. Particular attention will be placed on overall communicative ability, signing speed, accuracy, and vocabulary building.

Lecture (45.00)

Prerequisites: ASL-201

ASL-203 American Sign Language V (3.00 cr.)

This course will review and reinforce grammatical features from ASL IV. The students will improve conversational ASL skills when narrating unforgettable moments, sharing interesting facts, explaining rules, making major decisions and storytelling.

Lecture (45.00)

Prerequisites: ASL-202

AUTOMOTIVE

AUT-101 Automotive Fundamentals (3.00 cr.)

This course is designed to provide students with a foundation in the field of automotive technology. General service and maintenance procedures are stressed in this course.

Lecture (30.00)

Laboratory (30.00)

AUT-111 Automotive Brake Systems (3.00 cr.)

This course is designed to provide the student with the theory, design construction, inspection, diagnosis and repair of automotive brake systems. Hands-on laboratory procedures are stressed throughout the course.

Lecture (30.00)

Laboratory (30.00)

AUT-121 Automotive Steering & Suspension Systems (4.00 cr.)

This course is designed to provide the student with the theory, design, construction, inspection, repair and testing of automotive steering and suspension systems. Practical application in the laboratory of the theoretical material covered in class is stressed throughout the course.

Lecture (30.00)

Laboratory (60.00)

AUT-131 Automotive Heating and Air Conditioning (3.00 cr.)

This course is designed to provide the student with the operation, design, diagnosis, repair and service procedures of automotive heating and air conditioning systems. Practical application in the laboratory of the theoretical material covered in class is stressed throughout the course. Recommend that AUT-141 be taken prior to or concurrently with this course.

Lecture (30.00)

Laboratory (30.00)

AUT-141 Automotive Electrical & Electronic Prin (4.00 cr.)

This course is designed to provide the student with the basic principles of electrical/electronic laws, devices, instruments, and testing equipment. Practical application in the laboratory of theoretical material covered in class is stressed throughout the course.

Lecture (30.00)

Laboratory (60.00)

AUT-181 Automotive Practicum I (3.00 cr.)

The Automotive Program's cooperative work experience courses are designed to involve the student in actual day to day work situations. These courses are designed to give classroom related hands-on experience that cannot be given on campus. The student will adhere to all work rules and regulations maintained at the service facility. Automotive instructor permission is required. The student must have completed related classroom instruction.

Field Work (300.00)

AUT-182 Automotive Practicum II (3.00 cr.)

The Automotive Program's cooperative work experience courses are designed to involve the student in actual day to day work situations. These courses are designed to give classroom related hands-on experience that cannot be given on campus. The student will adhere to all work rules and regulations maintained at the service facility. Automotive instructor permission is required. The student must have completed related classroom instruction.

Field Work (300.00)

AUT-242 Automotive Electrical/Electronic Systems (4.00 cr.)

This course is designed to provide the student with the theory, design and service of automotive engine and body electrical/electronics systems. Application of theoretical material covered in class is stressed throughout the course. Recommend that AUT 141 be taken prior to or concurrently with this course.

Lecture (30.00)

Laboratory (60.00)

AUT-253 Automotive Engines (4.00 cr.)

This course is designed to provide the student with the theory, design, construction, inspection and service of automotive engines. This course will also provide the student with diagnosis, repair and testing procedures of automotive engines.

Lecture (30.00)

Laboratory (60.00)

AUT-261 Manual Drive Trains and Axles (4.00 cr.)

This course is designed to provide the student with theory, design, construction, inspection, repair, and diagnostic testing of manual drive trains and axles. Hands-on laboratory procedures are stressed throughout the course.

Lecture (30.00)

Laboratory (60.00)

AUT-262 Automatic Transmissions and Transaxles (4.00 cr.)

This course is designed to provide the student with the theory, design, construction, inspection, repair, and diagnostic testing of automatic transmissions and transaxles. Hands-on laboratory procedures are stressed throughout the course.

Lecture (30.00)

Laboratory (60.00)

AUT-271 Advanced Automotive Systems I (4.00 cr.)

This course is designed to explore the theory, design, service and diagnosis of advanced automotive systems. Computer controlled systems such as computer command controlled carburetors, electronic fuel injection and port fuel injection are explored in depth. It is recommended that the following courses be taken

prior or concurrently to this course: AUT-242 Automotive Electrical/Electronic Systems and AUT-253 Automotive Engines.

Lecture (30.00)

Laboratory (60.00)

AUT-272 Advanced Automotive Systems II (4.00 cr.)

This course is designed to provide students with the diagnosis, repair, service and testing procedures of advanced automotive systems and driveability problems. It is recommended that the following courses be taken prior or concurrently to this course: AUT-242 Automotive Electrical/Electronic Systems and AUT-253 Automotive Engines.

Lecture (30.00)

Laboratory (60.00)

Corequisites: AUT-271

AUT-283 Automotive Practicum III (3.00 cr.)

The Automotive Program's cooperative work experience courses are designed to involve the student in actual day to day work situations. These courses are designed to give classroom related hands-on experience that cannot be given on campus. The student will adhere to all work rules and regulations maintained at the service facility. Automotive instructor permission is required. The student must have completed related classroom instruction.

Field Work (300.00)

AUT-284 Automotive Practicum IV (3.00 cr.)

The Automotive Program's cooperative work experience courses are designed to involve the student in actual day to day work situations. These courses are designed to give classroom related hands-on experience that cannot be given on campus. The student will adhere to all work rules and regulations maintained at the service facility. Automotive instructor permission is required. The student must have completed related classroom instruction.

Field Work (300.00)

AUT-286 Automotive Capstone Practicum (3.00 cr.)

The Automotive Program's cooperative work experience courses are designed to involve the student in actual day to day work situations. These courses are designed to give classroom related hands-on experience that cannot be given on campus. The student will adhere to all work rules and regulations maintained at the service facility. Automotive instructor permission is required. The student must have completed related classroom instruction.

Field Work (360.00)

BEHAVIORAL HEALTH CARE

BHC-101 Brain Function Injuries & Treatment (3.00 cr.)

This course provides students with an overview of the basic concepts of brain structure and function, disabilities which arise from brain injuries, diseases and malfunction, and how people can learn to compensate and adjust to these problems. This will include the neuron, the brain stem, the limbic system, the cerebellum and the cerebral cortex, including hemispheres of the brain. This course will also review the incidence and prevalence of brain injury.

Lecture (45.00)

Prerequisites: ENG-012 and ENG-022

BHC-102 Emotional & Behavioral Disorders (3.00 cr.)

This course introduces students to the basic concepts of physical, cognitive, and emotional development across the life span. The student will learn the characteristics of disorders such as autism spectrum, as well as selective mutism, ADHD, depression, and psychotic disorders. Medical conditions such as generalized seizures, partial seizures and other complications which may be associated with neurological impairment will also be covered in this course. Students will become familiar with treatments and medications including their benefits and possible side effects.

Lecture (45.00)

Prerequisites: ENG-012 and ENG-022

BHC-103 Applied Behavioral Analysis (3.00 cr.)

This course will cover the basic principles of Applied Behavior Analysis, providing opportunities for hands-on learning with feedback. Students will learn

to apply behavioral change techniques derived from Operant and Classical Conditioning, including positive and negative reinforcement, in order to shape desired behavior in client populations. This course will expand the student's knowledge and skills for managing client outbursts, according to the guidelines for the use of seclusion and restraints.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: ENG-012 and ENG-022

BHC-104 Family, Community & the Law (1.00 cr.)

This course will introduce students to issues arising in families of neurologically impaired clients. Student will learn effective strategies for the provision of client care within the individual family. This course will increase the awareness of community agencies supporting families of clients with neurological challenges. Students will comprehend and learn to apply moral principles and ethical standards in communicating with clients and their families.

Lecture (15.00)

Prerequisites: ENG-012 and ENG-022

BIOLOGY

BIO-010 Preparation for Biology (3.00 cr.)

This course is designed primarily for those students who have the desire but lack the proper background to enter science oriented programs. The course introduces basic concepts of natural science, scientific language, methods of fundamental scientific study, and basic laboratory procedures. (Credits do not apply toward graduation requirements).

Lecture (30.00)

Laboratory (30.00)

BIO-103 Human Biology (3.00 cr.)

This non-laboratory course is designed as an overview of the human organism. Cells, tissues and specifically, organ systems will be discussed. Emphasis will be placed on anatomical structures and important physiological phenomena. Some aspects of genetics and human disease may be introduced. This course does not satisfy a laboratory science elective.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

BIO-104 Principles of Environmental Science (3.00 cr.)

This course is designed as a study of humans and their relationship with the environment. It considers basic concepts of ecology and how humans have altered and modified the environment through pollution and other changes imposed by technological advances. This course does not satisfy a laboratory science elective.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

BIO-106 Living in the Environment (4.00 cr.)

The course is a study of the relationships between living organisms and their environment. It includes the examination of basic biological concepts including the scientific method, cell structure and function, metabolism, genetics and evolution. Laboratory exercises include computer modeling, field investigations and laboratory experiments. This course is designed to fulfill a laboratory science general education elective for non-science majors.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

BIO-111 Biology I-Science (4.00 cr.)

This introduction to biology covers in detail the basic biological concepts of scientific method, cell structure and function, metabolism, evolution, genetics, and ecology, accompanied by appropriate illustrations. The principles are then discussed in relation to viruses, bacteria, protozoa and plants. Laboratory exercises are chosen to complement the material presented during lecture hours.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

BIO-112 Biology II-Science (4.00 cr.)

This second semester continuation of the basic principles explored in Biology I examines members of the animal kingdom with particular emphasis on mammalian anatomy and physiology. Laboratory work complements the lecture material.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

BIO-117 Basic Anatomy & Physiology I (4.00 cr.)

This course is designed to introduce the basic principles of anatomy and physiology to nursing and allied health students. Following an introduction to the organization of the human body, basic chemistry, and basic cell biology, Basic Anatomy and Physiology (BIO 117) examines the histology, gross anatomy and functions of organs of the integumentary, skeleton, muscular, and nervous systems. Laboratories are designed to supplement the lecture material and include the use of the following materials: histology slides, models, preserved specimens and computer simulated physiology exercises.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

BIO-118 Basic Anatomy & Physiology II (4.00 cr.)

This course is designed to introduce the basic principles of anatomy and physiology to nursing and allied health students. Following an introduction to the organization of the human body in Basic Anatomy and Physiology I (BIO-117), this continuation course examines the histology, gross anatomy and functions of organs of the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems. Laboratories are designed to supplement the lecture material and include the use of the following material: histology slides, models, preserved specimens and computer simulated physiology exercises.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: BIO-117

BIO-121 Basic Microbiology (4.00 cr.)

This course is designed to introduce the basic principles of microbiology to nursing and allied health students. Topics include biological concepts of cell structure, growth, reproduction, genetics, classification, beneficial microbe/human interactions, infections and host defenses. Laboratory exercises are designed to teach microscopy, staining, cultivation and identification of bacteria, control of microbial growth, aseptic technique and proper disposal of contaminated items. Lecture and Laboratory activities will emphasize analytical thinking and problem-solving ability.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

BIO-130 Plants & Society (4.00 cr.)

This laboratory based course will introduce non-science majors to scientific principles by using plants and examining how they affect society. Topics will include the scientific method, basic plant structure and the basic concepts of plant physiology. The course will explore the interdependence of plants and people. This course is designed to fulfill a laboratory science general education elective for non-science majors.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: MTH-011 and (ENG-013 and ENG-023) or ENG-046

BIO-140 The Microbial World (4.00 cr.)

This laboratory-based course is designed to introduce non-science majors to scientific principles by using the microbial world as an investigative model. Topics will include the scientific method, the cellular basis of life, and the basic concepts of microbiology. The course will illustrate the interdependence of humans and microbes, explore the role of microorganisms in establishing and maintaining the environment and examine the establishment, spread and impact of infectious diseases. Contemporary issues in microbiology such as the development of antibiotic resistance, and the use of microorganisms in genetic engineering and biological warfare will also be explored. This course is designed to fulfill the general edu-

cation goals of the college, with an emphasis on improving critical thinking, and scientific literacy. This course will fulfill the laboratory science requirement for non-science majors.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: MTH-011 and (ENG-013 and ENG-023) or ENG-046

BIO-140H Honors - The Microbial World (4.00 cr.)

This laboratory-based course is designed to introduce non-science majors to scientific principles by using the microbial world as an investigative model. The course will introduce the student to the scientific method, the cellular basis of life, and the basic concepts of microbiology. The course will illustrate the interdependence of humans and microbes, explore the role of microorganisms in establishing and maintaining the environment and examine the establishment, spread and impact of infectious diseases. Contemporary issues in microbiology such as the development of antibiotic resistance, and the use of microorganisms in genetic engineering and biological warfare will also be explored. This course is designed to fulfill the general education goals of the college, with an emphasis on improving critical thinking and scientific literacy. This course will fulfill the natural science requirement for non-science majors. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: MTH-011 and (ENG-013 and ENG-023) or ENG-046

BIO-206 Environmental Sci: Theory & Applications (4.00 cr.)

The course is a study of the relationships between living organisms and their environment. It includes an in-depth examination of ecosystems, terrestrial and aquatic biodiversity, renewable and nonrenewable resources, climate change, and waste management. Laboratory exercises include computer modeling, field investigations and laboratory experiments.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: BIO-111 and (ENG-013 and ENG-023) or ENG-046

BIO-210 Human Anatomy & Physiology (4.00 cr.)

This course discusses human anatomy and physiology and their inter-relationships. Lectures and laboratory exercises cover the salient features of mammalian morphology and physiology with special reference to humans. This course is designed primarily for specific programs at CCC and may not be transferable as an Anatomy & Physiology course.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: BIO-111

BIO-211 Anatomy & Physiology I (4.00 cr.)

Anatomy and Physiology I will introduce the student to the organization of the human body and histology. The course will also examine the histology, gross anatomy, and functions of the integumentary, skeletal, muscular, nervous, and endocrine systems. Laboratories are designed to supplement lecture material, and include the use of a variety of materials: histology slides, models, and preserved specimens.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: BIO-111

BIO-212 Anatomy & Physiology II (4.00 cr.)

Anatomy & Physiology II is a continuation of Anatomy & Physiology I (BIO-211). The course examines the histology, gross anatomy, and function of organs of the cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. Laboratories are designed to supplement lecture material and include the use of a variety of materials: histology slides, models, and preserved specimens.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: BIO-211

BIO-220 Elements of Microbiology (3.00 cr.)

This course is designed specifically for the Dental Hygiene Program. This course is an introduction to the microbial world. The focus of the lecture topics is a survey of the bacteria and viruses encountered in dental practice. The lab exercises include aseptic techniques, bacterial identification and infection control.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: BIO-111

BIO-221 Microbiology I (4.00 cr.)

Microbiology I is a comprehensive course covering the study of bacteria, fungi, and viruses. Laboratory exercises emphasize standard techniques used for the food, health, pharmaceutical, and other industries.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: BIO-111

BIO-222 Microbiology II (4.00 cr.)

In Microbiology II the principles and methods of medical microbiology are discussed. The student will study pathogenic and nonpathogenic bacteria and be introduced to medical mycology.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: BIO-221

BIO-225 Introduction to Plant Biology (4.00 cr.)

This course is an introduction to the study of Botany, and includes a survey of the plant kingdom, emphasizing reproductive, vegetative, physiological, and evolutionary processes. Particular attention is given to Angiosperm structure and function. Laboratory exercises include microscopic observation, demonstrations of physiological processes, and local plant identification. This course is designed as a general education laboratory science elective for science majors.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: BIO-111, MTH-029 and (ENG-013 and ENG-023) or ENG-046

BIO-235 Cell Biology (4.00 cr.)

Building on concepts introduced in Biology I: Science, this course will examine advanced topics in cell biology. Topics will include; cell ultra-structure, bio-energetics, metabolic pathways, cell cycle and division, signal transduction, molecular genetics, the cellular basis of cancer and stem cell research. The lab will introduce students to techniques in cell and tissue culture, cell separation, cytochemistry and microscopy.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: BIO-111, and MTH-125 or MTH-130

BIO-240 Genetics (4.00 cr.)

This course is designed to give students a solid foundation in the three major areas of genetics: classical, molecular, and population. The lab component will engage the students with experiments in *Drosophila* heredity, DNA purification, restriction enzyme digests and interactive computer exercises in population biology. The course will also enhance students' abilities in information processing, critical thinking, writing, and examining complex ethical issues.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: BIO-111 and CHM-111

BIO-250 Co-op I: Science (3.00 cr.)

Cooperative Education is a program designed to award academic credit for work related to a student's major. The learning experience is defined as a combination of professional work experience, the development of measurable learning objectives based on the job description and the completion of individually tailored co-op assignments. A Co-op advisor is assigned to each student to establish the academic validity of the cooperation education credits. The key role of the advisor is to meet with the student's employer and monitor the learning experience so that it reflects the student's academic major and/or career interests. The advisor awards a letter grade at the end of the 15-week work experience. A minimum of 135 hours of work experience is required to gain 3 academic credits.

Co-Op (135.00)

BIO-251 Co-op II: Science (3.00 cr.)

This course is a continuation of BIO 250 Co-op I and is designed to afford the student three additional credits for work experience. Cooperative Education is a program designed to award academic credit for work related to a student's major. The learning experience is defined as a combination of professional work experience, the development of measurable learning objectives based on the job description and the completion of individually tailored co-op assignments. A Co-op advisor is assigned to each student to establish the academic validity of the cooperation education credits. The key role of the advisor is to meet with the student's employer and monitor the learning experience so that it reflects the student's academic major and/or career interests. The advisor awards a letter grade at the end of the 15-week work experience. A minimum of 135 hours of work experience is required to earn 3 academic credits.

Co-Op (135.00)

Prerequisites: Completed a minimum of 20 credits; 8 credits in Biology; 4 credits in Mathematics or Science; and a minimum GPA of 2.5

BIO-255 Research Experience in Biology (3.00 cr.)

This course is an independent study in which the student will design and complete a laboratory-based research project which demonstrates knowledge and skills gained in previous science and mathematics classes. The research project does not have to be publishable or primary research. The student will work with a faculty advisor to guide the project.

Lecture (15.00)

Laboratory (60.00)

Prerequisites: Completed a minimum of 30 credits; 12 credits in Biology; 8 credits in Mathematics or Science; and a minimum GPA of 2.5

BIOTECHNOLOGY**BIT-102 Introduction to Biotechnology (1.00 cr.)**

This is a survey course for students interested in pursuing a career in biotechnology. Lecture topics are designed to introduce the scope, current advances, and societal implications of biotechnology. Students will be exposed to the diversity of career opportunities and the regional biosciences job market. Guest speakers from industry, academia, and research facilities will enable students to connect with organizations where employment opportunities may exist.

Lecture (15.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

BIT-200 Introduction to Biochemistry (4.00 cr.)

Introduction to Biochemistry will give the student a strong foundation in the basic topics and techniques used in biochemistry: proteins, carbohydrates, lipids and nucleic acids. Laboratory exercises will prepare the student to perform current techniques critical to biochemical research. These include: separation chemistry, enzyme analysis, molecule isolation and identification techniques. Data recording and analysis will be stressed.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: BIO-111 and CHM-221

Corequisites: BIO-240

BIT-201 Applications in Biotechnology (4.00 cr.)

The Applications in this Biotechnology course will detail concepts and principles of recombinant DNA techniques. Students will be exposed to the biotechnology research tools and protocols used for DNA isolation, gene mapping, DNA fingerprinting, cloning, gene expression and regulation, the production of gene libraries, and gene sequencing.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: BIO-221, BIT-102 and CHM-112

Corequisites: BIO-240

BIT-202 Instrumental Analysis (4.00 cr.)

Instrumental analysis will emphasize the theory and application of modern analytic instrumentation as applied to the field of biotechnology, including techniques in spectrophotometry, chromatography, nuclear magnetic resonance, mass spectrometry and fluorescence.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: BIT-102, CHM-112 and CHM-221

BIT-203 Cell & Tissue Culture/Bio-Manufacturing (4.00 cr.)

This is a capstone course for biotechnology students providing an introduction to the principles and practical considerations in the culture of cells. Topics include media preparation, cryopreservation, troubleshooting common culture problems, and scale-up. The course will provide an overview of the biomufacturing process, including standard operating procedures (SOPs) and current Good Manufacturing Practices (cGMP). Routine maintenance and record-keeping are emphasized.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: *BIO-221, BIO-235 and one 200-Level CHM or BIT Course*

BIT-205 Biotechnology Internship (3.00 cr.)

The student will integrate their academic studies and apply these principles to the internship in the professional, biotechnology industry experience they will receive during their internship assignment. The students will be placed in affiliated programs in institutions and laboratories where they will be exposed to biotechnological skills necessary for industry standards (e.g. genetics, animal handling, instrumentation).

Clinical (135.00)

Prerequisites: *BIT-102, BIT-201 and BIT-202*

BUSINESS MATHEMATICS**BMT-101 Business Mathematics I (3.00 cr.)**

Business Mathematics I is the study of mathematics using linear equations as a basis for solving business problems in retail management, finance and accounting. This course may not be accepted for transfer purposes at four-year institutions.

Lecture (45.00)

BMT-102 Business Mathematics II (3.00 cr.)

A continuation of Business Mathematics I, this course uses linear equations on a basis of solving more difficult mathematical problems in retail management, finance, and accounting. This course may not be accepted for transfer purposes at four-year institutions.

Lecture (45.00)

Prerequisites: *BMT-101*

BMT-103 Business Statistics (3.00 cr.)

This course introduces the fundamental concepts, methods, and methods and procedures of statistical analysis, descriptive and sampling statistics, measures of central tendency, index numbers, variability, descriptive analysis and presentation of single variable data, dispersion, time series analysis, frequency distribution, normal distribution and normal curve and probability.

Lecture (45.00)

BUSINESS**BUS-201 Co-op I: Business (3.00 cr.)**

Cooperative Education is a program designed to award academic credit for work related to a student's major. The learning experience is defined as a combination of professional work experience, the development of measurable learning objectives based on the job description, and the completion of individually tailored Co-op assignments. A Co-op advisor is assigned to each student to establish the academic validity of the cooperative education credits.

Co-Op (135.00)

BUS-202 Co-op II: Business (3.00 cr.)

This is a continuation of Co-op I, and is designed to afford the student three additional credits for work experience. A Co-op advisor is assigned to each student to establish the academic validity of the cooperative education credits.

Co-Op (135.00)

COMPUTER AIDED DRAFTING & DESIGN**CAD-101 Computer Aided Engineering Graphics (4.00 cr.)**

Computer Aided Engineering Graphics is a course in graphical communications for engineering or high technology students. It is an introductory course in engineering graphics that emphasizes the use of the computer as a tool in the effective application of basic drafting principles, standards, and techniques. This course introduces the student to drafting and drafting standards by stressing the

competent use of microcomputers, plotters, input devices, software, and other related materials.

Lecture (45.00)

Laboratory (45.00)

CAD-102 Advanced Computer Aided Eng Graphics (3.00 cr.)

This course is a continuation of Computer Aided Engineering Graphics stressing the advanced capabilities for design and drafting made possible by the use of the microcomputer. Topics covered include creating and viewing three-dimensional geometry, construction of complex drawings, block manipulation, using and editing intelligent entities (polylines), script files, attribute extraction, bill of materials generation, and the creation of custom shapes, linetypes, letter fonts, hatch patterns and menu systems. Database integration with CADD is also discussed.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: *CAD-101*

CAD-107 Parametric Design: AutoDesk Inventor (3.00 cr.)

This course introduces the beginning and intermediate CADD student to the use of parametrically driven graphics software applications such as AutoDesk Inventor to implement advanced part and assembly modeling techniques. Students will study creation and development of complex 3-dimensional mechanical design assembly drawings from simple sketches and the use of property and parameter manipulation and modification. The course will also introduce the student to sheet metal and flat pattern drawings and design.

Lecture (30.00)

Laboratory (30.00)

CAD-201 CADD Applications: MicroStation (3.00 cr.)

This course gives the introduction to intermediate Computer Aided Drafting and Design students the skills and knowledge necessary to use the MicroStation graphics software as a tool in the effective application of drafting principles and techniques. This course consists of training in all of the two-dimensional and three-dimensional drafting and design features of MicroStation, including rendering, fly through animation, and advanced concepts for a productive design environment.

Lecture (30.00)

Laboratory (30.00)

CAD-202 Advanced CADD Project (3.00 cr.)

The Advanced CAD Project course serves as a capstone learning experience for students in the Computer Aided Drafting and Design program. The course provides students with a vehicle to showcase acquired drafting and design skills in any of a number of engineering areas including (but not limited to) the architectural, mechanical, civil, and electrical disciplines. The purpose of the course is to expose final semester students to a real-world project development experience by guiding them through all of the stages of a professional level engineering project from conception to final, formal presentation.

Lecture (15.00)

Laboratory (60.00)

CAD-205 Architectural CADD Using Revit (3.00 cr.)

This course is an introduction to Architectural drafting and design using the AutoDesk Revit software application on the latest Windows platform. Revit Architecture is the industry standard for building information modeling (BIM) and was designed specifically for architects and designers. This is a core curriculum course for the CADD major but it can be utilized by anyone with at least one year of drafting experience using AutoCAD.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: *CAD-101*

CAD-206 Solids Modeling: Solids Works (3.00 cr.)

This course introduces students from the CADD and CIM programs to the use of SolidWorks as a tool in the design and manufacturing stages of the product development lifecycle. Students will be prepared to take the CSWA certification exam.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: *CIM-101*

COMPUTER GRAPHICS

CGR-102 Electronic Publishing & Prepress (3.00 cr.)

This course develops the student's basic computerized layout and design skills with particular emphasis on the fundamentals of prepress. Topics covered will include color control, color separations, special effects for type, automatic tracing of scanned images, scaling and cropping photographs and graphics, instant metamorphosis of one image into another, postscript output, and prepress process. This course includes in-class lab time.

Lecture (30.00)

Laboratory (30.00)

CGR-104 Elements & Principles of Graphic Design (3.00 cr.)

This course introduces students to the fundamentals and practical applications of layout and design for a variety of media. Course content will include principles of conventional and modern layout, tools, typography and effective use of color depending on the final output. Students will gain experience in executing variations of rough layouts for different purposes, selecting and positioning correct illustrative material, interpreting target audiences, creative concept formulation, working with art, as well as production methodology. The vocabulary advertising language associated with graphic design/advertising and production processes will be covered. This course is focused on the techniques of design, a computer is not required.

Lecture (45.00)

Prerequisites: ENG-012 and ENG-022

CGR-105 Podcasting (3.00 cr.)

This course introduces students to the fundamentals and practical applications of Podcasting. Students will explore all types of podcasting and blogging methods so they can self-publish their content and create podcasts for a wide audience. Course content will include both audio and video tool options. Students will upload to a webserver so the podcasts may be accessed from the World Wide Web. The vocabulary language associated with the podcasting process will be covered. All Computer Graphic classes now include in-class lab time.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

CGR-106 Print Publishing (3.00 cr.)

This course will examine theories, concepts, processes, terminology, systems and technologies relevant to the printing process, production and the digital industry. The course will explore and examine the printing industry and the preparation of publications. This course is not intended to provide students with hands-on operations of a printing press or a specific software package, but rather the understanding of the principles and practices of the printing production industry. Students will learn about the printing process through reading, writing, and discussion.

Lecture (45.00)

CGR-107 Scriptwriting (3.00 cr.)

A comprehensive introduction to scriptwriting including: concept, pitch, proposal, format, analysis, organization, workflow, and presentation. The course introduces students to the fundamentals of writing and critiquing scripts to help develop professional writing skills necessary to create short films. Emphasis is placed on the creative process from concept to completion, analyzing scripts, and discussions of artistic choices in storytelling.

Lecture (45.00)

CGR-111 Computer Graphic Design I (3.00 cr.)

This course will provide studio experience in computer graphics art and design. This combined studio/lecture course is an introduction to the creative possibilities of graphics computing and to the historical, conceptual, technical, and contemporary background of computers and computer graphics. Emphasis is placed on the visual-problem solving process through the use of applications and equipment. Students will be able to utilize a variety of software and hardware which includes bit-mapped raster and object-oriented vectoring software programs. This course includes in-class lab time.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: ENG-012 and ENG-022

CGR-112 Computer Graphic Design II (3.00 cr.)

This course builds on the foundation in Computer Graphic Design I. It further develops the student's basic computer graphic design and skills with particular emphasis on computer imagery created by various photo imaging programs. Students will study advanced manipulation tools which allow the artist to create electronic images directly on the computer screen by controlling the color and intensities of each pixel. Creative and conceptual development are emphasized throughout the course. This course includes in-class lab time.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-111

CGR-113 Web Page Design I (3.00 cr.)

This will introduce the student to elements of web design. This combined lecture/lab course is an introduction to the creative possibilities of web design. Emphasis is placed on the visual problem solving process through the use of applications and equipment. The course will also focus on how the advertising market is changing and using the Internet as tool for communication. Students will use industry standard software as well as coding to develop web pages.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-111

CGR-115 Digital Storytelling (3.00 cr.)

This course will focus on the planning, storyboard design and scripting of interactive media productions. Students will look at the storytelling, layout & design, and documentation. Narrative scripts and design will be developed with an emphasis on scene design, characterization, plotting, target audience, messages and script format.

Lecture (45.00)

Prerequisites: ENG-011 and ENG-021

CGR-123 Interactive Interface Design (3.00 cr.)

The boundaries between hardware and software, device and user have changed dramatically and continue to change. This course examines the user-centered interactive design approach to interface development and interactive applications for general and instructional design. It provides an overview of media in historical, current and future contexts; examining the role of written and visual media from both a contextual and practical perspective. This course will introduce a systems approach to multimedia and instructional design which includes introductory information and application of skills and techniques necessary in the analysis, design, development, implementation, and evaluation of interactive instruction. This is a not a lab-based course; a computer is not required.

Lecture (45.00)

Prerequisites: CGR-111

CGR-125 Game Design and Development I (3.00 cr.)

This course will introduce the student to basic game theory including game-play and strategy as well as the historical development of all types of games as they were affected by world and market conditions. In addition, the specific history of the videogame industry will be examined, as well as the overall processes involved in developing a videogame from basic conception to selling the proposal to production and marketing.

Lecture (45.00)

Corequisites: CGR-111

CGR-200 Game Design & Development II (3.00 cr.)

This course will focus on the production, design and technical skills of game design. This hands-on course will focus on techniques in design, and technical skills required to develop and design a computer generated interactive video game. All Computer Graphic classes now include in-class lab time.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-111 and CGR-125

CGR-205 Graphics for the Web (3.00 cr.)

An image can communicate powerful ideas and emotions; graphics can enhance a site's experience, support its content, and create a visual hierarchy. This course focuses on creating Web graphics including technical fundamentals and

techniques for the wide range of graphics encountered in a typical Web design project.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-113

CGR-213 Computer Graphic Design III (3.00 cr.)

An in-depth study of digital computerized imagery will be explored in detail. This advanced course will explore both a fine art and commercial art approach to digital imagery and will allow students to apply their knowledge to the realizations of visual images. All Computer Graphic classes now include in-class lab time.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-112

CGR-214 Web Page Design II (3.00 cr.)

This course is a continuation of Web Page Design I. It includes advanced features of web design including CSS, as well as system administration for setting up and managing a website.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-113

CGR-215 Web Multimedia (3.00 cr.)

This hands-on course focuses on creating multimedia websites. The emphasis is on using cross-platform tools to create high quality, low bandwidth media that downloads fast and works with most browsers. A basic knowledge of the web is required.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-113

CGR-220 Web Development (3.00 cr.)

This course studies strategies for making effective use of Web architecture and programs. It emphasizes site maintenance and focuses on the technical aspects of Web development from a designer's standpoint. Students will learn the fundamentals of JavaScript as a method to create interactivity with text, animation, sound and graphics. A basic knowledge of web design and HTML coding is required.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-113 and CGR-214

CGR-231 Video Imaging Technology I (3.00 cr.)

This course is designed to give students a thorough understanding of theory and practical applications of video technology. It consists of video theory, computer electronic image processing and special effects, contemporary video production and post-production techniques, and examples of video art and commercial productions from around the world. Topics include scanning theory, video image compositing, special effects hardware and software, and compositing layering. Class time will include lecture, demonstration, and hands-on training. All Computer Graphic classes now include in-class lab time.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-111

CGR-232 Video Imaging Technology II (3.00 cr.)

This course builds on the foundation learned in Video Imaging Technology I. It further develops the student's use of video desktop. Students will study the art of morphing, video footage, rotoscoping, and working with a video camera. Creative and conceptual development are emphasized throughout the course in the areas of imaging processing through the use of video desktop. Class time will include lecture, demonstration, and hands-on training. All Computer Graphic classes now include in-class lab time.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-231

CGR-233 Video Imaging Technology III (3.00 cr.)

This course provides a detailed examination of the equipment and techniques of video imaging technology. Areas include advanced editing techniques including SMPTE time code and different types of video quality, which will be based on

production and digital effects. Through a series of exercises and projects, students will explore advanced techniques from storyboard design to video taping, to on-line editing with images and sound, to final output capabilities. All Computer Graphic classes now include in-class lab time.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-232

CGR-235 Video Production (3.00 cr.)

This is a comprehensive introduction to basic video production techniques and equipment. Proper procedures are explained for the use of video cameras, lenses, video stocks, lights, microphones, tape-recorders, editors, and other video equipment. Attention is also given to the production planning and post-production. All Computer Graphic classes now include in-class lab time.

Lecture (30.00)

Laboratory (30.00)

CGR-239 2D Animation (3.00 cr.)

This course is an introduction to two-dimensional animation. The student will study the principles of animation and the art of motion, learn how to create and animate characters and explore basic animation techniques. This course includes in-class lab time.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-111

CGR-241 3D Computer Animation I (3.00 cr.)

This course introduces the fundamental 3D principles of modeling and animation. Topics include; perspective and the anatomy of a figure. The student will learn the basic concepts of shape and object manipulation. Lectures include demonstration of industry leading modeling and rendering software used in assignments and class discussions. This course includes in-class lab time.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-111

CGR-242 3D Computer Animation II (3.00 cr.)

This course builds on the foundation in Computer Animation I. It further develops the student's basic animation skills with particular emphasis on lighting, motion and rendering. Students will study advanced computerized animation techniques, working in the three dimensional environment. Emphasis is on creative content experimentation and critical thinking. Creative and conceptual developments are emphasized throughout the course. This course includes in-class lab time.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-241

CGR-243 Computer Animation III (3.00 cr.)

This capstone course explores advanced concepts in 3D designing and producing computer-generated animation. Students begin production of animation samples that demonstrate creativity and knowledge of sophisticated animation techniques. Students will complete a number of 3D projects and assignments, research animation career opportunities, and develop a video portfolio of their own work. All Computer Graphic classes now include in-class lab time.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-242

CGR-244 Special Effects (3.00 cr.)

This course explores various aspects of special effects in game design, multimedia and film/video. Developers must be familiar with the basics of applying sound and visual effects in a computer generated interactive environment. Students will learn how to composite special effects by combining the elements of graphics, animation, video, and audio using leading industry software. Students will learn some of the mysteries behind the production of special effects by reviewing case studies. Students will complete various assignments and create projects that demonstrate their understanding of special effects. All Computer Graphic classes now include in-class lab time.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-112

CGR-252 Portfolio Design (3.00 cr.)

This course will aid in the process of building and developing a professional portfolio of computer graphics. Students will be required to go on at least one job interview or talk with a professional art director about their portfolios and job opportunities in the field of computer graphics. Creative and conceptual development is emphasized throughout the course.

Lecture (45.00)

Prerequisites: CGR-102 and CGR-112

CGR-253 Digital Illustration (3.00 cr.)

This course will explore the applications of digital illustration as a means of effective visual communication. Emphasis is placed on the development of the creative visual concept and its relationship to style, media, technique, and method of reproduction. A variety of traditional and computer-generated illustration techniques are explored. Specific problems are given in technical illustration, medical illustration, children's illustration, type design and other advertising areas. All Computer Graphic classes now include in-class lab time.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-111

CGR-255 Game Design & Development III (3.00 cr.)

This course explores advanced production in game design and development skills. Students will produce advanced interactive video games with special effects, animation and sound effects. Students will complete a number of video game projects and assignments, research game design career opportunities and develop a video game portfolio of their own work. All Computer Graphics classes now include in-class lab time.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-200

CGR-256 Game Design & Development Final Project (3.00 cr.)

This capstone course explores advanced production in game design and development. It will expand on the higher-level techniques introduced in Game III including: interactivity, programming, special effects, animation and sound effects. Students will complete the working game that they started in Game Design III and they will develop the sales, testing and marketing materials to promote this game. These tools are needed for the students' video game portfolio. All Computer Graphics classes now include in-class lab time.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-125, CGR-200 and CGR-255

CGR-260 Comic Book Design (3.00 cr.)

This course will provide an introduction to current techniques for comic book design. The course involves basic instruction on storytelling by means of pictures. It deals with design, page layout, and character development. Topics will include how to create the story, characters and text balloons, page layout and design, adding special effects and 2D and 3D design. This course combines traditional and computerized techniques. All Computer Graphic classes now include in-class lab time.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CGR-111

CGR-270 Computer Graphics Internship/Co-Op (3.00 cr.)

This course is a supervised work and learning experience in a professional environment under the direction of a Computer Graphics faculty member and an employee of a participating firm. Enrollment is contingent upon the availability of internships. Students are selected on the basis of personal qualifications, including GPA, courses taken, recommendations, and an interview.

Co-Op (135.00)

CHINESE**CHI-101 Elementary Chinese I (3.00 cr.)**

The course is designed to students with no prior knowledge of Chinese. It aims at developing students' elementary skills in listening, speaking, reading and

writing of Putonghua (Mandarin), as well as cultural understanding. The student will be able to produce Chinese sounds through learning Pinyin, write about 100 characters (simplified version), read and write simple texts/sentences. The course will also promote students' appreciation for a different culture and language. This course is not intended for native speakers.

Lecture (45.00)

Prerequisites: ENG-012 and ENG-022

CHI-102 Elementary Chinese II (3.00 cr.)

This course continues to introduce students to the Mandarin (Putonghua) Chinese language and provides a basic working knowledge of the language (listening, speaking, reading, writing). It also provides cultural characteristics of the people who use the language natively. This course is not intended for native speakers.

Lecture (45.00)

Prerequisites: ENG-012, ENG-022 and CHI-101 or two years of high school Chinese

CHEMISTRY**CHM-010 Preparation for Chemistry (4.00 cr.)**

This preparatory course provides the students with mathematical skills needed for basic computations and their applications in the physical sciences and introduces them to the elementary concepts of energy and matter. Also included are the basic laboratory procedures of chemistry. This course is designed to prepare students with little or no background in chemistry for college chemistry. (Credits do not apply toward graduation requirements).

Lecture (45.00)

Laboratory (45.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

CHM-101 General, Organic & Biological Chem I (4.00 cr.)

This course is designed for allied health students such as nurses. This course is not equivalent to CHM-111 and is NOT appropriate for pre-medical or pre-pharmacy students or for those majoring in chemistry, biology, physics or engineering. This course is an introduction to fundamental principles and concepts of general chemistry including the topics of measurements, atomic structure, the periodic table, chemical bonds, stoichiometry, oxidation-reduction, gases, solids, liquids, solutions, colloids, rates of chemical reaction, equilibrium, acids and bases, and nuclear chemistry. Laboratory experiments illustrate the listed chemical principles and develop familiarity with laboratory techniques.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: CHM-010, MTH-029 and (ENG-013 and ENG-023) or ENG-046

CHM-101H Honors Gen Organic & Biological Chem I (4.00 cr.)

This course presents a study of the fundamental principles and concepts of general chemistry, including the topics of measurements, atomic structure, periodic table, chemical bonds, gases, solids, liquids, stoichiometry, solutions, colloids, rates of chemical reaction, equilibrium and oxidation-reduction. Selected laboratory experiments illustrate the listed chemical principles and develop familiarity with laboratory techniques. Need a grade of "C" or better in either high school chemistry or the Preparation for Chemistry course. This course is designed for Allied Health Students. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: CHM-010, MTH-029 and (ENG-013 and ENG-023) or ENG-046

CHM-102 General, Organic & Biological Chem II (4.00 cr.)

This course is a continuation of General Chemistry I. The course is an introduction to organic and biological chemistry including hydrocarbons, alcohols, derivatives of carboxylic acids, and amines, as well as carbohydrates, amino acids, proteins, enzymes, lipids, and metabolism. Selected laboratory experiments illustrate the reactions and properties of the listed compounds. Also included is an introduction to qualitative and quantitative laboratory techniques. This course is designed for Allied Health students.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: CHM-101 or CHM-111

CHM-111 Chemistry I - Science (4.00 cr.)

This course is appropriate for students majoring in chemistry, biology, mathematics, physics or engineering. It also is the appropriate general chemistry course for pre-medical, pre-pharmacy, pre-dental and pre-veterinary students. This course is an introduction to the fundamental principles and concepts in chemistry: measurements, matter, atomic theory, chemical calculations, reactions, gases, atomic properties, chemical reactions, periodic table, chemical bonding, liquid, solids and intermolecular forces. Laboratory experiments illustrate chemical principles and develop laboratory skills.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: CHM-010, and MTH-124 or MTH-125

CHM-112 Chemistry II - Science (4.00 cr.)

This course is appropriate for students majoring in chemistry, biology, mathematics, physics or engineering. It also is the appropriate general chemistry course for pre-medical, pre-pharmacy, pre-dental and pre-veterinary students. This course is a continuation of Chemistry I Science (CHM-111). Topics include crystal structures, phase diagrams, solutions and properties, kinetics, thermodynamics, chemical equilibrium, acids and bases, electrochemistry and nuclear chemistry. Laboratory experiments illustrate chemical principles and develop laboratory skills.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: CHM-111

CHM-120 Chemistry for Fire Protection (4.00 cr.)

A study of the fundamentals of chemistry directed specifically to the area of fire protection is presented. It includes measurements, matter, atomic theory, chemical reactions, solids, liquids and gases, combustion, heat of reactions, and methods of extinguishment. The laboratory experiments are selected to reinforce the lecture subject matter. Fire Science students only.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: MTH-029

CHM-130 General/Organic/Biochemistry Dental Hyg (4.00 cr.)

A survey of inorganic chemistry, organic chemistry, and biochemistry with emphasis on the practical aspects is presented. The laboratory experiments are designed to reinforce the lecture subject matter. Need a grade of "C" or better in either high school chemistry or the Preparation for Chemistry course, and a grade of "C" or better in high school biology. This course is designed specifically for those applying to or enrolled in the Dental Hygiene Program and may not transfer as a Chemistry course.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: MTH-029

CHM-140 Chemistry & Society (4.00 cr.)

This course is designed for non-science majors. The course will present some of the fundamental concepts of chemistry and introduce students to laboratory experimentation. Interesting chemistry topics will be considered with regard to their social, environmental, and economic issues. Discussion topics may include: air pollution, the ozone layer and the impact of technology on global warming; alternative energy sources, such as solar, nuclear and biomass processes; water pollution; nutrition; the mechanism of action of various drugs, and other topics based on student interest and instructor expertise. Fundamental chemistry topics to be discussed include: experimental measurements; atomic structure, atom properties and the periodic table; bonding, structure and reactivity; the solid, liquid and gaseous states; stoichiometry of chemical reactions; properties of solutions; rates of chemical reaction and catalysis; oxidation-reduction and acid-base reactions; pH; synthetic and natural polymers, including biopolymers such as proteins, carbohydrates and nucleic acids; and electrochemistry.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: ENG-101 and MTH-029

CHM-140H Honors Chemistry & Society (4.00 cr.)

This course is designed for non-science majors. The course will present some of the fundamental concepts of chemistry and introduce students to laboratory experimentation. Interesting chemistry topics will be considered with regard to their social, environmental and economic issues. Discussion topics may include: air pollution, the ozone layer and the impact of technology on global warming; alternative energy sources, such as solar, nuclear and biomass processes; water pollution; nutrition; the mechanism of action of various drugs, and other topics based on student interest and instructor expertise. Fundamental chemistry topics to be discussed include: experimental measurements; atomic structure, atom properties and the periodic table; bonding, structure and reactivity; the solid, liquid and gaseous states; stoichiometry of chemical reactions; properties of solutions; rates of chemical reaction and catalysis; oxidation-reduction and acid-base reactions; pH; synthetic and natural polymers, including biopolymers such as proteins, carbohydrates and nucleic acids; and electrochemistry. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: ENG-101 and MTH-029

CHM-145 Introduction to Forensic Science (4.00 cr.)

This is an introductory course in forensic science intended for criminal justice students and others interested in a laboratory science. Basic material in chemistry, biochemistry, mathematics and physics will be presented so that students have the requisite background to understand and appreciate the role of the crime laboratory in modern forensics. Laboratory experiments demonstrate modern forensic techniques and integrate the fundamental of science.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

CHM-150 Chemistry of Art Materials (4.00 cr.)

This course is designed for fine arts majors. The course will present some of the fundamental concepts of chemistry and introduce students to laboratory experimentation. Chemistry topics will be considered with particular regard to their applications in art. Fundamental chemistry topics to be discussed include experimental measurements; physical and chemical properties of materials; composition and structure of materials; the solid, liquid and gaseous states; dyes, visible spectroscopy and the perception of color; stoichiometry of chemical reactions; properties of solutions; rates of chemical reaction and catalysis; oxidation-reduction and acid-base reactions; pH; synthetic and natural polymers; and electrochemistry.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: ENG-101 and MTH 029

CHM-160 Fundamentals of Food Science (4.00 cr.)

This course introduces students to the science and technology related to foods. Topics include the structure, function and metabolism of the three primary biomacromolecules (proteins, carbohydrates and lipids) as well as the effects of enzymes, vitamins and hormones on food metabolism. The course will also include the effects of temperature on food (storage and cooking) and the laboratory techniques used in the food science industry.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: FNS-130 and CHM-101, or FNS-106 and CHM-111

CHM-221 Organic Chemistry I (4.00 cr.)

This course is an introduction to organic chemistry with an emphasis on compound structure, functional group transformations, and reaction mechanisms. Topics covered include: acid-base chemistry, alkanes, cycloalkanes, alkyl halides, alkenes, alkynes, radical reactions, conformational analysis, stereochemistry and the application of reactions in organic synthesis. Laboratory experiments focus on fundamental techniques (recrystallization, distillation, extraction, thin-layer chromatography) and representative reactions (nucleophilic substitution, alcohol oxidation, alkene addition reactions).

Lecture (45.00)

Laboratory (45.00)

Prerequisites: CHM-112

CHM-222 Organic Chemistry II (4.00 cr.)

This course is a continuation of Organic Chemistry I. A detailed study of the synthesis, reaction mechanisms, and spectroscopy of aromatic compounds, aldehydes, ketones, carboxylic acids, auto-oxidation, carboxylic acid derivatives, amines, phenols, macromolecules, fats, carbohydrates, proteins, and nucleic acids is included. Laboratory experiments are used to develop student techniques and illustrate the principles involved.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: CHM-221

COMPUTER INTEGRATED MANUFACTURING**CIM-101 Machine Shop Practices (3.00 cr.)**

Machine Shop Practices is an introductory course in the use of hand tools, machine tools and computer numerically controlled (CNC) machine tools used in modern machine shops and metalworking factories. Students learn basic manufacturing techniques through lecture and demonstrations and then solidify, expand and integrate this knowledge by making a series of projects in the shop. Students may be required to work beyond classroom hours to complete assigned hands-on projects.

Lecture (30.00)

Laboratory (30.00)

CIM-110 Introduction to Technical Careers (3.00 cr.)

The Introduction to Technical Careers offers the student a multidiscipline experience that explores the careers and the fundamental concepts from diverse technological programs. The course emphasis is to facilitate learning for students with opportunities to work within the following technological areas (Computers, Computer Aided Design, Engineering and Electronics, Computer Integrated Manufacturing, Programmable Logic Controllers, Laser Electro-Optics, and Fiber Optic Technologies). The result of this multidiscipline experience will enable the student to make educational decisions necessary to meet individual career goals.

Lecture (45.00)

CIM-115 Microcontroller Applications (3.00 cr.)

This course is designed to introduce the student to the use and application of single chip microcontrollers in the design of instrumentation, embedded control systems, and physical computing systems. The programming platform will be the Arduino family of microcontrollers and work-alike development boards with an emphasis on the Uno system. Students will author and debug several programs using the Arduino Integrated Development Environment (IDE) and the C/C++ programming language. Students will be provided a foundation for applying microcontrollers in diverse applications including home and/or factory automation, robotics, animatronics, and autonomous machines. Standard keyboard familiarity is recommended. No previous programming or electronics experience is required.

Lecture (30.00)

Laboratory (30.00)

CIM-202 Conventional Machinist (3.00 cr.)

This course is intended to give students the necessary machine time to complete the competencies set forth by the National Institute of Metalworking skills machinist Level I credential. Students will be shown how to use the NIMS website to register and receive their custom training guide to practice the competencies required by the Machinist Level I certification. The Machinist Level I certification has 11 competency standards that must be passed in order to receive the certification. The cost of tuition does not cover the cost of these exams. A student can still attend this class to learn the material and pass the class without registering with NIMS. The material will cover the skills required to become a conventional machinist. This course is part I of a two-part series of courses. The first 7 competencies of Machinist Level I will be addressed.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CIM-101

CIM-211 PLC Programming (4.00 cr.)

No investigation of the modern industrial or controls environment would be complete without the study of the Programmable Logic Controller (PLC) and its attendant programming language: Relay Ladder Logic (RLL). This course is designed to achieve these ends. This introductory course will explore the history,

theory, programming, and operation of the PLC. It will include wiring the PLC to real-world devices. It will cover those features common to all PLCs and briefly discuss those features offered on high-end machines. Both the capabilities and the limitations of the PLC will be discussed. Particular emphasis will be placed upon digital control with analog control applications being reserved for Advanced PLC Programming: CIM-212. The PLC used will be the Allen-Bradley SLC-5/02 and 5/04 processors. The A-B MicroLogix 1200 controller is also available for exploration. The programming environment will be Windows using the RSLogix 500 programming application and RSLinx communication software. Although the course will include a basic review of electrical principles, prior electrical/electronic and/or computer programming experience will enhance success and student persistence in this course.

Lecture (45.00)

Laboratory (45.00)

CIM-212 Advanced PLC Programming (3.00 cr.)

This course, formerly entitled Industrial Controls Systems, is a continuation of CIM-211, PLC Programming. Students will use the RS Logix-500 software package, running under the Windows operating system to investigate the advanced functions of the Allen-Bradley SLC-5/02 Programmable Logic Controller (PLC). This is chiefly a lab-oriented course. Preparatory lectures will accompany each lab assignment. Topics covered will include transitional bits, bit forcing, PLC networking and telephony, bit and data manipulation, shift registers, and analog I/O. Program control using master and zone control relays, sequencers, and sub-routines will be investigated.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CIM-211

CIM-213 Tag-Based Pro Logic Controller Program (2.00 cr.)

This course investigates IEC-61131-3 PLC programming using Relay Ladder Logic (RLL). The course intended for students who have completed both CIM-211 (PLC Programming) and CIM-212 (Advanced PLC Programming). Students who possess equivalent qualifying industrial experience with Rockwell Software's RSLogix 500 PLC programming software may petition the instructor to waive the prerequisite course. This course will utilize Rockwell's RSLogix5000 and or Rockwell's Studio5000 programming package to create, modify, upload, and download tab-based RLL PLC programs to Allen-Bradley's (AB) 5000-class of PLC's. Specifically, the course explores specialty I/O modules, sensor interfacing, advanced mathematics and scaling techniques, and advanced trouble-shooting procedures utilizing Rockwell Software's 5000-class Software and CompactLogix Hardware. The programming platform will be Windows 7; therefore, familiarity and hands-on experience with this Windows operating system is required.

Lecture (15.00)

Laboratory (30.00)

Prerequisites: CIM-212

CIM-219 CNC Machinist (3.00 cr.)

This course is a continuation course intended to give students the necessary machine time to complete the competencies set forth by the National Institute of Metalworking skills Machinist Level I credential. Students will be shown how to use the NIMS website to register and receive their custom training guide to practice the competencies required by the Machinist Level I certification. The Machinist Level I certification has 11 competency standards that must be passed to receive the certification. A student can still attend this class to learn the material and pass the class without registering with NIMS. The material covered will be the skills required to become a CNC machinist. This class is part two of a two-part series of classes designed to parallel the competencies set forth by NIMS. The last 4 competencies of Machinist Level I will be addressed. These are the CNC machinist portions of the certification.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CIM-101

CIM-221 CNC Programming & CAM (4.00 cr.)

This is an intensive, two-part course designed for CIM students. Part one of this course concentrates on Computer Numerical Control (CNC) Programming for milling and turning centers using EIA standard RS274D programming format. Some of the major topics covered in this first portion of the course are basic

CNC Operations, Cartesian Coordinates, Preparatory Functions, Miscellaneous Functions, Canned Cycles, RS232, DNC, MS-DOS, and Off-line programming. Part two of this course is devoted to Computer Aided Manufacturing (CAM). Students will generate CNC programs for milling and turning centers using a PC-based CAM system.

Lecture (45.00)

Laboratory (45.00)

CIM-222 Advanced CNC & CAM (3.00 cr.)

This is an intensive course designed for CIM students preparing for employment as CNC Programmers. This course concentrates on three-dimensional Computer Numerical Control (CNC) Programming for machining centers using a personal computer based Computer Aided Manufacturing (CAM) software. Some of the major topics covered in this course are standard 3D surface types and definitions, Post Processor theory, planar roughing of 3D surfaces, complex surfaces, and multiple surface machining.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CIM-221

CIM-231 Motors, Controllers, and Sensors (3.00 cr.)

This course is designed for CIM and Manufacturing Engineering students. It combines hands-on experiments with lecture topics. Covered topics will include AC and DC power, AC and DC motors, open and closed loop control, and stepper motors. Induction and commutation will be covered. Photoelectric, capacitive, and inductive sensors will be discussed and used. Optoelectronics, pneumatics and solenoid valves, transformers, and motor name plate reading will be covered. Paraday's Laws will be investigated. SCR, Triac, Relay, and Pulse Width Modulated (PWM) speed control techniques are discussed. NPN and PNP transistors, current-limiting resistors, exercises are performed. Laboratory exercises will include computer control of stepper motors, PLC control of a DC motor, motor dismantling, sensor applications and identification, design and building of a photoelectric switch and lead screw pitch determination. Both mechanical and solid state relay labs will be conducted. Qualified industrial experience will fulfill the prerequisite requirement.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CIM-211

CIM-251 CIM Integration/Project (3.00 cr.)

This course is the culmination of the entire CIM curriculum. It serves almost as a "final exam" on the curriculum because it requires the student to integrate the knowledge gained in the preceding courses in manufacturing, electronics, robotics, computers, CADD, PLC programming, and quality control. Students are divided into small work groups. Each group is assigned the task of manufacturing a part or a series of parts. The group designs, builds, programs, and operates a manufacturing cell to produce its "product". In addition, individual students also participate in the on-going full-scale manufacturing enterprise of the CIM Center.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CIM-101, CIM-211, and CIM-221

Corequisites: CIM-231

CIM-255 Precision Machining Project (3.00 cr.)

This is a capstone (project) class that draws upon the skills learned in the prerequisite classes of the Precision Machinist Technology curriculum. The student will be able to hone their skills while preparing a portfolio of physical objects to enhance their resume. Students will use the conventional and computerized machinery to make real parts. Students will also have the option to continue their quest for more National Institute for Metalworking Skills (NIMS) credentials if so desired.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CIM-101, CIM-202, CIM-219 and CIM-221

COMPUTER INFORMATION SYSTEMS

CIS-005 Computer Fundamentals (3.00 cr.)

This computer course is designed to give the student basic computer and internet skills for use in their adult life. It will cover a fundamental understanding of the computer environment, use of the Windows Operating System, exploring the

Internet and working with the productivity software: word processing and presentation software. Students will become familiar with the information available on the Camden County College Website, utilize the CCC Student email system, access the CCC Webadvisor to process academic information, and become acquainted with the online learning management system of Webstudy used for online enhanced classwork at CCC. Knowledge of the keyboard is recommended for this course. (Credits do not apply toward graduation requirements.)

Lecture (45.00)

CIS-101 Personal Computer Applications (3.00 cr.)

This course is an introduction to microcomputers in which the student will become familiar with the operation of the operating system, word processing, spreadsheets, database applications, presentation software and the Internet. The course will focus on helping the student logically plan the processes that are necessary to communicate with the computer to produce a desired result. During the semester, students will learn the Windows Operating System, the Microsoft Office Suite (Word, Excel, Access and PowerPoint), and a web browser to access the Internet/WWW. This course is taught in a room with computers. Students benefit by interacting with the lecture material. However, there are no graded or mandatory student computer exercises required during the class lecture. All hands-on assignments are completed outside of class. It is recommended that students who lack keyboarding skills acquire them by taking the one-credit course OST-110: Microcomputer Keyboarding.

Lecture (45.00)

CIS-102 Spreadsheets (3.00 cr.)

This course is designed for students in Computer Information Systems, Office Systems Technology, business or related fields. Students will learn to use a popular spreadsheet package and learn to plan, build, test and document spreadsheets. Emphasis is placed on real life applications using a case study approach. Topics include: formulas, charts, functions, creating and using macros, examining "what-if" alternatives, worksheet databases and integrating worksheet applications. This course is taught in a room with computers. Students benefit by interacting with the lecture material. However, there are no graded or mandatory student computer exercises required during the class lecture. All hands-on assignments are completed outside of class.

Lecture (45.00)

Prerequisites: CSC-101 or CIS-101

CIS-103 Database Management (3.00 cr.)

This course is designed for students in Computer Information Systems, Office Systems Technology, business or related fields. Students will learn to use a popular relational database management system. Basic database concepts will be introduced. Students learn how to plan, create and maintain databases. Other topics include: queries, customized forms, reports and introduction to user interface design, macros and a database programming language. SQL will be introduced as well as elementary database design concepts. This course is taught in a room with computers. Students benefit by interacting with the lecture material. However, there are no graded or mandatory student computer exercises required during the class lecture. All hands-on assignments are completed outside of class.

Lecture (45.00)

Prerequisites: CSC-101 or CIS-101

CIS-181 Linux/UNIX Essentials (3.00 cr.)

This course is designed to give the student a working knowledge of the Linux/UNIX operating system. The student will learn a variety of standard Linux/UNIX basic commands, how to work with files and directories, standard input/output and I/O redirection, standard error, pipes, basic protection/permission features for files, and use both full and relative path names in a file system. The features of the major shells will be described. The vi editor will be explored. Data backup and restore functions at the file level as well as the filing system level will be demonstrated. This course is taught in a room with computers for the explicit teaching of a computer skill set using lecture. Computers are used as a lecture tool to provide demonstrations and illustrations of the technical concepts taught. Access to computers provides the students with the advantage of interacting with the concepts presented. No graded assignments or mandatory exercises are completed during the lecture. Hands-on assignments are completed outside of class.

Lecture (45.00)

CIS-187 Linux/Unix Administration I (3.00 cr.)

This course familiarizes the student with the key network services managed by the Linux Administrator. Focus is on Web servers, e-mail (POP and SMTP protocols), and security. The course presents the following Internet services: DNS, FTP, HTTP (Apache Web Server), telnet, SSH. Intranet topics included are: NFS (Network File System), NIS (Network Information Services) and interoperability with Windows systems using Samba. At the conclusion of the course students will explore topics in networking: network configuration, security and interoperability. The material covered in this class lays a foundation for the Linux/UNIX System Administration II course. This course is taught in a room with computers for the explicit teaching of a computer skill set using lecture. Computers are used as a lecture tool to provide demonstrations and illustrations of the technical concepts taught. Access to computers provides the students with the advantage of interacting with the concepts presented. No graded assignments or mandatory exercises are completed during the lecture. Hands-on assignments are completed outside of class.

Lecture (45.00)**Prerequisites:** CIS-181**CIS-191 Internet: Tools and Techniques (3.00 cr.)**

This is a theory course that provides a broad knowledge of the Internet and its capabilities. The benefit of this course, to even the most novice Internet user, is that many topics are explored and discussed. Topics include the history of the Internet, devices and basic operations of the Internet, security issues, searching and browsing, tools used for blogging, creating web pages and social networking. If the course is taught in a room with computers, the students benefit by being able to interact with the material, however, there are no graded or mandatory student computer exercises required during the lecture or lesson; therefore, there would be nothing for a student to do during any designated lab time. This course does not involve “how-to” elements that would need practice during a lab time.

Lecture (45.00)**CIS-192 Practical Applications of Website Mgt (3.00 cr.)**

This course is designed for the student seeking knowledge of the business elements of the Internet. Today’s business marketing efforts require an Internet presence; this course will introduce the importance of an email marketing list, search engine and social media strategies. Businesses, large and small, exist for a single reason: to make a profit. Every expense must be held accountable toward enhancing or detracting from that profit. The cost of creating and maintaining an Internet website must be justified under this criteria. This course will be, as the title implies, based on practical application. Based on real-life experiences, it will discuss practical solutions to both technical and business problems; areas rarely covered in a text.

Lecture (45.00)**CIS-206 Advanced Computer Concepts/Applications (3.00 cr.)**

This course is a continuation of Computer Literacy in which the student will learn the advanced features of Word, Excel, Access, PowerPoint, and Publisher to use in the business environment. The students will learn and use several browsers and become knowledgeable in various operating systems. Emphasis will be placed on the following topics: user tools, user programming, presentation graphics, desktop publishing, use of scanners, workbook templates and data tables, macros, onscreen forms, Pivot Tables and Pivot Chart reports, mailing labels, digital photography, various Internet resources and commercial services. The theory content consists of articles that raise questions about how computers affect society to assist the students to clarify issues, widen perspectives, arouse curiosity and conduct educated discussions about the responsible use of emerging technologies of the computer age. This course is taught in a room with computers for the explicit teaching of a computer skill set using lecture. Computers are used as a lecture tool to provide demonstrations and illustrations of the technical concepts taught. Access to computers provides the students with the advantage of interacting with the concepts presented. No graded assignments or mandatory exercises are completed during the lecture. Hands-on assignments are completed outside of class.

Lecture (45.00)**Prerequisites:** CIS-101 or CSC-101**CIS-210 Information Systems Concepts (3.00 cr.)**

Today, information systems are an integral part of all business activities and careers. This course introduces the students to contemporary information systems and demonstrates how these systems are used throughout organizations.

The focus will be on the key components of information systems - people, software, hardware, data, and telecommunications, and how these components can be integrated and managed to create competitive advantage. Ethics and security protection relating to the use of information technology will be explained. In addition to surveying the exciting topic of information systems, students will gain hands-on experience with business software tools commonly applied to business data analysis and database management as well as business process execution. As a result, students will obtain valuable information technology knowledge and skills for being successful in all areas of business.

Lecture (45.00)**Prerequisites:** ENG-101, MTH-114; and CSC-101, CIS-101 or CIS-206**CIS-225 Project Management Essentials (3.00 cr.)**

This course provides students with the knowledge and skills to plan and manage projects using Microsoft Project. MS Project is a powerful tool for project design and development. It documents the project from start to completion using tools to track the project schedules, costs and risks. The goal is for the student to learn and apply the basic usages of these tools preparing the way for more advanced topics, such as Project Management.

Lecture (45.00)**Prerequisites:** CSC-101, CIS-101 or CIS-206**CIS-231 System Analysis & Design (3.00 cr.)**

This course will provide the student with System Development Life Cycle (SDLC) theory that is necessary in the analysis and design of a computer system. The student will learn the sequence of events occurring when a systems analyst undertakes the task of converting an existing system to a new computerized system. A CASE (Computer Aided Software Engineering) tool and other analysis tools are used in the analysis, design, and development process. This course is taught in a room with computers. Students benefit by interacting with the lecture material. However, there are no graded or mandatory student computer exercises required during the class lecture. All hands-on assignments are completed outside of class.

Lecture (45.00)**Prerequisites:** CSC-111**CIS-235 SQL Fundamentals I (3.00 cr.)**

Relational databases often drive company-critical and web-enabled applications; therefore, database manipulation captures important data vital for a business ROI success. This course is hands-on data acquisitions working with relational databases, enabling the student to effectively analyze the business data. Popular databases use the Structure Query Language (SQL) to write and analyze queries and stored procedures. In this course, the student will learn to apply the basic SQL tools of use of the MS Sequel Server which will prepare the way for more advance topics, such as SQL Server Reporting Services (SSRS), Crystal Reports and other business intelligence tools.

Lecture (45.00)**Prerequisites:** CSC-101, CIS-101 or CIS-206**CIS-236 SQL Fundamentals II (3.00 cr.)**

This course is a continuation of the first course SQL Fundamentals I and is intended to provide the student with the detailed study of SQL data manipulations. This is an in-depth hands-on study of the Structured Query Language (SQL) with some integration into Visual Basic. The main emphasis of this will be data management using Transaction SQL, stored procedures, triggers, and scripting using MS Sequel Server Tools. This course is taught in a room with computers running MS Sequel Server System.

Lecture (45.00)**Prerequisites:** CIS-235, CSC-111; and CSC-101, CIS-101 or CIS-206**CIS-237 Relational Database Concepts (3.00 cr.)**

In this course, the student will study the theory of Structured Query Language (SQL) and the Relational Database architecture and technologies. This model and design tools will be exemplified by the use of the MS Sequel Server System and its developer’s tools. This course is taught in a room with computers to allow the students benefit by being able to interact with the material, however, there are no graded or mandatory student computer exercises required during the lecture.

Lecture (45.00)**Prerequisites:** CSC-101, CIS-101 or CIS-206

CIS-238 Database Security and Protection (3.00 cr.)

In the database environment, there are two realms of protection concerns, the database (storage unit) and the server (where the storage unit sits). This course emphasizes an effective understanding of the importance of a business protecting its data. The course will cover hardware, software and human innovations to protect database environments.

Lecture (45.00)

Prerequisites: CIS-103; and CSC-101, CIS-101 or CIS-206

CIS-239 Database Administration Principles (3.00 cr.)

This course is designed to prepare the student for the Microsoft Technology Associate Exam 98-364 Database Administration Fundamentals. This model and design tools will be exemplified by the use of the MS SQL Server and its developers tools. This course is taught in a room with computers to allow the students benefit by being able to interact with the material, however, there are no graded or mandatory student computer exercises required during the lecture.

Lecture (45.00)

Prerequisites: CIS-103, CIS-235, CIS-237 and CSC-111

CIS-241 Relational Database Management I (3.00 cr.)

A detailed study of the Structured Query Language (SQL), Relational Database Model, Normal Form Theories, and Forms Generation and Report Generation. This model and design tools will be exemplified by the use of the Oracle Relational Database Management System and its developers tools. This course is taught in a room with computers, the students benefit by being able to interact with the material, however, there are no graded or mandatory student computer exercises required during the lecture.

Lecture (45.00)

CIS-242 Relational Database Management II (3.00 cr.)

This course is a continuation of the first course (RDBMS-I) and is intended to provide the student with the detailed study of internet application development using the Forms Developer in the Oracle System, PL/SQL, and the Oracle Library Functions of the Structured Query Language (SQL). The main emphasis of this course is the development of internet applications using the relational database model and the Oracle tools. This course is taught in a room with computers. The students benefit by interacting with the material, however, there is no graded or mandatory student computer exercises required during the lecture. College level 3rd generation computer programming course or experience is required in this course.

Lecture (45.00)

Prerequisites: CIS-241

CIS-243 Relational Database Management III (3.00 cr.)

This course is intended to provide the student with the detailed study of the advanced features of PL/SQL and Oracle Forms. We will cover Oracle PL/SQL Functions, Procedures, Packages, Triggers and Dynamic SQL. The main emphasis of this course is the development of internet applications using the Oracle Relational Database Management System. This course is taught in a room with computers, the students benefit by being able to interact with the material, however, there are no graded or mandatory student computer exercises required during the lecture.

Lecture (45.00)

Prerequisites: CIS-242

CIS-245 Database Administration Using Oracle (3.00 cr.)

The student will learn the tasks and functions required of an Oracle Database Administrator. The student will learn database architecture, create and start up a database, create and purge users, manage data, expand the size of a database, implement security and data integrity measures. Students will also learn how to manage logical and physical storage structures. This course is taught in a room with computers, the students benefit by being able to interact with the material, however, there are no graded or mandatory student computer exercises required during the lecture.

Lecture (45.00)

Prerequisites: CIS-241

CIS-246 Database Administration Using Oracle II (3.00 cr.)

The student will learn the tasks and functions required of an Oracle Database Administrator. The student will learn database security, implement a database backup and recovery procedure, and troubleshooting the Oracle database. This course is taught in a room with computers, the students benefit by being able to

interact with the material, however, there are no graded or mandatory student computer exercises required during the lecture.

Lecture (45.00)

Prerequisites: CIS-245

CIS-284 SHELL Programming Under Linux/UNIX (3.00 cr.)

This course is an introduction to programming with utilities and shell scripting languages in a Linux environment. Emphasis is placed on the essential aspects of shell programming including similarities and differences among popular shells: Bash, Bourne, and Korn shell. Students will learn the skills needed to effectively read, write and debug shell script. Features including command line argument processing, debugging techniques, the use of sed & awk to edit files and format output will be covered. This course is taught in a room with computers for the explicit teaching of a computer skill set using lecture. Computers are used as a lecture tool to provide demonstrations and illustrations of the technical concepts taught. Access to computers provides the students with the advantage of interacting with the concepts presented. No graded assignments or mandatory exercises are completed during the lecture. Hands-on assignments are completed outside of class.

Lecture (45.00)

Prerequisites: CIS-181

CIS-285 Linux/Unix Networking and Security (3.00 cr.)

This course is designed to give the student a working knowledge of the TCP/IP protocol, configurations and use of network access in the Linux and UNIX system. The major components of TCP/IP and networking configuration will be described along with Broadcast, Subnets and Subnet Masks. The student will learn to create Ethernet configurations in Linux and UNIX systems and to configure network start ups, and services such as Telnet, FTP, and NFS as well as to use access control to deny a host and to develop a mostly closed policy. Domain Name Server services will be learned as well as zoning, and secondary DNS. This course is taught in a room with computers for the explicit teaching of a computer skill set using lecture. Computers are used as a lecture tool to provide demonstrations and illustrations of the technical concepts taught. Access to computers provides the students with the advantage of interacting with the concepts presented. No graded assignments or mandatory exercises are completed during the lecture. Hands-on assignments are completed outside of class.

Lecture (45.00)

Prerequisites: CIS-181

CIS-288 Linux/UNIX Administration II (3.00 cr.)

This course is designed to give the student knowledge of the design and implementation of administrative files, options and procedures in an environment consisting of Linux/UNIX servers and workstations. Classroom lectures and demonstration will be performed on Linux/UNIX servers stressing the major concepts. In addition, students will implement each concept on a private version of Linux to demonstrate their grasp of the skill presented. This course is taught in a room with computers for the explicit teaching of a computer skill set using lecture. Computers are used as a lecture tool to provide demonstrations and illustrations of the technical concepts taught. Access to computers provides the students with the advantage of interacting with the concepts presented. No graded assignments or mandatory exercises are completed during the lecture. Hands-on assignments are completed outside of class.

Lecture (45.00)

Prerequisites: CIS-181, CIS-187, CIS-284 and CIS-285

Corequisites: CIS-289

CIS-289 Linux/Unix Server Security (3.00 cr.)

This is an advanced course that functions as the capstone for the Linux/UNIX Certificate Program. Topics include: threat and risk assessment, hardening principles, developing security policies and procedures, secure administration, implementing database and server security, utilizing security tools such as intrusions detection systems, and firewalls. Legal and ethical issues will be explored. This course is taught in a room with computers for the explicit teaching of a computer skill set using lecture. Computers are used as a lecture tool to provide demonstrations and illustrations of the technical concepts taught. Access to computers provides the students with the advantage of interacting with the concepts presented. No graded assignments or mandatory exercises are completed during the lecture. Hands-on assignments are completed outside of class.

Lecture (45.00)

Prerequisites: CIS-181, CIS-187, CIS-284, CIS-285 and CIS-288

COLLEGE SUCCESS

COL-010 The College Experience (3.00 cr.)

This course is designed for students who are either taking remedial courses and are transitioning into college level courses or, returning adult students looking to familiarize themselves with strategies needed to be effective at the college level. Students will be oriented to four areas of college readiness: Individual as Self; Individual as Student; Individual as Worker; Individual as Community Member / Citizen. In addition, they will be introduced to the appropriate College resources to assist them in each area.

Lecture (45.00)

COL-011 College Success (2.00 cr.)

This course focuses on self-assessment, setting short-term and long-term goals, using college resources, and developing techniques for surviving in college. Students also participate in individualized academic and career planning and workshops on resume writing, job search, and interview techniques.

Lecture (30.00)

COL-013 Introduction to the American Classroom (1.00 cr.)

This course is designed for non-native English speakers who are beginning to take college-credit bearing courses. The purpose of the course is to acclimate students to the American system of education and develop an understanding of what is expected of them both in and out of the classroom.

Lecture (15.00)

Prerequisites: ESL-023 and ESL-033

COMMUNICATIONS

COM-050 Written Comm/ESL Healthcare Profession (3.00 cr.)

In this course dealing with written English for healthcare in general, and nursing in particular, students will be introduced to the main principles of process writing, drawing on case studies, essays on ethics and cross-cultural nursing, and articles covering the competing theories of nursing. Students will focus on and become familiar with several genres of writing including composing academic papers, summaries, reflection pieces, critiques of seminal articles in nursing, as well as the process of composing a nursing diagnosis, a care plan, and recording patient histories. In addition, students will be introduced to key vocabulary for reading and writing English for healthcare.

Lecture (45.00)

Prerequisites: ESL-014 and (ENG-013 and ENG-023) or ENG-046

Corequisites: COM-051

COM-051 Spoken Comm/ESL Healthcare Professional (3.00 cr.)

In this course dealing with spoken English for healthcare in general, and nursing in particular, students will be introduced to the main principles of therapeutic communication. They will focus on and be able to carry out operations in the important areas such as techniques used to elicit information from patients in a non-judgmental environment, explaining, giving instructions, asking for clarification, and the de-jargonization of medical terminology and acronyms. Emphasis will be placed on developing clear speech through pronunciation practice activities, both in class and in the computer labs. This course will also focus on introducing students to cultural issues that relate to spoken interaction in an American nursing context.

Lecture (45.00)

Prerequisites: ESL-014 and (ENG-013 and ENG-023) or ENG-046

Corequisites: COM-050

COM-101 Influence of Mass Media (3.00 cr.)

This course will enable the student to become familiar with the history and evolution of American mass media. The student shall recognize how and why the media operate as they do and what results they produce. The student shall develop analytical and critical skills enabling enlightened evaluation of media products and shall demonstrate an understanding of the obvious and the subtle effects of media upon the individual, the society, and the culture.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

COM-102 Theory of Communications (3.00 cr.)

Theory of Communications is an introductory course in communications theory, principles, and applications. The student will analyze the principles and theories of communication and will apply these principles and theories to different communication situations.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

COM-103 News Writing & Reporting (3.00 cr.)

This is a course in basic journalistic theory and practice for students interested in a career in the news media. The purpose of the course is to provide the student with newswriting skills, reporting abilities, and an understanding of the legal and professional responsibilities of journalists.

Lecture (45.00)

Prerequisites: ENG-101

COM-104 Introduction to Public Relations (3.00 cr.)

This course illustrates how public relations has evolved in the 20th Century. Students will learn practical techniques of public relations that can be used in print, radio, and television.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

COM-105 Media Literacy (3.00 cr.)

Media messages are not always what they seem. This course offers students an opportunity to develop skills necessary to be in control of their media habits and to be media literate. Course goals are to assist students in the effort to understand why media messages are constructed, how to think critically about media messages, the effects of media messages, and how to best manage their media habits by using technology to locate, evaluate and use information. Students will use technology to present information.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

COM-141 Introduction to Broadcasting I (3.00 cr.)

This course will give an overview of the broadcast industry, including some history and law (FCC), along with present day make-up and problems. It will also discuss the future of broadcasting and employment opportunities in an exploding information age. Students will learn about the operation of the studios at WDBK-FM and work in the station (lab) to complete assignments.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

COM-143 Introduction to Electronic Media (3.00 cr.)

This course gives an overview of the electronic media industry including broadcast radio and TV, cable, electronic publishing, Internet, corporate and industrial telecommunications and related systems. Course goals are to provide students with an understanding of the different aspects of the electronic media industry and how they function together. The goals include discussion of historical and future concepts of the electronic media industry and career trends in the field.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

COM-145 Intercultural Communication (3.00 cr.)

This course will provide the student with practical information regarding the problems present in communicating with people of other cultures. It also explores cross-cultural differences in the communication process in order to learn how to communicate effectively with one another across cultural boundaries.

Lecture (45.00)

COM-196 Photojournalism Internship (3.00 cr.)

This is an applied course in Photojournalism. Emphasis will be on learning the proper methods of being a photographer and photojournalist for a newspaper, magazine or online media. The designation of a proper media outlet will be made final by the Communication program. One of the media outlets to be considered for the internship program is The Campus Press newspaper at Camden County College. The student is obligated to volunteer a minimum of 135 hours to complete the co-op.

Co-Op (135.00)

Prerequisites: ENG-101 and PHO-101

COM-198 Co-op I: Communications (3.00 cr.)

Cooperative Education is a program designed to award academic credit for work related to a student's major. The learning experience is defined as a combination of professional work experience, the development of measurable learning objectives based on the job description, and the completion of each individually tailored Co-op assignment. A Co-op advisor is assigned to each student to establish the academic validity of the cooperative education credits.

Co-Op (45.00)

COM-199 Co-op II: Communications (3.00 cr.)

This is a continuation of Co-op I, and is designed to afford the student three additional credits for work experience. A Co-op advisor is assigned to each student to establish the academic validity of the cooperative education credits.

Co-Op (45.00)

COM-208 Public Relations: New Media (3.00 cr.)

This course gives an overview of the strategies and tools available to public relations professionals through the development of digital communications technology. This course will also provide a foundation of understanding the role of convergence and hypermedia (integrated multimedia incorporating digital audio, visual, and text information). Another goal of this course is to include discussion of historical and future concepts of public relations in the digital age.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

CRIMINAL JUSTICE

CRJ-101 Administration of Justice (3.00 cr.)

This course introduces the student to the American system of criminal justice. Its growth and development will be examined with emphasis placed on the various sub-systems of the criminal justice system and contemporary issues, which challenge its functional efficiency and effectiveness.

Lecture (45.00)

CRJ-103 Legal Systems (3.00 cr.)

This course examines the judicial process with emphasis on New Jersey and federal jurisdictions. The course provides an introduction to legal research and methodology, court administration, and judicial discretion. In addition, the course will examine the contributions of other legal systems to the American judicial process.

Lecture (45.00)

CRJ-104 Juvenile Delinquency (3.00 cr.)

This course provides an analysis of current sociological and psychological factors contributing to delinquent behavior that occurs during the period between childhood and adulthood and includes causation, control, and the attitudes of society toward this phenomenon.

Lecture (45.00)

CRJ-105 Criminal Law (3.00 cr.)

This course traces the historical development of criminal law from ancient times to the present. The impact of the Constitution and current judicial decisions, as well as the development of the modern penal code, will be discussed.

Lecture (45.00)

CRJ-106 Contemporary Corrections (3.00 cr.)

This is an introductory course in the study on penology, examining the development of correctional theory and practice from the custodial treatment and administrative viewpoints.

Lecture (45.00)

CRJ-107 Introduction to Probation and Parole (3.00 cr.)

This course is an examination of supervision of offenders outside a penal institution. Emphasis is placed on the utilization of community resources in the treatment process, probation and parole.

Lecture (45.00)

CRJ-108 Community Policing (3.00 cr.)

This course provides an overview of the concepts of Community Policing, which focuses on problem solving, community partnerships and organizational transformation. Emphasis is placed on students taking a systematic approach to community policing as a philosophy in the changing role of police in the community. Their combined efforts help to bridge the gap between the police and the community.

Lecture (45.00)

CRJ-120 Introduction to Homeland Security (3.00 cr.)

This course considers some of the challenges of maintaining the safety and security of citizens, key assets and critical infrastructure in a democratic society. Analyses of past and present efforts to strike a balance between individual rights and the prevention and control of subversive acts and terrorism shall be undertaken.

Lecture (45.00)

CRJ-203 Principles of Investigation (3.00 cr.)

This course provides a practical approach to the fundamental concepts and techniques of criminal investigation for the law enforcement officer and the pre-service student. The course addresses itself to such basic issues, i.e. personal conduct at the crime scene, evidence, criminal procedure, conduct of interviews and investigations, and communication of information by note taking and report writing. Finally, an examination of investigative techniques during the conduct of specific criminal offenses of a felonious nature will be presented for discussion.

Lecture (45.00)

CRJ-206 Organized Crime (3.00 cr.)

A foundation course in systematic criminality, which addresses those organizations whose method of operation include fear, violence and corruption designed to achieve strategic and tactical goals including illegal profit development, social deterioration through their criminal enterprises and neutralization of the political process by corrupting public officials.

Lecture (45.00)

CRJ-207 Terrorism (3.00 cr.)

This is a survey course in domestic and international terrorism. It addresses these subjects in both modern and historical contexts. Areas of emphasis include defining terrorism, categories of terrorism, typologies, motivations of members, role of ideology, organizational models, networking, costs of terror, threats to democratic processes, hard line and conciliatory governmental responses and legal limitations in counter-terrorism.

Lecture (45.00)

CRJ-230 Victimology (3.00 cr.)

Victimology allows students to examine the insight of the overlooked individuals in the criminal justice system, the victim. This course of study comprises of victims rights when interacting with law enforcement officers, judicial officials and the processes in place to achieve justice for victims. In addition, students will be able to comprehend and understand the following concepts: offender accountability; social and economic impact on victims; and programs available to crime victims.

Lecture (45.00)

COMPUTER SCIENCE

CSC-101 Computer Literacy (3.00 cr.)

This course is designed to provide the student with the knowledge and skill to use computers efficiently. Students will gain "hands-on" experience on a Windows based PC in word processing, spreadsheets, database management, a web browser, a student information system, and an operating system. Students will also learn the many facets of information technology, the way in which the world is being changed by it, and the associated risks and potential implications of technology in society. Topics will include an introduction to programming, an introduction to the hardware and software components of a computer system, the Internet, computer systems found in business, computer ethics, computer security, and the application of information technology to research information. Topics flow from the concrete to the abstract, from the present to the future. Knowledge of the keyboard is recommended for success in this course.

Lecture (45.00)

CSC-102 Information Literacy in a Digital Era (3.00 cr.)

The Association of College and Research Libraries (ACRL), a division of the American Library Association (ALA), released five Information Literacy Competency Standards for Higher Education. This course is designed to provide the basic computer skills necessary to support the course goal of meeting the ACRL's five standards which are to determine the nature and extent of the information needed, to access needed information effectively and efficiently, to evaluate information and its sources critically, to use the information effectively to accomplish a specific purpose and to use the information ethically and legally. In turn, accomplishing these goals will enhance lifelong learning, the ability to think critically and the use of information for problem solving and decision making.

Lecture (45.00)

CSC-102H Honors Info Literacy in a Digital Era (3.00 cr.)

The Association of College and Research Libraries (ACRL), a division of the American Library Association (ALA), released five Information Literacy Competency Standards for Higher Education. This course is designed to provide the basic computer skills necessary to support the course goal of meeting the ACRL's five standards which are to determine the nature and extent of the information needed, to access needed information effectively and efficiently, to evaluate information and its sources critically, to use the information effectively to accomplish a specific purpose and to use the information ethically and legally. In turn, accomplishing these goals will enhance lifelong learning, the ability to think critically and the use of information for problem solving and decision making. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.

Lecture (45.00)

CSC-105 Fundamentals of Programming (4.00 cr.)

This is an introductory Computer Science course in which students will learn the fundamentals of object-oriented programming in a 3-dimensional, interactive, animation environment. Students will create animation projects using a special software package for creating animation in small virtual worlds using 3-dimensional models. Students will obtain a strong core of fundamental programming concepts and problem-solving techniques, providing a basis for further study in a variety of computer related fields.

Lecture (60.00)

CSC-111 Introduction to Programming (3.00 cr.)

This course is designed to introduce students to logical thinking and basic programming aspects using mainstream programming tools and an integrated development environment. Topics include object-oriented programming concepts, designing graphical user interface (GUI), event-driven programming, assigning properties, writing, testing, and debugging code. Data types, variables, constants, sequential, conditional, and repetitive statements, menus, dialog boxes, sub-programs, functions, parameters, lists and comboBoxes will be explored. Basic computer skills are expected.

Lecture (45.00)

CSC-120 Programming for New Media (4.00 cr.)

This is an introductory Computer Science course in which students will learn the fundamentals of object-oriented programming in a 3-dimensional, interactive, animation environment. The course will also present Java programming in a context that students find relevant and useful. Students learn to program using Java while creating interesting effects with sounds, pictures, web pages, and video. Students will obtain a strong core of fundamental programming concepts and problem solving techniques, providing a basis for further study in a variety of computer related fields.

Lecture (60.00)

CSC-121 Structured Programming (C++) (4.00 cr.)

This course emphasizes top-down modular program design and managing program complexity through abstraction. The fundamentals of ANSI C are covered while stressing good software engineering practices. Topics covered include data types, arithmetic, control structures, functions, recursive functions, ANSI C libraries, scope of identifiers, arrays, pointers, strings, structures, files, and simple sorting techniques.

Lecture (60.00)

CSC-122 Computer Science I (4.00 cr.)

This course emphasizes problem-solving strategies, analysis of algorithms and the use of simple data structures to formulate object-oriented programming solutions to problems. Topics include construction, friend functions, overload operators, templates, inheritance, polymorphism, standard libraries, arrays, pointers and strings. Object-oriented concepts and terminology will be presented with a focus on using classes for program specification and design. The concept of an Abstract Data Type is presented. The student will learn how classes are declared, defined, used and organized into coherent designs. Students will apply the concepts through programming assignments in an object-oriented language. Data abstractions, information hiding, software reusability and extensibility will be stressed.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: CSC-121 and MTH-100

CSC-151 HTML Programming (3.00 cr.)

This course is a lecture based course and is designed to be a first course in web development and provides a foundation in the theory, concepts and skills that web developers need. Topics include: Internet Concepts, XHTML, CSS Text Configuration, CSS Color Configuration, and CSS Page Layout, Web Media and Interactivity, Web Design Best Practices, Web Development Process, Choosing a Web Host, Web Site Promotion, E-Commerce Overview, and an introduction to client-side scripting using JavaScript. Class time is focused on presenting the theory behind the concepts listed in the course description as well as investigation, analysis, and evaluation of what makes a good website versus a poor website through the synthesis of business, commerce, user interface design, and technology best practices. There are no graded or mandatory student computer exercises required during the classroom sessions. Student assessment is based only on written examinations and project assignments that are completed outside of the class time allotted.

Lecture (45.00)

Corequisites: CIS-191

CSC-152 JavaScript for the Web (3.00 cr.)

This lecture-based course presents the theory, logic, and analytical skills to design and develop interactive web page content for reliable and secure websites. Although this course will be taught in a computer classroom to demonstrate the programming principles presented, all required assignments are completed outside of the scheduled class meeting times. Student assessment is based only on written examinations and project assignments that are completed outside of the class time allotted. This course focuses on client-side scripting for developing dynamic web pages by incorporating JavaScript with XHTML. Fundamental programming concepts using JavaScript are covered, including variables, functions, operators, event handlers, objects, arrays, strings, forms, and frames. Advanced topics including debugging and security are also presented.

Lecture (45.00)

Prerequisites: CSC-151 and CIS-191

CSC-161 Introduction to Java (3.00 cr.)

This course introduces students to the design and implementation of applications using the Java programming language. Emphasis will be placed on taking full advantage of object-oriented methodology and its ability to allow the creation of flexible, modular programs, and reusable code. Topics covered include primitive data types, control structures, classes, methods, and packages that make up the Java API. Object-oriented concepts related to data abstraction, encapsulation, information hiding, and inheritance will be presented. Pre-requisite: Some previous exposure to programming is suggested.

Lecture (45.00)

CSC-171 Introductory Python Programming (3.00 cr.)

This introductory programming course will be presented using the Python 3 language with a focus on procedural programming for systems administration tasks. Topics covered in detail will include programming with numbers, strings, lists and files, control structures (decision and repetition), functions, scope and exceptions. A cursory introduction to regular expressions and the set and dictionary data structures will also be presented.

Lecture (45.00)

CSC-213 Visual Basic I (3.00 cr.)

This course is designed to emphasize human interface design principles and how to implement them in Visual BASIC.Net. Topics include the Visual Studio environment, controls and their properties, variables and constants, decision making, procedures, Object Oriented Programming concepts in Visual BASIC, multiple forms, lists, and repetition. Students will design, implement, run, test and debug Visual BASIC projects throughout the course.

Lecture (45.00)

CSC-214 Visual Basic II (3.00 cr.)

This course is a continuation of CSC-213, Visual BASIC I. Topics include classes and object oriented programming, sequential and random access files, accessing database files, data handling, displaying data in grids, validation and error trapping, SQL, drag and drop, graphics, ActiveX controls, dynamic link libraries, object linking and embedding, using data environment and data report components.

Lecture (45.00)

Prerequisites: CSC-111

CSC-215 Visual Basic III (3.00 cr.)

This course is a continuation of CSC-214 Visual Basic II. Topics include Active X controls, Active X components, Active X documents, dynamic data structures, packaging and deployment, ADO data control, using Windows API files, creating Windows help files, multimedia applications using Microsoft agent control, and special topics selected by the instructor at the time of offering.

Lecture (45.00)

Prerequisites: CIS-103 and CSC-214

CSC-223 Computer Science II (4.00 cr.)

This course is a continuation of CSC-122 Computer Science I in C++. This course will present the fundamentals of data structures from an object-oriented perspective. The focus will be on the use of classes for design and implementation of Abstract Data Types. Lists, stacks, queues, trees, sets, and graphs will be studied as well as searching, sorting and recursive algorithms. The use of dynamic data structures will also be examined. Students will apply these concepts through programming assignments in a commercially viable object-oriented language. Software engineering principles will be stressed.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: CSC-122

Corequisites: MTH-129

CSC-224 Advanced C++ (3.00 cr.)

The purpose of this course is to continue the study of object-oriented features and advanced topics of the C++ programming language which were studied in CSC-122. Topics include in-depth study of construction, overloaded operators, streams, file processing, C++ library, multiple inheritance and polymorphisms as well as exception handling and templates. The newer features of C++ will also be covered, including casting, explicit construction, the Standard Template Library (STL), basic string class, namespaces, virtual base classes and Run-time type identification (RTTI). Students will apply these concepts through programming assignments in C++. Data abstraction, information hiding, software reusability and extensibility will be stressed.

Lecture (45.00)

Prerequisites: CSC-122

CSC-226 Programming Languages (3.00 cr.)

Programming Languages is designed for students intending to major in a Computer Science. The course will look at the history of programming languages and explore the fundamental, underlying concepts of high-level programming languages, including: syntax and semantics, structuring concepts for control, programs, and data. Different language paradigms will be studied and compared including object-oriented, functional, and logic and rule-based programming.

Lecture (45.00)

Prerequisites: CSC-223

CSC-240 Computer Organization (3.00 cr.)

This course is designed to provide students majoring in Computer Science with an unified view of the interrelated components of a computer system in terms of its structure and functions. This course covers the fundamental structures of logic gates, CPU, control unit, micro architecture, instruction set, I/O, and memory. Advanced topics such as RISC computers, parallel processing, and superscalar processors will also be introduced.

Lecture (45.00)

Prerequisites: CSC-121

CSC-252 XML and Related Technologies I (3.00 cr.)

This course provides an introduction to eXtensive Markup Language (XML) and related technologies. Students will gain conceptual and practical knowledge of the concepts that are required to work with XML. The course content is an introduction to the skills required to use XML (and its related technologies) in the context of e-business applications. Topics are history of XML, creating mark-up with XML, DTDs, Schemas, and Namespaces. The related technologies of Xpath, XSL, XSLT, and designing XML vocabularies are introduced.

Lecture (45.00)

Prerequisites: CSC-101 and CIS-151

CSC-262 Advanced Java (3.00 cr.)

This course is a continuation of Introduction to Java CSC-161. The course emphasizes more sophisticated uses of object-oriented concepts and techniques for building systems of multiple components. The software development process will be refined. Topics to be covered include expanded coverage of the Java API, layout managers for building more complex GUIs, files, and streams, recursive methods, exception handling, and multithreading. Students will also be introduced to each of the major types of data structures (linked lists, stacks, queues, trees) and implement programs that create and manipulate these data structures.

Lecture (45.00)

Prerequisites: CSC-161

CSC-263 Web Component Development in Java (3.00 cr.)

This course provides students with the knowledge and skills needed to design, develop, test and deploy web applications with Java technologies. Students will be taught the technical details of JSP and Servlet technology. They will also learn to integrate the web tier with the other tiers, from the browser display to Enterprise JavaBeans components running on an application server. The course will also cover essential topics relative to the creation of Enterprise JavaBeans and their interaction with a backend database using JDBC.

Lecture (45.00)

Prerequisites: CSC-262

COMPUTER SYSTEMS TECHNOLOGY

CST-102 Introduction to Networking (3.00 cr.)

This course will provide the student with a basic understanding of microcomputer networks and their related equipment. Students will survey the basic concepts and components of personal computer networking, such as network topologies, access methods, network protocol layers, data transmission media, network hardware, software and peripherals. Basic network management techniques will also be discussed.

Lecture (45.00)

CST-103 Microcomputer Oper Systems I/Workstation (3.00 cr.)

This course gives the computer technology student a comprehensive understanding of modern graphical user interface operating systems and workgroup networks through the use of the latest Microsoft Windows Workstation operating system. Topics discussed include installation and customization of the operating system, system and network security, file systems, setting up and managing local and network printing, creating and administering user and group accounts, editing and customizing the Registry, and system and network troubleshooting. Also included are peer to peer network relationships, remote services, disk drive management, sharing and managing network resources, data archiving, and network protocols.

Lecture (30.00)

Laboratory (30.00)

CST-106 Microcomputer Oper Systems II/Serv Sys (3.00 cr.)

This course will provide the student with a comprehensive understanding of the latest version of Microsoft Windows Server operating system. It introduces the student to Active Directory Services and prepares them to plan, configure, and administer a complex, Windows based client/server network environment. Students will learn how to centrally manage user, groups, and network resources, and to administer the user environment and software applications with group policies. Installation and configuration of Dynamic Host Control Protocol services (DHCP) to automatically assign IP addresses will be studied. Configuration of Domain Name System (DNS) to manage name resolution, schema, and replication will also be covered, along with using Remote Installation Services (RIS) to deploy Windows Server.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CST-103

CST-109 Building, Upgrading, Repairing PCs (3.00 cr.)

This course gives the student a comprehensive understanding of the architecture and hardware subsystems of a modern microcomputer. Microcomputer assembly, repair and troubleshooting techniques will be studied along with software maintenance and installation procedures. System building and upgrading will also be studied and performed.

Lecture (30.00)

Laboratory (30.00)

CST-201 Advanced Networking (3.00 cr.)

This course will provide the student with an advanced understanding of micro-computer networks and their related equipment. The concept of interoperation through the use of networking protocols will be discussed and demonstrated along with advanced network management and environment customization techniques. Remote access and wide area network applications will be covered.

Lecture (45.00)

Prerequisites: CST-102

CST-204 Computer and Network Security (3.00 cr.)

This course introduces the core concepts of Computer Security, the main threats, attacks and mechanisms, applied computer operations and security protocols, main data transmission and storage protection methods via cryptography, ways of identifying, understanding and recovery from attacks against computer systems, various methods of security breach prevention, network systems availability, applications security, recovery and business continuation procedures and counter systems penetrations techniques.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CST-102

Corequisites: CST-109

DENTAL ASSISTING

DAS-111 Fundamentals of Chair-Side Assisting (7.00 cr.)

This course provides an introduction to dental assisting. Topics include: knowledge and understanding of the dental assistant's duties in the operator; identification, use, care and maintenance of equipment, materials and instruments; tray preparation; sterilization procedures, the seating and dismissal of patients; and four-handed sit-down dental procedures. Duties related to a general dental practice and to specialty practices will be taught.

Lecture (45.00)

Laboratory (135.00)

Prerequisites: DAS-141 and DAS-143

DAS-115 Pharmacology (1.00 cr.)

The student will be introduced to basic pharmacological concepts as well as many of the most common drugs used by man to diagnose, prevent and treat disease. The student will study mechanisms of action, drug interactions and drug classifications as well as relating these to the course in pathology. Emphasis will be placed on the drugs used most commonly in the dental office.

Lecture (15.00)

Prerequisites: DAS-170 and DAS-141

DAS-120 Dental Radiology (4.00 cr.)

This Dental Radiology course is designed to provide the dental assisting student with the opportunity to gain knowledge of the origin, production and utilization of radiation and digital radiography. Emphasis is placed on concepts of radiation safety and patient management. Through lecture and laboratory sessions, students will achieve practical experience in exposing dental radiographs on manikins, processing, mounting, and evaluating dental radiographs of diagnostic quality. Students will attain understanding of the extra-oral panoramic survey and intraoral surveys utilizing the paralleling and bisecting techniques with image receptors, including film and digital sensors. Students will perform two full-mouth series on patients to clinical proficiency. Although some patients may be provided by the College, the student may need, identify and schedule patients who have a clinical need for dental radiographic imaging. Following successful completion of this course, the student will continue into the Supervised Clinical Experience Course, DAS-160, where they will complete the necessary requirements set by the New Jersey Department of Environmental Protection (DEP). Once both courses are successfully completed, the student will be able to finalize the steps necessary to apply to the DEP for a New Jersey Limited Dental Radiographer License. Completion of this course does not provide the student the authority to take radiographs in a dental setting /office of any kind. This course is accredited by the New Jersey Radiographic Technology Board of Examiners.

Lecture (30.00)

Laboratory (90.00)

Prerequisites: DAS-141 and DAS-143

DAS-125 Preventive Dentistry (3.00 cr.)

The dental assisting student will demonstrate the ability to apply preventive education methods for the control of dental disease, utilizing communication skills to design an individualized plaque control program. Within this program the student will demonstrate the ability to obtain, analyze and evaluate a patient's diet, making sound recommendations based on nutritional education, risk assessment tools and institutional and motivational skills taught within the course. Dental assisting students will be familiarized with the organization, principles and issues of the public health system in the United States, and the role of dentistry within these systems. Students will be exposed to basic concepts of epidemiology, statistical and survey methodology, and program planning, implementation and evaluation. Future roles for dental auxiliaries in a changing health care system will be investigated. Smoking cessation programs and oral cancer screening techniques will be discussed.

Lecture (45.00)

Prerequisites: DAS-141, DAS-143, DAS-150, DAS-151 and DAS-170

DAS-141 Biological Science for Dental Assistant (1.00 cr.)

This course provides a study of the fundamental anatomical and physiological interrelationships of the various organ systems of the human body. Major emphasis is placed on the structures of the head and neck and the development of the orofacial complex. FORMAL ACCEPTANCE INTO THE DENTAL ASSISTING PROGRAM IS REQUIRED.

Lecture (15.00)

Corequisites: DAS-143

DAS-143 Infection Control for Dental Assistant (2.00 cr.)

This course is a fundamental study of sterilization and infection control protocol dealing with the transmission of infectious diseases, immunizations and applications of standard (universal) precautions in the dental office/clinic setting. Major emphasis is placed on basic microbiology and modes of precautions. This course will focus on the dental office procedures for surface asepsis techniques, instrument sterilization with steam and dry sterilizers, methods of spore monitoring, and appropriate personal protective equipment and workplace controls. FORMAL ACCEPTANCE INTO THE DENTAL ASSISTING PROGRAM REQUIRED.

Lecture (30.00)

DAS-150 Dental Anatomy for Dental Assisting (2.00 cr.)

Dental Anatomy is a first semester course for the dental assisting student. Tooth anatomy, embryology, and histology are discussed in depth, providing an understanding of the development, form and function of the structures of the oral cavity. FORMAL ACCEPTANCE INTO THE DENTAL ASSISTING PROGRAM REQUIRED.

Lecture (30.00)

Prerequisites: DAS-141 and DAS-143

DAS-151 Dental Laboratory Procedures I (2.00 cr.)

This course involves the study of the chemical and physical properties of materials used in dentistry; measurements, classifications and the application of these materials, using lecture, audiovisual presentations, demonstrations and active student participation in laboratory exercises.

Lecture (15.00)

Laboratory (30.00)

Prerequisites: DAS-141 and DAS-143

DAS-152 Dental Laboratory Procedures II (2.00 cr.)

This course involves the study of the chemical and physical properties of materials used in dentistry; measurements, classifications and the application of these materials, using lecture, audiovisual presentations, demonstrations and active student participation in laboratory exercises.

Lecture (15.00)

Laboratory (30.00)

Prerequisites: DAS-151 and DAS-170

DAS-160 Supervised Clinical Experience (6.00 cr.)

In accordance with the Department of Environmental Protection Bureau of Radiological Health, no person may either place or expose a dental radiograph on any individual, or make a radiographic exposure by pressing the exposure button in any dental setting except the Camden County College Radiology Area or Clinical Affiliate Site unless he/she is properly licensed in the State of New Jersey. A Dental Assisting National Board certificate is not a New Jersey Dental Radiologic Technology License and must not be used as such. Non-compliance will result in a formal report to the NJ Department of Environmental Protection Bureau of X-Ray Compliance. The radiology portion of this course has been evaluated and accredited by the New Jersey Radiographic Technology Board of Examiners.

Lecture (15.00)

Clinical (300.00)

Prerequisites: DAS-111, DAS-120, DAS-150, DAS-151 and DAS-170

DAS-170 Medical Emergencies in the Dental Office (1.00 cr.)

This course prepares the student to recognize, manage and make the modifications necessary to prevent a medical emergency that may develop during dental therapy.

Lecture (15.00)

Prerequisites: DAS-141 and DAS-143

DAS-180 Office Administration (2.00 cr.)

The dental assisting student will demonstrate proficiency in management procedures within the general, specialty, and institutional dental settings.

Lecture (30.00)

DAS-190 Oral Pathology (1.00 cr.)

This course is designed to give the dental assisting student a background in oral pathology. An understanding of the principles of pathology and the manifestation of specific disease processes will prepare the student to better assist in the prevention, diagnosis, and treatment of oral diseases. The student will also become familiar with the vocabulary of oral pathology and gain an understanding of the relationship of dentistry to oral and systemic diseases.

Lecture (15.00)

Prerequisites: DAS-141 and DAS-170

DENTAL HYGIENE

DHY-111 Dental Hygiene I - Seminar (2.00 cr.)

Dental Hygiene I Seminar is a lecture course offering the student an opportunity to gain knowledge and understanding in the foundation of the clinical practice of dental hygiene. Through the use of lectures, demonstrations, audiovisual aids/class activities and practical experience, the student will develop his/her skills in the following areas: infection control/OSHA guidelines; legal/ethical issues; medical/dental history evaluation; patient data collection; periodontal examination; dental disease etiology & prevention; plaque control; communication skills; principles of instrumentation utilizing the mirror, probe, explorer and curets; assessment, planning, implementation and evaluation of patients using the dental hygiene care process. FORMAL ACCEPTANCE INTO THE DENTAL HYGIENE PROGRAM IS REQUIRED.

Lecture (30.00)

DHY-120 Dental Radiology (4.00 cr.)

Dental Radiology is a pre-clinical course designed to provide the dental hygiene student the opportunity to gain knowledge of the origin, production, and utilization of radiation in dentistry. Emphasis is placed on concepts of radiation safety and patient management. Through lecture and laboratory sessions the student will gain practical experience in exposing, processing, and mounting dental radiographs of diagnostic quality and the use of digital imaging. FORMAL ACCEPTANCE INTO THE DENTAL HYGIENE PROGRAM IS REQUIRED.

Lecture (30.00)

Laboratory (90.00)

DHY-122 Dental Hygiene II Seminar (2.00 cr.)

This course is a lecture/discussion period designed to impart further knowledge and understanding of the clinical practice of the dental hygienist throughout the assessment, planning, implementation, and evaluation phases of treatment. The student will acquire theoretical and clinical information in the following areas: principles of instrumentation utilizing curets and scalers, treatment planning/documentation, plaque control, tooth stains/polishing agents and techniques, topical fluoride application, instrument sharpening, evaluation and recall procedures, intraoral photography, care of prosthetic appliances, patient management, motivation and behavior modification, and nutritional counseling. SUCCESSFUL COMPLETION OF ALL FIRST SEMESTER COURSES IS REQUIRED.

Lecture (30.00)

Prerequisites: DHY-111, DHY-120, DHY-130, DHY-151 and DHY-170

DHY-130 Dental Anatomy (2.00 cr.)

Dental Anatomy is a first semester course for the first-year dental hygiene student. The course is designed to provide the student with knowledge and understanding of the nomenclature used in dentistry, the anatomy and physiology of the primary and permanent dentition, the relationship of the supporting tissues of the teeth, the relationship of the teeth within each arch, and the occlusion of the maxillary and mandibular teeth. Instructional aids for the lecture series include dental typodonts, oversized tooth models, color slides, cross-sectioned models, and extracted teeth. FORMAL ACCEPTANCE INTO THE DENTAL HYGIENE PROGRAM IS REQUIRED.

Lecture (15.00)

Laboratory (30.00)

DHY-142 Periodontics I (2.00 cr.)

In this course, the student will study the biologic structures and functions of the normal periodontium and be able to recognize and identify the clinical characteristics of the normal periodontium on patients. The student will then utilize this information in the study of periodontal disease. The student is taught to recognize periodontal pathology, including the various types of periodontal conditions. The student will also study the roles of plaque, calculus, and restorative dentistry in the etiology of periodontal disease. SUCCESSFUL COMPLETION OF ALL FIRST SEMESTER COURSES IS REQUIRED.

Lecture (30.00)

Prerequisites: DHY-111, DHY-120, DHY-130, DHY-151 and DHY-170

DHY-151 Dental Hygiene I Pre-Clinic (2.00 cr.)

Dental Hygiene I Pre-Clinic provides the student the opportunity to put into clinical practice the information and skills obtained during Dental Hygiene I Seminar and co-requisite courses. Under the supervision of instructors, students will perform basic dental hygiene services in a clinic setting in order to develop the educative, preventive and therapeutic skills necessary for the clinical practice of dental hygiene. FORMAL ACCEPTANCE INTO THE DENTAL HYGIENE PROGRAM IS REQUIRED.

Laboratory (90.00)

DHY-152 Dental Hygiene II Clinic (3.00 cr.)

Dental Hygiene II Clinic provides the student the opportunity to put into clinical practice the information and skills obtained during current and previous dental hygiene seminars. Under the supervision of instructors, students will perform basic dental hygiene services in a clinical setting in order to develop the educative, preventive and therapeutic skills necessary to practice dental hygiene through the standard of care model. SUCCESSFUL COMPLETION OF FIRST SEMESTER COURSES IS REQUIRED.

Clinical (135.00)

Prerequisites: DHY-111, DHY-120, DHY-130, DHY-151 and DHY-170

DHY-162 Dental Lab Procedures (2.00 cr.)

This course involves the study of the chemicals and physical properties of materials used in dentistry; their measurements and classifications and the application of these materials. Demonstrations and active student participation in laboratory exercises provides practical application of the information received in the lecture portions of class. SUCCESSFUL COMPLETION OF ALL FIRST SEMESTER COURSES IS REQUIRED.

Lecture (15.00)

Laboratory (30.00)

Prerequisites: *DHY-111, DHY-120, DHY-130, DHY-151 and DHY-170*

DHY-170 Medical Emergencies in the Dental Office (1.00 cr.)

This course prepares the student to recognize, manage, and make the modifications necessary to prevent a medical emergency that may develop during dental therapy. FORMAL ACCEPTANCE INTO THE DENTAL HYGIENE PROGRAM IS REQUIRED.

Lecture (15.00)

DHY-172 Head & Neck Anatomy (2.00 cr.)

This course includes the study of the anatomy, histology, and embryology of the head, neck and oral cavity. Introductory information regarding cellular biology and general histology is presented. Other sciences are mentioned in reference to the musculature, blood and nerve supplies, bones, landmarks, sinuses and foramina of the respective areas. The significance of the various structures in dentistry is discussed.

Lecture (30.00)

Prerequisites: *DHY-111, DHY-120, DHY-130, DHY-151, and DHY-170*

Corequisites: *DHY-122, DHY-142, DHY-152 and DHY-162*

DHY-212 Community Dentistry (2.00 cr.)

This course provides an introduction to current principles and issues in public health and their relationship to delivery of dental care to the public. Dental hygiene students are familiarized with the organization of the United States and other health care systems and the role of dentistry within these systems. Students will be exposed to basic concepts of epidemiology, statistical and survey methodology, and program planning, implementation, and evaluation. Future roles for dental auxiliaries in a changing health care system are investigated. SUCCESSFUL COMPLETION OF ALL FIRST YEAR COURSES IS REQUIRED.

Lecture (30.00)

Prerequisites: *DHY-111, DHY-120, DHY-122, DHY-130, DHY-142, DHY-151, DHY-152, DHY-162, DHY-170 and DHY-172*

DHY-223 Dental Hygiene III Seminar (2.00 cr.)

Dental Hygiene III Seminar is a lecture discussion period designed to expand the student's knowledge and understanding of the clinical practice of the dental hygienist. Through the utilization of guest lecturers, slide presentation and class group activities, the student will acquire information relating to dental hygiene clinical practice. As needed, at the end of each class there will be group discussion directly related to problems and progress in clinic.

Lecture (30.00)

Prerequisites: *DHY-122 and DHY-152*

DHY-224 Dental Hygiene IV Seminar (2.00 cr.)

Dental Hygiene IV Seminar is a lecture/discussion period designed to expand the student's knowledge and understanding in providing dental hygiene services to the "special needs" patient. Various dental and dental hygiene specialties and practice options will be introduced to expose the student to opportunities available within the field of dental hygiene. The student will acquire theoretical and clinical information in the following areas: plaque control; nutritional counseling; physically disabled patients; mentally disabled patients, gerodontic patients; nursing home patients; special needs patients: puberty, adolescence, menopause, pregnancy; bleaching techniques, career alternatives and the Internet in Dentistry. As needed, at the end of each class, there will be group discussion directly related to problems and progress in clinic.

Lecture (30.00)

Prerequisites: *DHY-223*

DHY-233 Advanced Techniques in Periodontics (1.00 cr.)

The treatment of inflammatory periodontal disease is taught during this course. Various aspects of conservative as well as surgical treatment are discussed. The student will become familiar with periodontal charting (including PSR), advanced instrumentation, chemotherapeutics, and recall as well as the various types of periodontal surgical procedures. The student is taught to recognize the limits of dental hygiene therapy in advanced periodontal cases, and to be aware of types of more complex treatment.

Lecture (15.00)

Prerequisites: *DHY-122, DHY-142 and DHY-152*

DHY-252 Local Dental Anesthesiology (2.00 cr.)

This course will prepare the student to safely and effectively administer local dental anesthesia as current New Jersey legislation allows. The course will include the neurophysiology and psychology of pain, pharmacology of anesthetic agents, a review of anatomy and physiology as they relate to the administration of local dental anesthesia, and management of emergencies and complications. This course will include classroom and clinical components.

Lecture (30.00)

Clinical (12.00)

Prerequisites: *(DHY-271 and DHY-172) or DHY-132 and HPE-181*

Corequisites: *DHY-224*

DHY-253 Dental Hygiene III Clinic (6.00 cr.)

Dental Hygiene III Clinic provides the student the opportunity to reinforce and refine clinical techniques developed in the previous semester. Greater emphasis will be placed on periodontally involved patients. Additional adjunctive requirements will be assigned to allow students to develop in all areas of the dental hygiene process. One clinical session per week will be devoted to advanced techniques.

Clinical (270.00)

Prerequisites: *DHY-122, DHY-142 and DHY-152*

DHY-254 Dental Hygiene IV Clinic (4.00 cr.)

Dental Hygiene IV provides the student the opportunity to reinforce and refine clinical techniques developed in the previous semester. Greater emphasis will be placed on the student's progression in assessment, dental hygiene diagnosis, and treatment planning of more periodontally involved patients. Additional adjunctive requirements will be assigned to allow students to develop in all areas of the dental hygiene care process.

Clinical (180.00)

Prerequisites: *DHY-253*

DHY-261 Pathology (2.00 cr.)

The student will learn the causes and treatment of many common human diseases with particular emphasis on the oral, head, and neck regions. Attention will be given to the recognition of disease processes in the oral cavity and how they relate to the patient's overall treatment. There will be many slides to show examples of the various diseases. The students are encouraged to relate what is learned in this course with their treatment of clinic patients.

Lecture (30.00)

Prerequisites: *DHY-122, DHY-152 and DHY-172*

DHY-262 Ethics, Jurisprudence & Practice Mgmt (1.00 cr.)

The intent of this course is to familiarize the student with the ethics, jurisprudence & practice management in the field of dentistry. Ethical and legal issues that influence the profession will be discussed. The student will learn the necessary skills valuable to the dental office team. This course is web enhanced and all outlines are to be completed prior to the class session.

Lecture (15.00)

Prerequisites: *DHY-111, DHY-120, DHY-130, DHY-151 and DHY-170*

DHY-271 Pharmacology & Anesthesiology (2.00 cr.)

The student will be introduced to basic pharmacologic concepts as well as many of the most common drugs used to diagnose, prevent and treat disease. The students will study mechanisms of action, drug interactions, and drug classifications as well as relating these to the course in pathology.

Lecture (30.00)

Prerequisites: *DHY-122 and DHY-152*

ECONOMICS

ECO-101 Macroeconomics (3.00 cr.)

This study of macroeconomics provides knowledge and understanding of the American economy as a whole. Topics include economic resources, the economizing program, supply and demand relationships, public and private sectors and national income accounting.

Lecture (45.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

ECO-102 Microeconomics (3.00 cr.)

This study of microeconomics is a continuation of Economics I with emphasis on the individual firm and the individual household. The course discusses the most profitable output for the firm. Topics include labor, agriculture, competition, economic growth and poverty.

Lecture (45.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

EMERGENCY DISASTER MANAGEMENT

EDM-110 Introduction to Public Safety (3.00 cr.)

This course provides an introduction to the principles and practices of public safety organizations, police, fire, and emergency medical services and the work environment of the men and women who staff these organizations. The development of public safety organizations is examined in an historical context. Emphasis is placed on training, organizational subculture, operational jurisdictions, legal mandates and the unique professional qualities of each service.

Lecture (45.00)

EDM-240 Intro to Emergency Disaster Management (3.00 cr.)

This course provides a thorough overview of operations and the conceptual basis of the emergency management system in the mitigation of, response to, recovery from, and preparedness for a broad array of emergencies and disasters. Inter-agency and inter-governmental initiatives, programs and protocols will be reviewed.

Lecture (45.00)

EDM-241 Operational Security (3.00 cr.)

This course examines the principles of Operational Security or OPSEC. The focus is on the protection of life, assets, and facilities, and on ensuring safety of personnel. The five steps in the operational security process will be thoroughly discussed as well as, the mix of mechanical, operational and natural security necessary to protect facilities and personnel. This course focuses on the special requirements of public and private first responders, members of non-governmental organizations providing emergency or humanitarian services, and others who are assigned safety, security or emergency management responsibilities. It is recommended that students take CRJ-211, Introduction to Loss Prevention, as a prerequisite to this course.

Lecture (45.00)

ELEMENTARY / SECONDARY EDUCATION

EDU-100 Teaching: Introduction to the Profession (3.00 cr.)

This course is designed for students considering a career in teaching. It guides students through the profession, its foundations, realities, challenges and rewards. Students will evaluate classroom practices using case studies and video methodology. They will participate in a fifteen-hour field experience observation in a local school.

Lecture (45.00)

Field Work (15.00)

EDU-101 Historical Trends in American Education (3.00 cr.)

This course will provide an in-depth study of the prominent trends running throughout American education from 1600 to the present covering pre-school through post-secondary education. The focus will include social forces, sources of conflict, major educational figures, and patterns of schooling during each period.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

EDU-102 Human Exceptionality (3.00 cr.)

The study of human exceptionality is important for undergraduate students to understand our pluralistic society, accept differences and develop the sensitivity

and awareness that would allow them to work effectively in a diverse society. In the United States, people with disabilities are the largest growing minority group. Currently, there are over 54 million individuals with disabilities and the numbers continue to increase. Therefore, it is reasonable to conclude that our students will encounter exceptional individuals in their classes, in their community, and in their workplace. It is imperative that our students have the opportunity to learn about the nature and courses of exceptionality as well as the history of litigation that has led to increased civil rights for people with disabilities.

Lecture (45.00)

EDU-104 Learning Communities I (3.00 cr.)

This course introduces Elementary and Subject-matter candidates to the elements of successful, caring learning communities and builds a foundation for the course, Teaching in Learning Communities II and further educational work. Candidates study, observe, and participate in various elementary school learning communities and collaborative teaching-learning environments as they examine the interplay between planning, instruction, assessment, culture, diversity, and management within a learning community environment. A 20 hour field experience component is required. (This course only transfers to Rowan University).

Lecture (45.00)

Field Work (20.00)

Prerequisites: EDU-100

EDU-105 Educational Technology (1.00 cr.)

This laboratory course focuses on the use of educational technology in support of student learning, and integration of technology into the P-12 curriculum. Strategies to incorporate technology and the World Wide Web into the school curriculum will be explored. Each student will develop an online portfolio to demonstrate their growth over time and record evidence of their teaching competencies.

Laboratory (30.00)

EDU-106 Inclusive Class: Pedagogy/ Elem. Seminar (3.00 cr.)

This course introduces educational principles and pedagogies that promote the use of positive universal classroom management techniques supportive of all learners in an inclusive setting. Students will be empowered to: articulate common academic language as it relates to the cycle of teaching and learning; create connections between educational philosophies, beliefs and dispositions; and embrace universal, proactive supports and strategies for creating effective learning communities to promote a positive school climate. The field experience seminar serves as the vehicle for domain-specific application of the principles and pedagogies that promote collaboration with partners in the field to support learning and the mental and physical health of diverse learners in all settings. The seminar will integrate teaching, research and service to advance knowledge in the field to prepare and support professionals through the development of knowledge, skills and dispositions with the ultimate goal of ensuring equitable educational opportunities for all learners. Students will participate in a 40-hour field experience observation in a local school.

Lecture (45.00)

Prerequisites: EDU-100

EARLY CHILDHOOD EDUCATION

EED-105 Children's Health, Nutrition & Safety (3.00 cr.)

The focus of this course will be on promoting a safe and healthy classroom environment for children. The student will expand his/her knowledge of important topics in child development, relating specifically to health, safety and nutrition. Current issues that affect children will be discussed with possible solutions explored. This course incorporates basic components of good health and personal care needs in day-to-day, as well as emergency situations.

Lecture (45.00)

EED-110 Early Childhood Curriculum (3.00 cr.)

The course introduces the student to curriculum and planning in an early childhood classroom. Through a study of cognition and learning, students explore lesson planning in all areas of the curriculum including language arts and literacy, math, social studies and science. Students become familiar with state curricula standards and their practical application in an early childhood classroom. Students explore various methods of curriculum planning such as webbing and the materials that are used in an early childhood classroom.

Lecture (45.00)

EED-115 Child Development & Learning (3.00 cr.)

This course explores the sum of the total physical, intellectual, social, emotional and behavioral changes that occur in children from the moment of conception through the adolescent years. The course explores the physical, cognitive, social and emotional development of the child from birth through the preschool years. Major theories of development are also presented.

Lecture (45.00)

EED-120 Language Arts for the Preschool Child (3.00 cr.)

This course is an introduction to language development in the child and those language experiences which will be most beneficial. The student will be given the opportunity to explore all aspects of pre-reading skills that are essential in early childhood programs.

Lecture (45.00)

EED-205 Creative Arts: Early Childhood Learners (3.00 cr.)

This course is an introduction to creative development and to its application in the Early Childhood Curriculum. The following areas of study will be included: Creative development as it relates to the total development of the young child; theories related to creativity and aesthetics; appropriate creative experiences in art, music, movement, language and sensorial activities; selection and use of appropriate materials. The importance of teacher self-concept and individuality as it relates to nurturing the creative process in young children. The course allows students to examine progressive art forms that are applied in an early childhood education setting.

Lecture (45.00)

EED-210 Math/Science for the Preschool Child (3.00 cr.)

This course offers the student an opportunity to explore principles, methods and materials for teaching young children math and science concepts through discovery and experimentation. Emphasis is on the planning, implementation, and evaluation of developmentally-appropriate activities utilizing a variety of methods and materials.

Lecture (45.00)

EED-220 Behavior Management (3.00 cr.)

The student will develop an understanding of the discipline issues that children face from birth to early elementary school years. Emphasis will be placed on the acquisition of skills with importance on the child's developmental level. Special consideration will be taken with different theoretical approaches to understanding behavior.

Lecture (45.00)

EED-230 Applied Preschool Experience (3.00 cr.)

Field experience is traditional in higher education early childhood education programs. It is the "learning by doing" under educational guidance. Field work offers the student the opportunity to work directly with children, teachers, and administrative staff in early childhood education settings such as daycares and private and public preschools. This experience allows the student to apply his/her knowledge of the field in a practical setting. Students will use lecture time to reinforce their field work experience. Students are encouraged to find field work internships prior to registration. Background checks may be required at some schools. Field work is required for a total of 100 hours during the semester.

Lecture (15.00)

Field Work (100.00)

Prerequisites: EED-110

EED-240 Social & Emotional Dev: Infant/Toddler (3.00 cr.)

This course will introduce infant/toddler mental health and the interaction process essential to promote quality infant/toddler programs in center and family based settings. The course will cover topics such as attachment, separation and loss, and separation and individual construct. The student will understand ethical and boundary issues within the infant/toddler mental health field, use self-reflection and dialogue with peers to understand one's role as an infant/toddler caregiver or related service specialist as they interact with infants, toddlers and families in a professional capacity. Students will present, document, and analyze field observations to further understanding of typical development and its variations in infants, toddlers, and families.

Lecture (45.00)

ELECTRICAL ELECTRONIC ENGINEERING**EET-101 Electrical & Electronic Principles (4.00 cr.)**

This course covers the fundamental concepts that are the foundation for succeeding in electrical and electronics courses. Emphasis is on the analytical understanding of basic DC and AC circuits in mathematical terms and in laboratory situations. Laboratory test equipment is utilized to substantiate the mathematical analysis of experimental circuits.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: MTH-120, MTH-123 or MTH-125

EET-201 Electrical Circuits (3.00 cr.)

This course covers the application of DC and AC electrical principles to electrical circuit networks. Basic network theorems and methods of analysis are combined with complementary laboratory exercises to provide a solid working foundation in electrical fundamentals.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: EET-101

EET-211 Electronics I (3.00 cr.)

This course introduces the student to electronic semiconductor devices and describes the methods, basic circuits, and hardware needed to enable the devices to operate within predictable limits. The theoretical topics presented in the lectures will be supplemented with practical applications of them in laboratory exercises and experiments using current-technology industrial test equipment and test procedures.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: EET-101

EET-212 Electronics II (3.00 cr.)

This course is a continuation of Electronics I. Complex circuits with discrete components (FET, OP-Amps and filters), and with linear ICs will be described and analyzed. Laboratory experiments using current technology test equipment and test procedures will be used to verify results of theoretical analysis.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: EET-211

EET-213 Electronic Communications (3.00 cr.)

This course analyzes electronic circuits that perform modulation and detection of AM, FM, MN signals and pulsed waveforms. All methods of wireless communications including digital, data, and high frequency communication techniques are investigated. The theories presented in the lectures will be demonstrated with practical applications in laboratory experiments.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: EET-201 and EET-211

Corequisites: EET-212

EET-221 Digital Circuits (3.00 cr.)

This course covers binary number systems: Boolean algebra, digital logic functions, implementation of simple logical operations, and utilization of the Karnaugh map for simplification of logical equations. In this course applications include multi-vibrations and switching and counting circuits, using both integrated circuits and discrete components.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: EET-101

EET-241 Robotics (3.00 cr.)

This course offers students the opportunity to work with various industrial robots in programming for movements and functions. In this course the fundamental principles of operation will be covered. Topics include AC and Fluidic power, DC power and positioning, data acquisition, data handling and conversion, voice synthesis and interfacing.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: EET-101

EET-251 Electronic Projects (3.00 cr.)

This is a capstone course designed to introduce the student to principles of comprehensive design of an electrical/electronic project. The student may work within a small engineering team to design and develop a project, or the student may work alone on a project, depending on class size. Students are expected to develop a complete plan from feasibility study, cost analysis and electrical design and documentation through the building of a prototype. Interaction between electrical and mechanical students will be encouraged. All students must make a formal written and verbal presentation at the completion of the course.

Lecture (15.00)

Laboratory (60.00)

Prerequisites: EET-201 and EET-211

Corequisites: EET-212

ENGINEERING SCIENCE

EGR-101 Introduction to Engineering (2.00 cr.)

This course is an introduction to the Engineering Curriculum and Profession. The emphasis is on providing the student with the tools necessary to succeed in the Engineering Curriculum and to introduce topics that graduate engineers will encounter in the workforce. Students will be presented with problem solving techniques, analytical tools, design processes, and ethical concepts and responsibilities of an engineer.

Lecture (15.00)

Laboratory (30.00)

Prerequisites: MTH-124 or MTH-125

Corequisites: ENG-101

EGR-103 Technical Drawing (3.00 cr.)

This course is an introduction to the theories, principles, and techniques of graphical communication for the Engineering disciplines. It is a course designed for the Computer Aided Drafting and Design student but can be utilized by anyone with an interest in any field of engineering. Topics covered include 2-dimensional and isometric drafting techniques; lettering, technical sketching, dimensioning, geometric dimensioning and tolerancing; orthographic, axonometric and oblique projection; sectional and auxiliary views; drawing principles and standards for threads, fasteners, springs, gears, and cams. A survey of electric diagrams, structural, landform, and piping drawings, and welding representations are also included.

Lecture (30.00)

Laboratory (30.00)

EGR-201 Statics (3.00 cr.)

This is the first course in a two-course series introducing the subject of mechanics of rigid bodies. Statics teaches the student the effects of forces acting upon stationary (or at least non-accelerating) rigid bodies.

Lecture (45.00)

Prerequisites: MTH-150

EGR-202 Dynamics (3.00 cr.)

This is the second course (after Statics) in a two-course series introducing the subject of mechanics of rigid bodies. Dynamics deals with the analysis of bodies in motion and effects of forces upon such bodies.

Lecture (45.00)

Prerequisites: EGR-201

EGR-208 Co-op I: Engineering (3.00 cr.)

This course is designed to allow the student to apply the technical skills gained during the course of study in engineering in a real-world environment. It emphasizes analytical problem solving so that solutions can be implemented that benefit industry, education or the community. Students work with Co-op advisor to help develop meaningful learning objectives at their places of employment.

Co-Op (135.00)

EGR-209 Co-op II: Engineering (3.00 cr.)

This course may be selected as a continuation of Co-op I Engineering. Prerequisite: Recommendation of the Program Coordinator.

Co-Op (135.00)

EGR-211 Engineering Circuit Analysis (4.00 cr.)

In this course DC and AC fundamentals are applied to the study of electrical networks. It is a core course in the Engineering Science Curriculum. The responses of varied circuits to basic input functions are analyzed by using transform methods. The integrated laboratory component is designed to introduce students to industrial test equipment and procedures. Computerized circuit simulation software is used to supplement laboratory experiments.

Lecture (45.00)

Laboratory (30.00)

Prerequisites: MTH-150 and PHY-201

EGR-250 Elect/Computer Engineer Concept: Digital (3.00 cr.)

This is the first course in a two-part series for community college engineering science students transferring to a college of engineering, electrical and computer engineering curriculum. Students will be exposed to concepts of Boolean Algebra, Switching Theory and Combination Network design. In addition, contemporary Digital Circuit Theory and System Design fundamentals will be explored. The goals will be accomplished through an analysis of digital circuits and devices and through use of Systems-on-Chip (SoC) design, programming and simulation. Students will obtain practical simulation experience using firmware systems.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: MTH-140 and PHY-201

Corequisites: MTH-150

EGR-251 Elec/Computer Engine Concept: Electronic (3.00 cr.)

This is the second course in a two-part series. This course will provide fundamental knowledge of electronic devices and circuit design involving diodes, bipolar junction and field-effect transistors. Circuit simulation procedures will be developed using software such as PSPICE. In addition, the course will impart fundamental and contemporary System on Chip (SoC) knowledge for community college engineering science students transferring to a college of engineering ECE curriculum, and provide broader SoC background for those who wish to pursue career opportunities in SoC related fields.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: EGR-250

Corequisites: EGR-211

EMERGENCY MEDICAL TECHNICIAN

EMT-101 Emergency Medical Technician (6.00 cr.)

The Emergency Medical Technician (EMT) course is intended to prepare the student for an entry-level career in emergency medical services at the basic provider level. The program is an intensive four-month course that addresses a variety of topics through lectures, skill labs, and evaluation sessions provided by certified EMT instructors, paramedics, nurses, and physicians. Upon successful completion of the course, the student is eligible to take the New Jersey Department of Health examination for EMT-B certification.

Lecture (90.00)

Laboratory (90.00)

Clinical (60.00)

ACADEMIC SKILLS – ENGLISH

ENG-002 Reading II Express (1.00 cr.)

This course is designed for students who require only brief instruction in the reading required prior to the Reading III level. Preparing students for Reading Skills III in a rapid format, this course quickly covers the concepts of topic, stated main idea and implied main idea, supporting details, and general comprehension of paragraphs and essays. A segment of the curriculum is also dedicated to the identification of authorial bias and to the interpretation of charts and graphs.

Lecture (15.00)

Prerequisites: ENG-012

ENG-005 Pathways to Reading & Writing (3.00 cr.)

This course integrates reading and writing skills related to job-seeking and career goals. Instruction provides strategies for thinking about relevant readings and decoding meaning in them as well as expressing ideas in writing. Course instruction will be flexible, responsive, interactive, and multi-sensory across a broad spectrum of basic reading and writing exercises. Students should expect to work in a collaborative learning environment to develop reading, writing, and communication skills.
Lecture (45.00)

Prerequisites: *Placed into Pathways to Reading & Writing*

ENG-011 Reading Skills I (3.00 cr.)

The objective of this course is to develop the student's ability to comprehend short reading passages through the development of the most fundamental reading skills: decoding and identifying subject matter, main idea, major and minor supporting details. Students also learn to state the main idea in a standard American English sentence and to write summaries. (Credits do not apply toward graduation requirements.)
Lecture (45.00)

ENG-012 Reading Skills II (3.00 cr.)

In this course, the student will learn to do the following for multi-paragraph essays: write stated or implied main ideas; identify supporting details and describe their relationships to main ideas; answer questions requiring literal and inferential comprehension; utilize rhetorical strategies to aid comprehension; write accurate summaries; interpret charts and graphs that serve as support; demonstrate competence in ancillary readings deemed appropriate by instructors; and acquire information that will expand their general background knowledge.
Lecture (45.00)

Prerequisites: *Placed into Reading Skills II*

ENG-013 Reading Skills III (3.00 cr.)

This course seeks to improve the students reading comprehension skills. Instruction reviews strategies for understanding multi-paragraph non-fiction pieces by identifying topics, main ideas, and supporting details, and drawing inferences and conclusions. The course focuses on the identification and understanding of each readings standard rhetorical strategy, target audience, and purpose and concludes with syntheses among texts that take different approaches to similar subject matter.
Lecture (45.00)

Prerequisites: *ENG-012 or ENG-002*

ENG-021 Writing Skills I (3.00 cr.)

This course aids students whose deep anxiety about writing interferes with their ability to produce text. The course also focuses on the writing of correct sentences in the context of one paragraph essays. (Credits do not apply toward graduation requirements.)
Lecture (45.00)

ENG-022 Writing Skills II (3.00 cr.)

This course seeks to improve the students essay writing skills. Students will compose multi-paragraph essays on general topics. They will also compose timed essays in response to prompts. Additional emphasis is on review and practice of formal English grammar and usage. The course focuses on statement and support of a central controlling idea, using standard rhetorical strategies for logical organization of clear, correct sentences.
Lecture (45.00)

Prerequisites: *ENG-021 or Placed into Writing II and Placed into Reading II or higher*

ENG-023 Writing Skills III (3.00 cr.)

This course seeks to improve the students essay writing skills in preparation for English Composition I. Students will compose multi-paragraph essays that summarize and respond to readings and accurately incorporate source material. They will also compose timed essays on impromptu topics. Time is allotted for review and practice of formal English grammar and usage. The course focuses on critical thinking about audience and purpose as well as language and style, using standard rhetorical strategies.
Lecture (45.00)

Prerequisites: *ENG-022 or Placed into Writing III and Placed into Reading II or higher*

ENG-046 Reading & Writing III Accelerated (4.00 cr.)

This course integrates reading and writing skills. By the end of the semester, students will demonstrate their comprehension of college-level readings by summarizing them, writing essays in response to them, and answering relevant exam questions on their content. During this process, students will annotate readings and compose clear, well developed papers. Upon completion of the course, they will read and write at the levels required of students placing directly into English Composition I.
Lecture (60.00)

Prerequisites: *Placement Reading Score of 79-82 & Essay Score of 5*

ENGLISH**ENG-101 English Composition I (3.00 cr.)**

This course acquaints the student with the conventions of expository writing. It offers training in clear, logical communication and encourages the student to read, analyze, discuss, and write. The "substance" of English Composition I is the essay: students study both the content and the rhetoric of selected essays and write essays which thoughtfully develop their own ideas in good rhetorical form.
Lecture (45.00)

Prerequisites: *(ENG-013 and ENG-023) or ENG-046*

ENG-101H Honors English Composition I (3.00 cr.)

This honors course acquaints the student with the conventions of expository writing. It offers training in clear, logical communication and encourages the student to read, analyze, discuss, and write. The "substance" of English Composition I is the essay: students study both the content and the rhetoric of selected essays and write essays which thoughtfully develop their own ideas in good rhetorical form. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.
Lecture (45.00)

Prerequisites: *(ENG-013 and ENG-023) or ENG-046*

ENG-102 English Composition II (3.00 cr.)

English Composition II is the second semester of a two-semester course. Its purpose is to develop more fully the reading, writing, and speaking ability of the composition student to build on the basis of English Composition I. English Composition II will especially stress argumentative writing and will provide the student with a strong basis in the rhetoric of argumentation. In addition, the development of the student's research skills and ability to handle source material are important aspects of this course.
Lecture (45.00)

Prerequisites: *ENG-101*

ENG-102H Honors English Composition II (3.00 cr.)

Honors English Composition II is the second semester of a two-semester course. Its purpose is to develop more fully the reading, writing, and speaking ability of the composition student to build on the basis of English Composition I. English Composition II will especially stress argumentative writing and will provide the student with a strong basis in the rhetoric of argumentation. In addition, the development of the student's research skills and ability to handle source material are important aspects of this course. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.
Lecture (45.00)

Prerequisites: *ENG-101*

ENG-121 Introduction to Literature (3.00 cr.)

Introduction to Literature is a study of poetry, fiction, and the drama. This course provides the student with the terminology and background necessary for the profitable study of literature; it also guides students in the application of the principles of literary criticism.
Lecture (45.00)

Prerequisites: *(ENG-013 and ENG-023) or ENG-046*

Corequisites: *ENG-101*

ENG-131 Shakespeare (3.00 cr.)

This course is a survey of Shakespeare's art from his earliest to his last writings through the reading and discussion of his major plays.
Lecture (45.00)

Prerequisites: *ENG-101*

Corequisites: *ENG-102*

ENG-133 Italian Literature in Translation (3.00 cr.)

This course covers specific masterpieces of Italian literature which include fiction, drama and poetry. Students will explore the works of major Italian literary figures such as Boccaccio, Machiavelli, Pirandello and Eco. In addition, students will study the relationship between class, gender, religion, and identity through the works of writers such as Carlo Levi, Grazia Deledda, Benedetto Croce and St. Thomas Aquinas. The development of Italy's literature within the framework of its history will be thematic to the course. Another important theme of this course will be the presenting of Italy's historical, cultural and social background linking literature from the independent city-state to the eventual unification of Italy in 1860. (This course does not count towards the 6 required language elective credits in any curriculum.)

Lecture (45.00)**Prerequisites: ENG-101****ENG-141 The Short Story (3.00 cr.)**

The short story course is intended for students who would like to begin a study of literature and are interested in studying the aspects of fiction at an introductory level. The major objective of the course is to help students identify, understand, interpret, and enjoy fiction. Reading fiction provides students with some insight into the nature and condition of human existence; that is, short stories illuminate some aspect of life or human behavior.

Lecture (45.00)**Prerequisites: ENG-101****Corequisites: ENG-102****ENG-181 Women's Literature (3.00 cr.)**

Women's Literature explores fiction and poetry by well-known writers, such as Charlotte Bronte and Emily Dickinson as well as by less famous contemporary women with varied backgrounds and viewpoints. Students in the class will learn to express and support original ideas about the literature they read. Through class discussions they will analyze and evaluate literature in terms of major themes: enclosure and escape, women's feelings about family ties, a woman's life cycle, women's friendships, and creativity. Both women and men are welcome to take the class.

Lecture (45.00)**Prerequisites: ENG-101****Corequisites: ENG-102****ENG-191 The Myths of the World (3.00 cr.)**

Myths are among the oldest, most powerful, and most entertaining forms of literature. Participants in this course study a wide range of myths within and beyond the western tradition. The subject matter includes both the Greek and Roman myths that form a necessary background to much western literature and art and variations of those stories told in cultures uninfluenced by western civilization. Comparisons of myths from around the world demonstrate that very different but equally valid patterns of thought have been applied to answering similar questions about the human condition in a wide variety of times and places. Readings include myths from Celtic, Germanic, African, Asian, and native American traditions.

Lecture (45.00)**Prerequisites: ENG-101****Corequisites: ENG-102****ENG-192 Topics in Literature (3.00 cr.)**

A different topic, author, or group of authors is presented in each Topics in Literature course. Among the possible offerings are courses in literary movements, such as Romanticism of the Harlem Renaissance, in literature from particular regions, such as Ireland or the American West, on themes, such as mystery or nature writing, and in specific genres, such as poetry or creative non-fiction. The course allows members of the department to teach courses in their differing area of expertise. Topics vary in response to students' changing interests.

Lecture (45.00)**Prerequisites: ENG-101****Corequisites: ENG-102****ENG-210 English Grammar (3.00 cr.)**

This course is intended to provide the student an understanding of English grammar from both a synchronic and a diachronic perspective. Topics covered

will include, but are not limited to; the nature and importance of grammar and the study of grammar, the history of the English language, resources for studying English grammar, the sentence, the parts of speech, phrases and clauses, sentence patterns, nouns, articles, pronouns, verbs, verbals, adjectives, adverbs, conjunctions, prepositions, sentence diagramming, changing perspectives on grammar, and traditional and non-traditional approaches to grammar, including the advent of computer technology.

Lecture (45.00)**Prerequisites: ENG-101****ENG-221 Creative Writing (3.00 cr.)**

This course examines the process of writing imaginative literature; it combines lectures, discussions, and workshops. After lectures on selected topics, students read and discuss models of professional writing as well as their own works. Class time is occasionally used for performing writing assignments.

Lecture (45.00)**Prerequisites: ENG-101****ENG-225 Children's Literature (3.00 cr.)**

Children's Literature studies the major genres in the field: folklore; picture storybooks; fantasy; minority literature; historical fiction; and realistic fiction. A critical study of the texts will emphasize literary and cultural interpretations. English and American works will dominate but will be supplemented by some European texts, particularly folklore.

Lecture (45.00)**Prerequisites: ENG-101****Corequisites: ENG-102****ENG-241 Technical Writing (3.00 cr.)**

This course emphasizes the principles and mechanics of technical writing; it is designed to fit the needs of undergraduates and those already in business and industry. Technical Writing especially stresses the importance of communications in business and industrial life: correspondence, reports, preparation of company publications and technical articles, research techniques, and oral technical presentations.

Lecture (45.00)**Prerequisites: ENG-102****ENG-261 English Literature I (3.00 cr.)**

This course is a study of selected masterpieces in English Literature from the Anglo-Saxon period through the Age of Reason. Authors, such as Chaucer, Shakespeare, Donne, Milton, Pope, Swift, and Defoe, are studied with an emphasis placed on the ideas that helped to shape Western Civilization.

Lecture (45.00)**Prerequisites: ENG-101****Corequisites: ENG-102****ENG-262 English Literature II (3.00 cr.)**

English Literature II is a continuation of English Literature I. This course is a study of selected masterpieces in English Literature from the Romantic Age to the present. Authors, such as Wordsworth, Keats, Dickens, Hardy, Yeats, Eliot, Lawrence, and Beckett, are examined.

Lecture (45.00)**Prerequisites: ENG-101****Corequisites: ENG-102****ENG-266 Irish Literature (3.00 cr.)**

This course covers a broad survey of Irish literature, which includes fiction, drama and poetry. Students will explore the works of major Irish literary figures such as Yeats, Joyce, Synge, Swift and O'Casey. In addition, students will study the relationship between class, gender, religion and identity through the works of less known writers such as Seamus Heaney, Eavan Boland, Brendan Behan, and Nuala NiDhomhnaill. The development of Ireland's literature within the framework of its history will be thematic to the course. Another important theme of this course will be the presenting of Ireland's historical, cultural and social background linking literature to nationalism.

Lecture (45.00)**Prerequisites: ENG-101****Corequisites: ENG-102**

ENG-271 World Literature I (3.00 cr.)

Masterpieces of literature representative of various epochs, nationalities, and literary genres from ancient times to the sixteenth century form the core of this course. World Literature I explores the relationship of humanity to the world and deities in such works as the Bible, the Upanishads, Homer's epics, ancient Greek drama, Virgil's Aeneid, the poetry of Li Po and Tu Fu, and Dante's Inferno.

Lecture (45.00)

Prerequisites: ENG-101

Corequisites: ENG-102

ENG-271H Honors World Literature I (3.00 cr.)

Masterpieces of literature representative of various epochs, nationalities, and literary genres from ancient times to the sixteenth century form the core of this course. World Literature I explores the relationship of humanity to the world and deities in such works as the Bible, the Upanishads, Homer's epics, ancient Greek drama, Virgil's Aeneid, the poetry of Li Po and Tu Fu, and Dante's Inferno. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.

Lecture (45.00)

Prerequisites: ENG-101

ENG-272 World Literature II (3.00 cr.)

World Literature II is a continuation of World Literature I. Masterpieces of literature from the sixteenth century to the present are studied with the emphasis on humanity's changing views as the modern world develops. These views are studied through the works of such writers as Moliere, Voltaire, Flaubert, Dostoevski, Lu Hsun, and Achebe.

Lecture (45.00)

Prerequisites: ENG-101

Corequisites: ENG-102

ENG-272H Honors World Literature II (3.00 cr.)

Honors World Literature II is a continuation of Honors World Literature I. Masterpieces of literature from the sixteenth century to the present are studied with the emphasis on humanity's changing views as the modern world develops. These views are studied through the works of such writers as Moliere, Voltaire, Flaubert, Dostoevski, Lu Hsun, and Achebe. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.

Lecture (45.00)

Prerequisites: ENG-101 or ENG-101H

ENG-281 American Literature I (3.00 cr.)

American Literature I is a study of masterpieces in American literature from its beginning to 1860. The course analyzes the major social, ideological, and literary trends that contributed to the formation of the American way of life. Authors such as Irving, Poe, Emerson, Thoreau, Hawthorne, and Melville are read.

Lecture (45.00)

Prerequisites: ENG-101

Corequisites: ENG-102

ENG-281H Honors American Literature I (3.00 cr.)

American Literature I is a study of masterpieces in American literature from its beginning to 1860. The course analyzes the major social, ideological, and literary trends that contributed to the formation of the American way of life. Authors such as Irving, Poe, Emerson, Thoreau, Hawthorne, and Melville are read. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.

Lecture (45.00)

Prerequisites: ENG-101

Corequisites: ENG-102

ENG-282 American Literature II (3.00 cr.)

American Literature II is a study of masterpieces in American literature from 1860 to the present. The course analyzes the major social, ideological, and literary trends that contributed to present day American life. Students will read authors, such as Dickinson, Twain, James, Eliot, Hemingway, and Faulkner.

Lecture (45.00)

Prerequisites: ENG-101

Corequisites: ENG-102

ENGLISH AS A SECOND LANGUAGE**ESL-002 Introduction to ESL Writing and Grammar (6.00 cr.)**

This course focuses on the ability of non-native English speakers to express themselves in a written format in English. It is designed for students whose placement scores indicate limited or no ability to write in English. Students review the English alphabet and then write simple sentences about their own lives and experience. As they study vocabulary and the organization of writing in English, they move to writing longer simple sentences using the structures and concepts they have studied. Basic grammatical structures are introduced and practiced in class through writing.

Lecture (90.00)

ESL-003 Introduction to ESL Reading & Oral Comm (6.00 cr.)

This course focuses on the ability of non-native English speakers to understand written English and to express themselves orally in English. It is designed for non-native English speaking students whose placement scores indicate limited or no ability to comprehend written English and/or to understand spoken English. Listening and speaking skills, as well as reading comprehension skills, are taught and practiced in class through reading, listening, and speaking activities.

Lecture (90.00)

ESL-061 ESL Writing & Grammar 1 (4.00 cr.)

This course focuses on the development of basic writing and grammar skills for non-native speakers of English. Students will learn how to write grammatically correct sentences. Students will also be introduced to the paragraph structure. Grammatical structures relevant to this course will be addressed. (Credits do not apply toward graduation requirements.)

Lecture (60.00)

ESL-062 ESL Writing & Grammar 2 (4.00 cr.)

This course focuses on the development of intermediate writing and grammar skills for non-native speakers of English. Students will learn how to write an academic paragraph that is sound in form and content. Grammatical structures relevant to this course will be addressed. (Credits do not apply toward graduation requirements.)

Lecture (60.00)

Prerequisites: ESL-061

ESL-063 ESL Writing & Grammar 3 (4.00 cr.)

This course focuses on the development of advanced writing and grammar skills for non-native speakers of English. Students will learn how to write a multi-paragraph essay that is sound in form and content. Grammatical structures relevant to this course will be addressed. (Credits do not apply toward graduation requirements.)

Lecture (60.00)

Prerequisites: ESL-062

ESL-071 ESL Reading & Vocabulary 1 (4.00 cr.)

This course focuses on the development of basic reading and vocabulary skills for non-native speakers of English. Students will read a variety of reading selections in order to develop both reading and vocabulary building skills on a basic level. (Credits do not apply toward graduation requirements.)

Lecture (60.00)

ESL-072 ESL Reading & Vocabulary 2 (4.00 cr.)

This course focuses on the development of intermediate reading and vocabulary skills for non-native speakers of English. Students will read a variety of reading selections in order to develop both reading and vocabulary building skills on an intermediate level. (Credits do not apply toward graduation requirements.)

Lecture (60.00)

Prerequisites: ESL-071

ESL-073 ESL Reading & Vocabulary 3 (4.00 cr.)

This course focuses on the development of advanced reading and vocabulary skills for non-native speakers of English. Students will read a variety of reading selections in order to develop both reading and vocabulary building skills on an advanced level. (Credits do not apply toward graduation requirements.)

Lecture (60.00)

Prerequisites: ESL-072

ESL-081 ESL Listening & Speaking 1 (4.00 cr.)

This course focuses on the development of basic listening and speaking skills for non-native speakers of English. Students will develop communication, presentation, and pronunciation skills on a basic level. (Credits do not apply toward graduation requirements.)

Lecture (60.00)

ESL-082 ESL Listening & Speaking 2 (4.00 cr.)

This course focuses on the development of intermediate listening and speaking skills for non-native speakers of English. Students will develop communication, presentation, and pronunciation skills on an intermediate level. (Credits do not apply toward graduation requirements.)

Lecture (60.00)

Prerequisites: ESL-081

ESL-083 ESL Listening & Speaking 3 (4.00 cr.)

This course focuses on the development of advanced academic listening and speaking skills for non-native speakers of English. Students will develop communication, presentation, and pronunciation skills on an advanced level required for success in academic classes. (Credits do not apply toward graduation requirements.)

Lecture (60.00)

Prerequisites: ESL-082

ESL-094 English for Academic Purposes (4.00 cr.)

This is an integrated reading and writing course that will develop a student's ability to read academic texts, extract information from them, and respond critically in writing. This course will focus on students acquiring advanced sentence level structures necessary to be successful in College-level courses. This course will also focus on students reading a variety of reading selections in order to develop both reading and vocabulary building skills for success in College-level courses. (Credits do not apply toward graduation requirements.)

Lecture (60.00)

Prerequisites: ESL-063 and ESL-073

FINANCE**FIN-201 Investment Principles (3.00 cr.)**

This course introduces students to the basics of investment. It covers the mechanics of investing, investment media, the securities markets and their regulation, and an analysis of the major areas of investment, policy and practices.

Lecture (45.00)

FIN-202 Investment Analysis (3.00 cr.)

Investment Analysis is an introductory course in investment securities to prepare the students to approach realistically the problem of how to invest funds and how to manage an investment portfolio for a business enterprise or for personal use.

Lecture (45.00)

Prerequisites: FIN-201

FIN-212 Principles of Finance (3.00 cr.)

This course introduces students to the basics of financial management and finance. Emphasis is given to techniques and methods used to manage the money supply used by a business organization. Included in the subjects covered are financial analysis, planning and control, budgeting and forecasting, current asset management, sources of short-term financing, decision models used in making capital investment decisions, and failure, reorganization and liquidation.

Lecture (45.00)

Prerequisites: ACC-101 or ACC-104

FIN-213 Corporate Finance (3.00 cr.)

This course deals with the practices and methods used by today's corporations to manage money and finance the business operations. Included in the subjects covered are the market for long term securities, fixed income securities, debt and preferred stock, warrants and convertibles, the cost of capital, dividend policy and internal financing, mergers and holding companies, and multinational business finance.

Lecture (45.00)

Prerequisites: FIN-212

FIN-215 Real Estate Sales (5.00 cr.)

This course is a basic course in the principles of real estate and includes the study of property interests, contracts, financing, titles, deeds and closing, appraising, leases, federal laws, NJ statutes and NJ Real Estate Commission rules and regulations. Students successfully completing the course with a grade of C or better will also be certified to sit for the NJ Real Estate Salesperson Examination.

Lecture (75.00)

FIRE SCIENCE**FIR-101 Fundamentals of Fire Behavior/Protection (3.00 cr.)**

This course introduces fire behavior, fire protection engineering, fire prevention control, and fire extinguishment. Students will learn the principles relevant to hazard control, structural design, limitation of loss, detection, and extinguishment. The course will create awareness of fire protection systems, the processes to control and extinguish fires and provide the basis for a career in fire service.

Lecture (45.00)

FIR-102 Fund of Fire Prevention/Fire Inspector I (3.00 cr.)

This course provides fundamental information regarding the basic principles of fire prevention and inspection. It provides basic knowledge and understanding of building construction principles with emphasis on life safety devices, code requirements and inspection and enforcement techniques. This course has been approved to meet the Fire Inspector Certification standards as established in the Uniform Fire Code N.J.A.C. 5:71-4.4. The course prepares the student to take the ICC Certification test for Fire Inspector.

Lecture (45.00)

FIR-106 NJ Firefighter II (3.00 cr.)

This is a State of New Jersey certification course that requires a minimum of 86 hours of hands-on practical labs. Students will apply theoretical classroom learning from FIR-101 in a controlled environment through a series of scenarios and simulations developed to mirror real world incidents. FIR-101 or the NJ State Firefighter I Certification is required for success in this course.

Laboratory (90.00)

Prerequisites: FIR-101

FIR-121 Fire Fighting Tactics and Strategy (3.00 cr.)

This course covers efficient and effective utilization of manpower, equipment, and apparatus. Emphasis is on preplanning, fire-ground organization problem solving related to fire-ground decision making in fires, and attack tactics and strategy.

Lecture (45.00)

Prerequisites: FIR-101

FIR-125 Fire Fighter Safety & Survival (3.00 cr.)

This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services. The course is a required element of the national model Associates curriculum as developed by FEMA under the Fire and Emergency Services higher Education (FESHE) program.

Lecture (45.00)

FIR-201 Fire Protection Systems (3.00 cr.)

This course is an introduction to fire alarm and detection systems, the various extinguishing agents, protection systems for special hazards, sprinkler systems and water supplies. The student will become aware of the importance of fire protection systems and their use and design to protect life and property. The course will describe primary objectives in the different types of systems. It will cover basic design, operation, and maintenance of these systems for a lay person but does not intend to be a course for the fire protection engineers or installer of systems.

Lecture (45.00)

Prerequisites: FIR-101

FIR-202 Fire Investigation (3.00 cr.)

This course will introduce arson and incendiary fires. Students will learn methods of determining fire causes, recognizing and preserving evidence, interviewing and detaining witnesses, procedures in handling juveniles, court procedure and court testimony.

Lecture (45.00)

Prerequisites: FIR-102

FIR-211 Building Construction for Fire Service (3.00 cr.)

This course is a systematic study of the evolutionary development of building construction and design with emphasis on fire protection concerns. Attention is directed to inherent fire hazards in different types of structures and the recommended degree of fire protection control.

Lecture (45.00)

Prerequisites: FIR-101

FIR-212 Fire Official (3.00 cr.)

This course is designed to ensure competence in the administration of the New Jersey Uniform Fire Code. This course will familiarize the student with various legal requirements and responsibilities established by the Uniform Fire Safety Act. This course will acquaint the student with administrative requirements associated with managing a Local Enforcing Agency, Legal rights of owners and tenants, Municipal ordinances, and Administrative Codes. It will include the use of Permit, Registration Fees penalties, and responsibilities of the Fire Official.

Lecture (45.00)

Prerequisites: FIR-222

FIR-222 Fire Inspector II (3.00 cr.)

This course builds upon course FIR-102 and is the completion of the required training as established in the Uniform Fire Code N.J.A.C. 5:71-4.4. This course provides instruction in all specialized operations regulated as part of the New Jersey Uniform Fire Code. At the end of this course students will be prepared to take the National ICC Fire Inspector test required for certification as a Fire Inspector in New Jersey.

Lecture (45.00)

Laboratory (15.00)

Corequisites: FIR-102

FIR-225 Hydraulics (3.00 cr.)

This course covers properties, principles, and concepts of fluid materials. This includes water flows, friction loss, fluid pressures, fluid flows, and various design and capacity considerations of tanks and pumps.

Lecture (45.00)

Prerequisites: FIR-101

FIR-231 Organization & Management of Fire Depts (3.00 cr.)

This course introduces the student to the organization and management of a fire department and the relationship of government agencies to the fire service. Emphasis is on fire service leadership from the perspective of the company officer.

Lecture (45.00)

Prerequisites: FIR-101 or FIR-102

FIR-235 NJ Fire Officer I (3.00 cr.)

This is a State of NJ certification courses that requires minimum 45 hours of classroom with discussion of practical applications for the firefighter. This course is intended for active firefighters who are or will be placed in supervisory roles as part of their responsibilities. The program follows a mandatory state curriculum that includes class/homework assignments, research projects, quizzes for each chapter, a mid-term, and a final exam. In addition to the final exam, the New Jersey Fire Officer I Certification exam will be administered and graded by the Division of Fire Safety. All course requirements must be met prior to taking the state exam. This program meets the course of instruction requirements of N.J.A.C. 5:73-8, Standards for Fire Service Training and Certification Fire Officers. Successful completion of this course and passing the state administered final exam are required to attain N.J. DFS Fire Officer I Certification.

Lecture (45.00)

Prerequisites: FIR-101

FIR-241 Hazardous Materials (3.00 cr.)

This course will study hazardous materials and their relationship to Public Safety Services, as said materials are transported, stored, and used. Emphasis will be given to the role of the first responder and other emergency management personnel in pre-planning for hazardous materials incidents.

Lecture (45.00)

Prerequisites: FIR-101

FIR-251 Fire Serv Instruction Techniques/Methods (3.00 cr.)

This course is designed to advance the professional development of individuals who either are, or will be, assuming instructional duties and responsibilities in the emergency services. The students will learn how to effectively plan curriculum through methods of presentation as it relates to the fire service. Most importantly, students will be able to identify learners needs and understand the management of learning. (Students who successfully complete the course will have satisfied the New Jersey State requirements for Level I instructor and will be scheduled to take the state certification exam within the class.)

Lecture (45.00)

FIR-252 Arson/Law & Court Procedures (3.00 cr.)

This course is designed as an advanced course in fire investigation. A systematic approach and analytical process are discussed so that students will be able to carry out a successful arson/ criminal investigation. This course when combined with Fire Investigation (FIR-202) is the equivalent of the State of New Jersey and National Fire Academy course in fire investigation. Emphasis will be placed on understanding the motives for arson and different causes of arson. Students will learn proper techniques of preserving criminal evidence and its use in court. A large portion of the second half of the course will focus on preparation for a court case. Surveillance, interviews and interrogation are procedures that will be examined. The course will end with a mock trial.

Lecture (45.00)

Prerequisites: FIR-202

FILM**FLM-101 Television Appreciation (3.00 cr.)**

Television Appreciation is a survey course that aims to acquaint the student with the medium. One focus is on the way in which television chronicles and influences American life and a larger global society since the mid 20th century. The students will analyze the roles of writers, directors, pre-production, production, post-production, on-camera and voice over talent actors and "real people" in all areas of television programming content from broadcast news and news magazines, to sports, episodic television, sitcom, reality TV, placement of previously released and made for TV films, specials and commercial sales giving the student the ability to analyze the medium as both a performance art and recorded art form.

Lecture (45.00)

FLM-105 Film Basic: Structure Light Sound Space (3.00 cr.)

This is an overview of film production. It includes hands-on studio work in light design, sound production and design and camera technique.

Lecture (30.00)

Laboratory (30.00)

FLM-110 Filmmaking I (3.00 cr.)

As a continuation of Filmmaking Basics, students will continue to study video film production to script, design, shoot and edit short film projects.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: FLM-105

FLM-201 Film Appreciation (3.00 cr.)

Film Appreciation introduces the movie as a powerful art form, in addition to exploring its familiar role as popular entertainment, with a focus on evaluating narrative as well as non-narrative styles of film. The course develops students' insight into the process of filmmaking, while engaging critical thinking skills in the analysis of the many creative choices that contribute to form a finished film. Explorations of technical developments, film history and critical analyses are presented, which will engage students who wish to deepen their understanding of film for personal enjoyment, as well as those students who are interested in pursuing further studies in cinema, communications or related mass media.

Lecture (45.00)

FLM-201H Honors Films Appreciation (3.00 cr.)

Honors Film Appreciation is a basic survey aiming to acquaint the student with the art of the form. The focus is on the narrative or story film and the approach is analytical rather than historical. Having completed the course a student should find that she/he has greater insight into the creating of films and a greater appre-

ciation of that which is good in film. A more insightful filmgoer should be a more demanding patron. A more discerning film-going public may encourage more discerning film-making and that, perhaps, should be the focus of a theatre appreciation course. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.

Lecture (45.00)

FLM-205 Motion Graphics (3.00 cr.)

This course is intended for students who desire to work as motion graphics artists on film and television productions, as well as for other artists and filmmakers who desire to work in other aspects of filmmaking and need an understanding of motion graphics. The students will be trained in the language and techniques of motion graphics and animation for film and television. This course will familiarize students with the language and tools for motion graphics in film and television production and post production, acquaint them with the specialized equipment for motion graphics and, in conjunction with the film and television production classes, give them the opportunity to work in real-life production and post-production conditions. The techniques will include the use of live action and live compositing, keying and green screen.

Lecture (30.00)

Laboratory (30.00)

FLM-206 Media Presentation (3.00 cr.)

This course is intended for men and women who desire to work as on-camera and voice-over talent and the filmmakers who work with them. The students will be trained in the language and techniques of media auditioning. The business of accepting, preparing for and billing a job will be incorporated into the classes. It will familiarize the student with the language and behavior of a film and/or television set, acquaint them with the specialized equipment for media talent and, in conjunction with the film production classes, give the students the opportunity to work in real-life shoot conditions.

Lecture (30.00)

Laboratory (30.00)

FLM-210 Filmmaking II (3.00 cr.)

As a continuation of Filmmaking I, students will continue to study video film production to script, design, shoot and edit a capstone film project.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: FLM-110

Corequisites: FLM-201

FLM-215 Production Internship I (3.00 cr.)

Students will work, for a minimum of 135 hours, directly with film and video producers in the media industry including New Media providers. Students will produce work journals and evaluations from the independent producers with a portfolio where propriety permits.

Internship (135.00)

Prerequisites: FLM-110 and FLM-210

FLM-220 Production Internship II (3.00 cr.)

Students will continue to work, for a minimum of 135 hours, directly with film and video producers in the media industry including New Media providers. Students will produce work journals and evaluations from the independent producers with a portfolio where propriety permits.

Internship (135.00)

Prerequisites: FLM-110 and FLM-210

FOOD & NUTRITION SCIENCE

FNS-100 Dietetic Foundations (3.00 cr.)

This course is designed as a study of the various professions, career options, education requirements, and credentials in the dietetic profession. Topics include professional association membership, eligibility requirements, professional registrations, code of ethics, and the trends and predictions of the industry. Students will learn basic professional terminology and commonly used documentation abbreviations. The student will become familiar with the techniques of presenting education lessons and materials to various client groups.

Lecture (45.00)

Prerequisites: ENG-012, ENG-022 and MTH-011

FNS-105 Introduction to Nutrition (3.00 cr.)

This course is designed as a scientific exploration of the fundamentals of nutrition. Topics include the function and sources of the macro and micronutrients needed to promote health and aid in disease prevention and treatment. Students will learn about energy metabolism, digestion, absorption and transportation of nutrients. Students will learn how cultural influences affect nutrition status and they will learn how to assess and improve nutritional health by completing a computerized diet analysis on their current eating habits. This course does not satisfy a laboratory science elective.

Lecture (45.00)

Prerequisites: ENG-012, ENG-022 and MTH-011

FNS-106 Foundations of Nutritional Science (3.00 cr.)

This introductory course is specifically for Dietetic Technology, Dental Hygiene and Food Science program students. This course is designed to focus on chemical and biological aspects of nutrition science concepts. Topics include energy metabolism and pathways, nutrition physiology and application of the role of nutrition in prevention and treatment of health concerns throughout the lifespan. This unique course will allow students to apply assessment and counseling skills at the introductory level.

Lecture (45.00)

Prerequisites: ENG-012, ENG-022 and MTH-011

FNS-107 Nutrition for Health Care Professional (3.00 cr.)

This course evaluates the chemical composition and reaction of the nutrients in food, digestion, absorption and metabolism of Nutrients. The nutritional needs of humans throughout the life cycle including pregnancy, lactation, infancy, childhood, adolescences and geriatrics will be explored. Students will learn how cultural influences affect nutrition status and they will learn how to assess and improve nutritional health by completing a computerized diet analysis on their current eating habits. The relationship of diet to health and disease, and the role of nursing professionals and nutrition will be emphasized.

Lecture (45.00)

FNS-110 Food Service Management (3.00 cr.)

This course introduces the principles of management within the food service operation. Management styles and theories are detailed. Procedures involved in hiring and supervision of personnel, including relevant laws and regulations, are explored. Emphasis is placed on types and flow of communication, employee training and evaluation, goal setting and quality improvement, and interactions with other professionals. Professional ethics and financial management are highlighted.

Lecture (45.00)

Prerequisites: ENG-012, ENG-022 and MTH-011

FNS-130 Life Cycle Nutrition (3.00 cr.)

This course further evaluates the chemical composition and reaction of the nutrients in food. Students will study the nutritional needs of humans throughout the life cycle including pregnancy, lactation, infancy, childhood, adolescences and geriatrics. Case studies are used in the application of theoretical concepts to demonstrate the students ability to develop key skills such as communication, group working and problem solving. Patient interviewing and nutrition assessment tools and techniques are practiced.

Lecture (45.00)

Prerequisites: FNS-100 and FNS-106

FNS-200 Community Nutrition Rotation (3.00 cr.)

This course is designed as a "hands-on" experience in community nutrition. Students will apply knowledge and skills developed in Life Cycle Nutrition. Students will interview, counsel, plan and conduct nutrition classes, obtain screening data, evaluate food intake and food related behaviors of clients, individuals and groups of all age levels and economic backgrounds. Weekly clinical hours are assigned for a total of 135 hours during the semester.

Lecture (15.00)

Clinical (135.00)

Prerequisites: FNS-130

FNS-210 Food Service Operations (3.00 cr.)

This course focuses on the principles of procurement, production and service in food service operations. Topics include equipment selection, use and maintenance. Food quality issues and understanding the business environment in relation to food service operations are introduced. Students will learn relevant state and federal laws; recognize causes, symptoms and types of food borne illnesses; and detail critical limits for prevention measures in regards to safety and sanitation. Students will learn the proper flow of food and be able to apply HACCP procedures at each stage. Proper use of hazardous materials (MSDS) and crisis management plans are discussed.

Lecture (45.00)

Prerequisites: ENG-012, ENG-022 and MTH-011

FNS-211 Therapeutic Nutrition I (3.00 cr.)

This course presents the physiologic and metabolic changes that occur as a result of disease development. Students will learn how to use nutrition assessment and the nutrition care process in the treatment of patients in various clinical settings. Students learn how to involve the patient in the care process in regards to dietary modification needed to meet nutrient needs during the disease process. This course focuses on the dietary management of diabetes and gastrointestinal diseases.

Lecture (45.00)

Prerequisites: FNS-130

FNS-212 Therapeutic Nutrition II (3.00 cr.)

This course continues the study of physiologic and metabolic changes that occur with disease development. Topics include nutrition and disorders of the heart, blood vessels and lungs, cancer and HIV infection, renal (kidney) diseases and severe stress including surgery, infections, and burns. Case studies will be reviewed and presented. Nutritional assessment will be emphasized.

Lecture (45.00)

Prerequisites: FNS-211 and one 4-credit Laboratory Science Elective

FNS-221 Quantity Food Production (4.00 cr.)

This course allows students to plan and prepare foods and meals for large groups. Students will learn how to use and convert standard recipes, how to order foods in quantity, and how to assess food safety.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: FNS-210 or HTS-115

FNS-230 Culinary Technology Rotation (3.00 cr.)

An integration of knowledge and skills acquired in didactic courses with observation and practice of the duties of the food service personnel such as standard recipe use, menu planning, supervision of employees, sanitation and safety procedures, inventory management, regulations and standards, and writing work schedules. Students will engage in many hands-on activities and will complete case studies to demonstrate knowledge of areas covered in this field experience.

Clinical (150.00)

Prerequisites: FNS-110 and HTS-115

Corequisites: HTS-205

FNS-240 Food Service Rotation (3.00 cr.)

This course integrates the skills acquired in didactic courses with observation and practice of the duties of food service employees and director/managers. Topics covered include menu planning, supervision of employees, sanitation and safety procedures, and writing work schedules. Also covered are the duties of the consulting dietitian such as nutritional assessments, calculating diets, interviewing and counseling elderly patients, and documenting medical charts. Students will be scheduled for 135 clinical hours at affiliated sites throughout the semester.

Lecture (15.00)

Clinical (135.00)

Prerequisites: FNS-210

FNS-245 Nutrition Manager Rotation (3.00 cr.)

This course is an integration of knowledge and skills acquired in didactic courses with observation and practice of the duties of the food service director/manager. Duties include menu planning, supervision of employees, sanitation and safety procedures, writing work schedules, etc. In addition, the duties of the consulting

dietitian, i.e., nutritional assessment, calculating diets, interviewing and counseling elderly patients, and documentation of the medical chart will be observed and practiced.

Lecture (15.00)

Clinical (150.00)

Prerequisites: FNS-130 and FNS-210

FNS-250 Clinical Nutrition Rotation (3.00 cr.)

This course is designed to integrate skills and knowledge obtained in course work with the practical application of nutrition care in various clinical and wellness sites. The students will be scheduled for 180 clinical hours at affiliated sites throughout the semester. Students will observe and practice the duties of the dietetic professional, such as nutritional screening and assessment, calculating diets, assessing calorie counts, counseling clients, documenting the client's record, and follow-up planning. The student develops a comprehensive patient case history for presentation during the last weeks of the semester.

Lecture (15.00)

Clinical (180.00)

Prerequisites: FNS-200, FNS-212 and FNS-240

FRENCH**FRE-101 Elementary French I (3.00 cr.)**

This course introduces the student to the language and culture of the French-speaking world. It provides the student with basic working information of the language (listening, speaking, reading, writing) in order to interact and communicate with others, while gaining a greater understanding of the different franco-phone cultures. This course is intended for students beginning the language or for those who have received a grade below C in two years of high school French. This course is not intended for native speakers.

Lecture (45.00)

Prerequisites: ENG-012 and ENG-022

FRE-102 Elementary French II (3.00 cr.)

This course continues the basic elements of the language and the understanding of the French-speaking world. It provides the student with basic working information of the language (listening, speaking, reading, and writing) in order to interact and communicate with others at a novice-high level, while gaining a greater understanding of and respect for the different Francophone cultures. This course is not intended for native speakers.

Lecture (45.00)

Prerequisites: ENG-012, ENG-022 and FRE-101 or two years of high school French

FRE-201 Intermediate French I (3.00 cr.)

This course continues the study of the basic working structures of the language (listening, speaking, reading, and writing) at the intermediate-low level in order to interact and communicate with others, while gaining a greater understanding of and respect for the different cultures in the French-speaking world.

Lecture (45.00)

Prerequisites: FRE-102 or two years of high school French, and ENG-013 and ENG-023, or ENG-046

FRE-202 Intermediate French II (3.00 cr.)

This course completes the study of the working structures of the language (listening, speaking, reading, and writing) at the intermediate-mid level in order to interact and communicate with others, while gaining a greater understanding of and respect for the different cultures in the French-speaking world through literature and film.

Lecture (45.00)

Prerequisites: FRE-201

FRE-203 Introduction to French Culture (3.00 cr.)

This course presents topics and issues pertaining to various French-speaking countries. This includes geography, beliefs and ideologies, daily life issues and realities, family life and work, entertainment and art. Topics are approached from a cross-cultural and sociological point of view for a deeper understanding of the culture.

Lecture (45.00)

Prerequisites: FRE-102, FRE-201 or FRE-202 and (ENG-013 and ENG-023) or ENG-046

FORENSIC SCIENCE

FSC-110 Introduction to Forensic Osteology (4.00 cr.)

This is an introductory course in forensic osteology intended for criminal justice students and others interested in a career in forensics. Basic material in anatomy and related disciplines will be presented so that students have the requisite background to understand and appreciate the role of the forensic osteologist. Case studies illustrate forensic applications. Laboratory experiments illustrate important material.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: CHM-145, MTH-029 and (ENG-013 and ENG-023) or ENG-046

FSC-120 Introduction to Forensic Toxicology (4.00 cr.)

This is an introductory course in forensic toxicology for students with an interest in forensic science or criminal justice. The course will provide the basic concepts of analytical chemistry as it applies to drug and body fluid analysis, as well as the fundamentals of pharmacology and toxicology as they apply to commonly encountered abused and toxic substances. Laboratory experiments will complement the lecture material.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: CHM-145, MTH-029 and (ENG-013 and ENG-023) or ENG-046 and one 4-credit Chemistry Course

GEOGRAPHY

GEO-101 Cultural Geography (3.00 cr.)

This course is designed to acquaint students with geography in general and with cultural geography specifically. Students will be encouraged to explore the relationships which exist between human activity and various places on the earth's surface. This will necessitate investigating such topics as population and human environment, religion, language, race, political structures and economic activities. A spatial perspective of each topic will be explored utilizing the United States and Canada as a benchmark to better understand these global distributions. Students will be encouraged to investigate the dynamic nature of these cultural elements in order to begin to understand their continuously evolving spatial and temporal characteristics.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

GEO-104 Geography of the United States & Canada (3.00 cr.)

The course is a regional study of the United States and Canada in terms of the aerial distribution of physical features, population patterns and economic activities. This course analyzes the forces stimulating change within these regions.

Lecture (45.00)

GERMAN

GER-101 Elementary German I (3.00 cr.)

This course introduces the student to the language and culture of the German-speaking countries. It provides the student with basic working information of the language (listening, speaking, reading, writing) in order to interact and communicate with others, while gaining a greater understanding of the German-speaking culture. This class is intended for students beginning the language or for those who have received a grade below C in two years of high school German. This course is not intended for native speakers.

Lecture (45.00)

Prerequisites: ENG-012 and ENG-022

GER-102 Elementary German II (3.00 cr.)

This course continues the basic elements of the language and the understanding of the German-speaking world. It provides the student with basic working information of the language (listening, speaking, reading, and writing) in order to interact and communicate with others at a novice high-level, while gaining a greater understanding of and respect for the German-speaking culture. This course is not intended for native speakers.

Lecture (45.00)

Prerequisites: ENG-012, ENG-022 and GER-101 or two years of high school German

GER-201 Intermediate German I (3.00 cr.)

This course continues the study of the basic working structures of the language (listening, speaking, reading, and writing) at the intermediate-low level in order to interact and communicate with others, while gaining a greater understanding of and respect for the German-speaking culture.

Lecture (45.00)

Prerequisites: GER-102 or two years of high school German and (ENG-013 and ENG-023) or ENG-046

GREEK

GRK-101 Elementary Classical Greek I (3.00 cr.)

Students will read and translate selected Greek texts and learn the grammar and syntax of the language. Students will become acquainted with Greek history, Classical civilization, and the influence of the Classical world on Western civilization. This class is intended for students beginning the language or for those who have received a grade below C in two years of high school Classical Greek.

Lecture (45.00)

Prerequisites: ENG-012 and ENG-022

GRK-102 Elementary Classical Greek II (3.00 cr.)

This course is a continuation of Elementary Classical Greek I. Students will continue to learn the basic elements of the grammar and syntax of the language. Students will become acquainted with Greek history, Classical civilization, and the influence of the Classical world on Western civilization.

Lecture (45.00)

Prerequisites: ENG-012, ENG-022 and GRK-101 or two years of high school Greek

HISTORY

HIS-101 World Civilization I (3.00 cr.)

An introduction to the major cultures of the world from the ancient period to c.1500 C.E. in Africa, Asia, Europe, and Latin America, this course will analyze these cultures in their political, economic, and religious aspects. The objectives of this course are to give students a greater understanding of why the world is the way it is today, to develop within the students the necessary skills to analyze both contemporary and historical societies and their institutional components, and to cultivate an awareness of foreign cultures and societies in order to give new perspectives on our own cultural assumptions and traditions.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HIS-101H Honors World Civilization I (3.00 cr.)

An introduction to the major cultures of the world from the ancient period to c.1500 C.E. in Africa, Asia, Europe, and Latin America, this course will analyze these cultures in their political, economic, and religious aspects, and will also reflect the latest information on the role of women in society. The objectives of this course are to give students a greater understanding of why the world is the way it is today, to develop within the students the necessary skills to analyze both contemporary and historical societies and their institutional components, and to cultivate an awareness of foreign cultures and societies in order to give new perspectives on our own cultural assumptions and traditions.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HIS-102 World Civilization II (3.00 cr.)

This course is an introduction to the major cultures of the world from c 1500C.E. to the present. This course should not be taken by students who have taken HIS-112, Western Civ. II.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HIS-102H Honors World Civilization II (3.00 cr.)

This course is an introduction to the major cultures of the world from c 1500C.E. to the present. This course should not be taken by students who have taken HIS-112, Western Civ. II.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HIS-111 Western Civilization I (3.00 cr.)

This course is a comprehensive survey of the political, social, economic, intellectual and cultural developments of Western Civilizations from ancient Egypt and the Near East, Greece and Rome, the Middle Ages and Renaissance up to 1500. This course should not be taken by students who have taken HIS-101, World Civilization I.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HIS-112 Western Civilization II (3.00 cr.)

This course is a comprehensive survey of the political, social, economic, intellectual and cultural developments of Western Civilization from the Reformation, the Age of Absolutism, the Enlightenment, and the Age of Revolutions through the development of the modern nation-state to the present. This course should not be taken by students who have taken HIS 102 - World Civilization II, or HIS 103 - World Civilization III.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HIS-121 United States History I (3.00 cr.)

This is a comprehensive survey of the political, social, economic, intellectual, and cultural development of American civilization from 1607 to 1877 and includes such topics as Puritanism, republicanism, federalism, Jeffersonian and Jacksonian democracy, nationalism, sectionalism, slavery, revolution, secession reform movements, minorities and women.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HIS-122 United States History II (3.00 cr.)

This is a comprehensive survey of the political, social, economic, intellectual and cultural development of American civilization from 1877 to the present, including such topics as racism, ethnicity, industrialism, unionism, militarism, materialism, secularism, minorities, and women.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HIS-124 American Social History (3.00 cr.)

This is a study of the social history of ordinary people in American society from the colonial period to the present, with emphasis on their daily lives and their institutions and such issues as family, sex, work, religion, ethnicity, education, race, immigration, social movements, and cultural values.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HIS-125 Social & Intellectual History (3.00 cr.)

This course is a survey of the major social movements and the intellectual achievements in nineteenth and twentieth century America. It focuses on the relationship between intellectual development and social movements.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HIS-127 Topics in American History (3.00 cr.)

This course is designed to allow students to enroll in a course that investigates a specific historical topic in American history.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HIS-131 African-American History I (3.00 cr.)

This course offers a comprehensive survey of political, economic, and social life of the African-American in the United States from the period of colonization through reconstruction.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HIS-132 African-American History II (3.00 cr.)

This course offers a comprehensive survey of political, economic, and social life of the African-American in the United States from post reconstruction to the present.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HIS-135 Ancient Egyptian History (3.00 cr.)

This is a survey of the political, social, and economic development of ancient Egypt from its prehistoric origins to its conquest by Alexander the Great.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HIS-142 The History of American Women (3.00 cr.)

This course is a study of American women's changing political, social, economic, intellectual, and sexual status and role from the colonial period to the present, including family, politics, work, religion, feminism, and sexism.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HIS-150 Topics in History (3.00 cr.)

This course is designed to allow students to enroll in a course that investigates a specific historical topic or a problem. Since the topic may change from semester to semester, a description of the course content will be available in the Office of the Dean of Liberal Arts during registration and will also be distributed to all academic advisors.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HEALTH INFORMATION TECHNOLOGY

HIT-101 Introduction to Health Information (3.00 cr.)

This course will examine the aspect of taking health data and presenting it as information. Focus will be on the concepts of health data that include data elements, data sets, data dictionaries, data quality management and the usages of health data. Governmental requirements for data reporting will be reviewed. Data analysis that results in application of information will be emphasized. Basics of health records, format, and documentation will also be discussed. Students will receive instruction on qualitative and quantitative analysis and abstraction with the opportunity to practice from actual health records in the lab. Chart management software will be incorporated into this course for the student to use in the lab.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HIT-110 Health Informatics (4.00 cr.)

This course focuses on the fundamentals of information systems as they relate to the field of Health Information. This course offers a broad background in theory, which includes the application of basic computer and communication concepts, technologies, systems, development and planning. Issues surrounding our health-care delivery system's migration to the Electronic Health Record are discussed. The course will also address the concept of the EHR as it deals with the patient's continuum of care.

Lecture (45.00)

Laboratory (30.00)

Prerequisites: ENG-101, HIT-101 and (CIS-101 or CSC-101) or (NOL-110 and NOL-120)

HIT-115 Healthcare Reimbursement (3.00 cr.)

This course is designed to enhance the student's communication skills within the medical profession and to familiarize students with health records and the basics of medical coding, billing, insurance, and proper reimbursement. Introduction to various terms and concepts that are unique to the reimbursement environment including payment systems will be discussed in detail. Background and introductory information on the payer and healthcare system in the US will be discussed. Introductory information on coding classification systems will be discussed.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: HIT-101, HIT-120, and BIO-103, BIO-117 or BIO-211

HIT-120 Medical Terminology (3.00 cr.)

This course provides the tools of word analysis which will make the understanding of medical words from the simple to the complex easier. The words are divided into basic elements- basic, suffixes, prefixes, combining forms- which will help to correlate word elements with the basic anatomy, physiology, and disease processes of the human body. In addition, the presentation will emphasize the spelling and pronunciation of medical terms.

Lecture (45.00)

HIT-130 Introduction to Ambulatory Coding (3.00 cr.)

This is an introductory course to the classification systems used in the ambulatory environment of the US healthcare system. Students will learn how to use coding manuals to locate codes for procedures, physician's services, and medical supplies. Common outpatient-based reimbursement tools and payment systems will also be discussed. Familiarity with governmental agencies and regulatory requirements as they relate to physician and outpatient-based services will be a focus of this course.

Lecture (45.00)

Prerequisites: HIT-101, HIT-120, and BIO-103 or BIO-117 and BIO-118 or BIO-211 and BIO-212

HIT-132 Basic Pharmacology (3.00 cr.)

This course introduces the student to various drug classifications, their uses, actions, contraindications, and common side effects. The regulatory environment for the pharmaceutical industry will be discussed. Medication delivery methods, documentation requirements, and common drug-related abbreviations will also be discussed.

Lecture (45.00)

Prerequisites: HIT-120 and BIO-103, BIO-117 or BIO-211

HIT-134 Basic Pathophysiology (3.00 cr.)

This course is designed to familiarize students with the multitude of clinical diseases and their respective signs, symptoms, risk factors, and treatments. Case studies will be used throughout the course. Internet information from national disease websites will be used to highlight the latest information on specific major disease processes, like diabetes, breast cancer, arthritis, lupus and colon cancer. Students will also be required to demonstrate their knowledge of human anatomy.

Lecture (45.00)

Prerequisites: HIT-120 and BIO-103, BIO-117 or BIO-211

HIT-135 Medical Coding Internship (2.00 cr.)

This is a capstone course for the Medical Coding Certificate Program. This course will integrate coding concepts covered in the classroom and allow the student apply these concepts to actual health records in a healthcare facility, either ambulatory or acute care. During this course students will be required to use approved HIPAA coding classification systems.

Co-Op (90.00)

Prerequisites: HIT-115, HIT-130, HIT-134 and HIT-140

HIT-140 Diagnostic & Procedural Coding I (3.00 cr.)

This is an introductory course to diagnostic and procedural coding using the International Classification of Diseases (ICD) coding classification system. The student will learn various coding concepts including coding conventions, practices, and guidelines. This foundation will be expanded upon in the second course that will focus on the International Classification of Diseases classification system, Diagnostic and Procedural Coding II.

Lecture (45.00)

Prerequisites: HIT-101, HIT-120, and BIO-103 or BIO-117 and BIO-118 or BIO-211 and BIO-212

HIT-150 Technical Practice Experience (1.00 cr.)

This course will provide the student with valuable time for practical application of technical aspects of the health information technology program. This course will focus on the application of concepts discussed in other health information courses.

Clinical (45.00)

Prerequisites: HIT-118 or BIO-212, ENG-102, HIT-115, HIT-205 and CIS-101 or CSC-101

HIT-202 Statistical Methods / Health Information (3.00 cr.)

This course will build on the information presented in MTH-111 Introduction to Statistics. The objective of this course is to target the student to the application of statistical methods in the field of Health Information Technology. Specific ratios and rates directly related to the acute care medical environment will be a part of classroom discussion. Practical application of class lectures will be completed. The concepts of data presentation, computerization of statistics, and the application of this information to non-acute care medical environments will also be addressed. It is important that students have strong familiarity with

this information since it can be a vital part of job duties for Health Information Technology Technicians.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: HIT-110 and MTH-111

HIT-205 Legal & Ethical Issues in HIT (2.00 cr.)

This course will examine the legal and ethical environment for the field of Health Information Management. Case studies will be used throughout the course to allow students to apply and analyze the content areas of the course.

Lecture (30.00)

Prerequisites: HIT-101

HIT-215 Advanced Ambulatory Coding (3.00 cr.)

This course will expand upon information covered in Introduction to Ambulatory Coding (HIT-130). Students will learn how to manipulate coding software packages and utilize the CPT and HCPCS manuals to code for physician procedures and services. Advanced coding proficiency directed at surgical coding will be emphasized. Computer applications of the CPT program through the 3M software will be demonstrated and the students will be allowed time to use this coding application.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: HIT-130, HIT-132 and HIT-134

HIT-220 Professional Practice Experience (2.00 cr.)

This course will provide the students enrolled in the Health Information Technology degree program the opportunity for practical application of what they have learned in the classroom. This is the capstone course for the degree program. The components of health information analysis, information technology, information systems, organization, and supervision are vital focus areas for this internship/experience.

Clinical (90.00)

Prerequisites: HIT-132, HIT-150, HIT-110, HIT-130, HIT-134 and HIT-140

HIT-235 Organizational Resources, QI & PI (4.00 cr.)

This course focuses on application and analysis in the following areas: managerial processes, clinical quality assessment, performance improvement, project management, and organizational resources. Data presentation via oral and written formats will be emphasized. This course has a lab component, which will focus on the practical application of performance improvement and quality assurance plans in a stimulated "real-world" environment.

Lecture (45.00)

Laboratory (30.00)

Prerequisites: HIT-110 and HIT-115

HIT-240 Diagnostic & Procedural Coding II (4.00 cr.)

This course focuses on disease and procedural coding with emphasis on the advanced application of coding. It includes practical application of coding in-patient and outpatient records. Coding standards, coding guidelines, regulatory requirements, and regulatory agencies will also be discussed. Information on the prospective payment systems will be discussed in detail. The link between medical record documentation, pathophysiology, and reimbursement will be explored through lecture presentations and the usage of actual medical charts. Students will be introduced to the 3M coding software system and allowed lab time for practice.

Lecture (45.00)

Laboratory (30.00)

Prerequisites: HIT-132, HIT-134 and HIT-140

HEALTH & EXERCISE SCIENCE**HPE-100 Personal Fitness (1.00 cr.)**

The purpose of this course is to make the student aware of his/her present level of fitness and how that can affect the student throughout the life span. The student will learn how to assess the components of fitness. Areas of concern will be cardio respiratory endurance, muscle strength and endurance, body composition, and flexibility. Basic nutrition as it relates to weight control and exercise is also discussed.

Lecture (15.00)

Prerequisites: ENG-012

HPE-101 Intro to Health and Exercise Science (3.00 cr.)

This course outlines the history and philosophies that led to the development of health, physical education, and recreation as an integral part of our educational system. Important people and their contributions to various fields of study will be identified and compared. New and innovative pedagogic methods in the areas related to physical education will be contrasted. Career options of the multi-faceted fields comprising physical education and sport will be identified and students will assess and appraise several of their choices. The career choices may include, but are not limited to, the following: teaching, fitness, athletics, sport management, sport marketing, sport communication, athletic training, and administration. Settings for these career choices are schools, colleges, non-school programs, amateur and professional leagues, and industry. The course will include a field experience at several of the sites mentioned above.

Lecture (45.00)

Prerequisites: ENG-012 and ENG-022

HPE-102 Health & Wellness (3.00 cr.)

This course provides students with theoretical and practical experiences on the relationship of lifestyle to productivity and quality of life. The course addresses wellness lifestyle, disease, physical fitness, weight control, nutrition, relationships, violence, stress management, addictions and lifestyle management.

Lecture (45.00)

Prerequisites: ENG-012, ENG-022 and MTH-011

HPE-104 Health & Personal Living (3.00 cr.)

The purpose of this course is to provide the student with general knowledge of current health issues which affect one's quality of life with an emphasis on physical fitness. Topics include chronic and infectious diseases, environmental health, consumerism, and the benefits of physical fitness. The affect of alcohol, drugs, and tobacco on one's personal health will also be discussed.

Lecture (45.00)

Prerequisites: ENG-012, ENG-022 and MTH-011

HPE-106 Stress Management (3.00 cr.)

This course is designed to prepare the student to recognize and adapt to stress, whether real or imagined. Stress symptoms are the outcome of the body's inability to respond appropriately to changing situations or signals (known as stressors). The goal of the course is to learn about stressors and how to effectively cope with their effects in managing stress.

Lecture (45.00)

Prerequisites: ENG-012 and ENG-022

HPE-107 Badminton (1.00 cr.)

This course is designed for the beginning badminton student. It will contribute to the student's general education by introducing many facets of badminton which may be used vocationally. Basic techniques will be taught, in addition to rules and regulations.

Laboratory (30.00)

HPE-108 Aerobic Dance (1.00 cr.)

This exercise class emphasizes aerobic conditioning through dance-like movements. It is composed of a non-stop series of routines which emphasize continuous vigorous, rhythmic large muscle movements done to music. Flexibility and body toning exercises are also included.

Laboratory (30.00)

HPE-109 Physical Conditioning/Police Recruits (3.00 cr.)

The Physical Conditioning Training Program is designed to develop a trainee's level of physical fitness in order to perform physically demanding police tasks, as well as to instill within the trainee a desire to maintain a high level of fitness throughout his or her lifetime. The goals of this training program are to prepare the trainee to meet the requirements of the job, educate the trainee on the importance of maintaining a health-oriented lifestyle, provide positive reinforcement for the trainee to develop and maintain a high level of physical fitness. This course is for Police Academy Recruits only.

Lecture (15.00)

Laboratory (75.00)

HPE-110 Coed Aerobic Fitness Exercise (1.00 cr.)

A specialized interval fitness training program for both men and women of all fitness levels, the program concentrates on the cardiovascular system as well as the upper body, hips, legs and abdominals. The objective in this workout is to maintain a training heart rate throughout the entire program while using various exercise changes from high and low intensity. The program uses a variety of aerobic movement and step techniques, including jog/walk interspersed with lying, sitting, and standing exercises as well as hand weights and exercise bands to improve physical fitness levels of all participants.

Laboratory (30.00)

HPE-113 Volleyball (1.00 cr.)

This course is designed to provide the student with the basic skills, techniques, and strategies necessary to develop an understanding of volleyball. It is hoped that this course will aid and encourage men and women to become self-motivated and to gain a greater understanding and appreciation for the sport.

Laboratory (30.00)

HPE-114 Personalized Fitness (2.00 cr.)

This lecture course is designed for students majoring in the personal training certificate program. It is designed to provide experience in assessment tests that will enable the students to analyze their present levels of fitness and to compare them to established norms for their age and gender. Areas of concern will be cardiorespiratory endurance, muscle strength and endurance, body composition, and flexibility.

Lecture (30.00)

Prerequisites: ENG-012

HPE-119 Cardio Kickboxing (1.00 cr.)

This is a specialized interval fitness-training program for both men and women of all fitness levels. The program concentrates on the cardiovascular system, as well as the upper body, hips, legs and abdominals. The objective in this workout is to maintain your training heart rate throughout the entire program while using various exercise changes from high and low intensity. The program uses a variety of aerobic and martial arts movements including jogging/ walking interspersed with lying, sitting, standing, kicking and punching exercises to improve physical fitness levels of all participants.

Laboratory (30.00)

HPE-120 Fitness with Balls and Bands (1.00 cr.)

This course seeks to improve fitness through the use of Swedish exercise balls (resist-a-balls) and resistance bands. Exercises and activities are taught to improve flexibility and muscle tone. This activity is appropriate for all ages and is a safe and enjoyable technique for improving strength and flexibility. Students will be taught how to safely and effectively use exercise balls and resistance bands to improve health.

Laboratory (30.00)

HPE-121 Beginning Golf (1.00 cr.)

This course is designed to teach basic techniques of grip, stance, swinging, chipping, and putting. Mental and physical exercises will be used for learning and improvement to more fully enjoy the game of golf. Field trips may be required at student expense.

Laboratory (30.00)

HPE-123 Taekwondo I (1.00 cr.)

This is an introductory study of the Martial Art known as Taekwondo, Korean for "the art of kicking and punching". Students will practice defending themselves in various situations and settings, against many different attacks such as front and rear grabs, hand and foot strikes, and chokes. Students will learn multiple stances, including front, back, horse and fighting. Achieving balance between physical and mental aspects of Taekwondo is covered in depth. Physical training covers blocking, punching, kicking, falling correctly, stretching correctly and exercising for better performance and endurance. Mental training focuses on enhancing one's self-control, self-esteem, self-confidence, and most of all, self-awareness. No equipment is required.

Laboratory (30.00)

HPE-124 Tai Chi (1.00 cr.)

This is an introductory study of the Chinese martial art know as Tai Chi Chaun. Students will learn relaxing and tension-blocking techniques through proper breathing and timing. They will increase balance and coordination in both the slow form and the fast martial arts set. This class will develop a good core foundation focusing energy with the Horse Stance and Bow Step. The state of perfect balance is achieved through the Wu Chi. Strength and motion is practiced in slow kicks, Bending Bear and Pushing the Waves. This class will enhance the student's self-control, self-esteem and inner strength. Repeated full range of motion exercises benefit students with pain and joint stiffness, or discomfort due to poor circulation and posture.

Laboratory (30.00)

HPE-125 Self-Defense I (1.00 cr.)

This is an introductory study of the art of self-defense. Students will learn to defend themselves in various situations, including parking lots and confined spaces, against many different attacks such as front and rear grabs, strikes, chokes, knock downs, etc. Defense postures include standing, kneeling, seated and prone positions. Rape prevention and avoiding potentially dangerous situations are covered in depth. Physical training covers blocking, striking, kicking, rolling and falling properly. Mental training focuses on enhancing one's self-control, self-esteem, self-confidence, and most of all, self-awareness, for it is through self-awareness that one is capable of self-defense. No equipment required.

Laboratory (30.00)

HPE-126 Pilates Based Conditioning (1.00 cr.)

This course will provide both men and women of all fitness levels a theoretical and practical experience focusing on strengthening, lengthening, and toning their bodies without the use of machines. The students will be able to strengthen and tone their muscles, improve posture, provide flexibility and balance, unite body and mind, and create a more streamlined shape. Students will learn to utilize Pilates in a safe and effective manner.

Laboratory (30.00)

HPE-127 Exercise Techniques & Prescription (1.00 cr.)

This course is designed for students majoring in personal training. It covers the protocols used to prescribe cardiovascular, strength, and flexibility exercise programs. A variety of training modes and techniques are also taught. Students will be active participants in the course.

Laboratory (30.00)

HPE-128 Taekwondo II (1.00 cr.)

This is a more in-depth study of the Martial Art known as Taekwondo, Korean for "the art of kicking and punching." Students will practice how to defend themselves in various situations and settings, against many different attacks such as front and rear grabs, strikes, (both hand and foot) and chokes. Students will learn multiple stances including front, back, horse, cat and walking. Achieving balance between physical and mental aspects of Taekwondo is covered in depth. Physical training covers: blocking, punching, kicking, falling correctly, tumbling correctly, stretching correctly and exercising for better performance, endurance and health. Mental training focuses on enhancing one's self-control, self-esteem, self-confidence, self-discipline and self-awareness. All concepts and skills learned in Taekwondo I will be reviewed, reflected upon, and improved.

Laboratory (30.00)

Prerequisites: HPE-123

HPE-129 Sport Nutrition (2.00 cr.)

This course will cover basic nutrition as it applies to sport and exercise. Topics include energy systems, macronutrients, hydration, glycemic index, supplements, ergogenic aids, body weight management, and optimizing the diet for training, competition, and recovery.

Lecture (30.00)

Prerequisites: ENG-012

HPE-130 Consumer Health Decisions (3.00 cr.)

This course uses the scientific method as the basis to critically analyze health claims related to health, nutrition, and fitness products, as well as other health-related services. The role of advertising is explored, as well as sound principles for purchasing nutrition, fitness and other health-related products

and services. Students learn important concepts related to health insurance and hospitals, traditional and alternative medical care and how to better manage the decisions they make.

Lecture (45.00)

Prerequisites: MTH-011 and (ENG-013 and ENG-023) or ENG-046

HPE-141 Hatha Yoga (1.00 cr.)

This is an elementary level course in Hatha Yoga and includes physical and mental disciplines that aim to balance different energy flows within the body through a variety of stretching exercise asanas (yoga postures).

Laboratory (30.00)

HPE-142 Intermediate Hatha Yoga (1.00 cr.)

This course is designed for students who want to take the next advanced step to complete a life-cycle of interpersonal well-being. Relaxation response, progressive relaxation, sound mantra, as well as image visualization are part of this course.

Laboratory (30.00)

Prerequisites: HPE-141

HPE-145 Wellspring Fitness Lab I (1.00 cr.)

This course is designed for individuals interested in improving their physical fitness and obtaining healthier lifestyles. Course design allows freedom in individualized scheduling of thirty hours of activity in the Wellspring Fitness Lab during any of the open hours.

Laboratory (30.00)

HPE-146 Wellspring Fitness Lab II (1.00 cr.)

An intermediate course designed for individuals interested in improving and maintaining their health and physical fitness levels, this course allows freedom in individualized scheduling of thirty hours of activity in the Wellspring Fitness Lab during any of the open hours. The course will include individual fitness evaluation, computerized analysis of results, and a prescribed exercise program. Emphasis will continue in the health related fitness components: muscular strength and endurance, flexibility, cardiorespiratory endurance, and body composition. Wellspring Fit Lab I is not a prerequisite for this course.

Laboratory (30.00)

HPE-161 Weight Training (1.00 cr.)

An introduction to weight training, this course is intended to give the student an understanding of the basic principles involved in weight training. The specific techniques should enable the novice weight trainer to initiate a weight training program that is scientifically sound and easy to follow.

Laboratory (30.00)

HPE-170 First Aid, Safety & Prevention of Injury (3.00 cr.)

First aid knowledge helps to develop an awareness of potential accident situations and the emergency care needed to aid victims of accidents or sudden illnesses. This knowledge and skill often means the difference between life and death, temporary and permanent disability, and between a rapid recovery or a long hospitalization. Students successfully completing the course will be eligible for the appropriate American Red Cross course certification cards or the National Safety Council certification cards.

Lecture (45.00)

Prerequisites: ENG-012

HPE-171 Emergency Response (6.00 cr.)

The American Red Cross Emergency Response course is to provide the participant with the knowledge and skills that are necessary as a first responder in any emergency to help sustain life, reduce pain, and minimize the consequences of injury or sudden illness until more advanced medical help can arrive. The course content and activities are designed to help the participants make the appropriate decisions about the care they will render in an emergency. The skills learned in this course enable the first responder to act as a crucial link in the emergency medical services (EMS) system. This course is restricted to Police Academy Recruits only.

Lecture (75.00)

Laboratory (30.00)

HPE-175 Foundations of Fitness (3.00 cr.)

This course is designed to provide students with the skills and knowledge to be able to design, implement, and assess a fitness program for K-12 students. Content will focus on health and skill related fitness and include designing fitness programs for individuals with differing needs and abilities.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HPE-178 Motor Development & Motor Learning (3.00 cr.)

This is an introductory course that includes the study of locomotor and non-locomotor movement, manipulative skills, and developmental and environmental factors that affect learning in these motor skill areas. The course will focus on motor behavior changes. Students will also be introduced to motor learning theories and concepts, assessment, and development of motor skills in various settings.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HPE-180 Community CPR/American Red Cross (1.00 cr.)

Cardiopulmonary resuscitation, also known as CPR, is a combination of artificial respiration and artificial circulation. The students will learn the principles and techniques of CPR, related concepts, and nomenclature that are involved in this procedure. Rescue breathing techniques for adults, children and infants will also be taught. Upon successful completion of the course, students will receive certification from the American Red Cross.

Lecture (15.00)

Laboratory (15.00)

Prerequisites: ENG-011

HPE-181 Basic Life Support (BLS)-"C" Course-AHA (1.00 cr.)

This course is designed for those students who are entering the allied health field. The students will learn about the factors that make up prudent heart living and how to incorporate these factors into their everyday lives. After correctly demonstrating one and two person CPR and obstructed airway skills for infants, children and adults, the student will receive a card signifying successful completion of the course. The class is the American Heart Association's "C" level course.

Lecture (15.00)

Laboratory (15.00)

HPE-195 Concepts of Individual and Dual Sports (3.00 cr.)

This course is designed to prepare health and exercise science majors to successfully teach specific sport activities. Students are exposed to rules, strategies, organization, and skill development in individual and dual sports. Sports taught may vary from each semester. Some of the sports, which may be the subject of this course include tennis, badminton, self-defense, bowling, volleyball, gymnastics and others.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: ENG-012, ENG-022 and MTH-011

HPE-201 Introduction to Sport Management (3.00 cr.)

This course is designed to introduce the student to the different managerial and administrative components of the sport industry. Class discussion and requirements will focus on assisting the student in establishing a conceptual understanding of the fundamental skills of planning, organizing, leading and evaluating within a sports contest. The principles of budgeting, marketing, strategic planning, ethics, as well as techniques of personnel, facility and sport event management will be discussed. In addition, the student will be exposed to the different sport career opportunities and their entrance requirements. Trends in the industry will also be discussed.

Lecture (45.00)

Prerequisites: ENG-013

HPE-209 Internship: Sports Management (1.00 cr.)

This course is a requirement in the Sports Management option. The course is designed to provide opportunity to gain on-the-job experience in the field of sport management. Under the supervision of the internship coordinator and the site supervisor, the internship will enhance the student's understanding and development of the competencies necessary to manage, promote and plan the daily operation and functions of a sports-related business. Students will keep a

portfolio of their experiences, a daily log of their activities and meet personally with the internship coordinator before, during and after the completion of the internship.

Co-Op (150.00)

Prerequisites: CSC-101, ENG-102, HPE-102, HPE-195, HPE-201, MTH-111, PSY-101 and HIS-101 or HIS-111

HPE-210 Internship: Personal Trainer Certificate (3.00 cr.)

The internship is a requirement in the Personal Trainer Certificate Program. The course is designed to provide opportunity to gain on-the-job experience. Under the supervision of the Internship coordinator, this internship will enhance the student's development of the competencies necessary to design, develop and implement a variety of health and fitness programs. The Internship will include a mandatory seminar on liability, ethics, professional appearance and behavior which must be completed before the student is placed at a site.

Laboratory (225.00)

Prerequisites: FNS-105, HPE-180, HPE-114, HPE-127, HPE-161, HPE-211, MTH-011, CIS-101 or CSC-101 and (ENG-013 and ENG-023) or ENG-046

HPE-211 Theory/Application Physical Training I (4.00 cr.)

This course will focus on the theories and applied principles of physical training as it relates to individuals of all ages. The course is designed to offer sound, systematic training programs for those who wish to apply strength and conditioning techniques to achieve higher levels of fitness and health. The student will be required to assist in a fitness lab for a total of 6 hours per semester. An additional 14 hours will involve laboratory instruction including rudimentary equipment maintenance. At the conclusion of the course, the student will have the knowledge to design a comprehensive strength training program, teaching biomechanically correct and safe weight training techniques, and be prepared to sit for a national certification exam in personal training.

Lecture (45.00)

Laboratory (30.00)

Prerequisites: ENG-012

HUMAN SERVICES**HSR-001 Self Advocacy Individ Dev Disabilities (3.00 cr.)**

People with intellectual and/or developmental disabilities must be able to exercise their basic Human Rights by speaking and standing up for themselves. This course will provide students ways to be included in decisions about their clients lives and in public policy decisions affecting this population. The course is designed to provide students with knowledge and understanding of self-advocacy issues and opportunities for effectively participating in activities addressing these issues. Students will be exposed to materials about self-advocacy, individuals who are acting as self-advocates, and organizations comprised of individuals with disabilities who are active in advocacy endeavors.

Lecture (30.00)

Laboratory (30.00)

HSR-010 Life Skills I (3.00 cr.)

Life Skills is an introductory course for the student seeking to enhance their independence while creating a realistic life plan. This course is designed for students in Postsecondary Studies certificate programs. Course instruction will be flexible, responsive, and multi-sensory. The course is designed to help students focus on building coping skills in order to be as independent as possible in their lives.

Lecture (45.00)

HSR-015 Academic Development (2.00 cr.)

This course is designed for students in the Certificate of Vocational Studies (VOC. CPS). This course will promote practical strategies and resources to be effective in college, as well as in careers. This course is part one of a four part series oriented to four areas of college/vocational readiness: Academic Development; Employment Development; Career Development; Advocacy Development. In addition, the students will have the opportunity to work directly with their mentors who will assist them in each area.

Lecture (15.00)

Laboratory (30.00)

Corequisites: ENG-005

HSR-020 Life Skills II (3.00 cr.)

Life Skills II is a continuation of Life Skills I which is an introductory course for the student seeking to enhance their independence while creating a realistic life plan. This course is designed for students in Postsecondary Studies certificate program. Course instruction will be flexible, responsive, and multi-sensory. The course is designed to help students acquire the necessary daily living skills to allow for independent function in a variety of environmental (home, vocational community).

Lecture (45.00)

Prerequisites: HSR-010

HSR-022 Employment Basics (3.00 cr.)

Employment Basics is an introductory course for the student seeking employment. This course is designed for students in a Postsecondary Studies certificate program. Course instruction will be flexible, responsive, and multi-sensory. The course is designed to help students focus on basic understanding of employers' expectations as well as employee responsibilities.

Lecture (45.00)

HSR-023 Introduction to Social Interaction (3.00 cr.)

The course is designed to introduce and provide practice in the social graces. Students will learn and practice appropriate verbal and non-verbal expression. Units of study will include everyday etiquette, communication and protocol, dining and entertaining, celebrations and ceremonies and workplace etiquette.

Lecture (30.00)

Laboratory (30.00)

HSR-025 Employment Development (2.00 cr.)

This course is designed for students in the Certificate of Vocational Studies (VOC. CPS). This course will promote practical strategies and resources to improve employability skills. This course is part two of a four part series oriented in the areas of college/vocational readiness: Academic Development; Employment Development; Career Development; Advocacy Development. In addition, the students will have the opportunity to work directly with their mentors who will assist them in each area.

Lecture (15.00)

Laboratory (30.00)

Corequisites: HSR-022

HSR-030 Career Exploration (3.00 cr.)

This course is designed for students in the Certificate of Vocational Studies (VOC. CPS). This course will promote practical strategies and resources to gain competencies in career planning.

Lecture (45.00)

Corequisites: HSR-035

HSR-033 Advanced Social Interaction (3.00 cr.)

This course is a continuation of SPE-001 Social Interaction and is designed to introduce and provide practice in the social graces as they pertain to the workplace. Students will learn and practice appropriate verbal and non-verbal expression. Units of study will include ritual and behavior in job search, resume writing, writing cover letters, acquiring references, making appointments for interviews, interviewing, appropriate job search courtesies, appropriate interview and workplace wardrobe and grooming and all facets of workplace behavior once hired for a position.

Lecture (30.00)

Laboratory (30.00)

HSR-035 Career Development (2.00 cr.)

This course is designed for students in the Certificate of Vocational Studies (VOC. CPS). This course will promote practical strategies and resources to improve employability skills. This course is part three of a four part series oriented in the areas of college/vocational readiness: Academic Development; Employment Development; Career Development; Advocacy Development. In addition, the students will have the opportunity to work directly with their mentors who will assist them in each area.

Lecture (15.00)

Laboratory (30.00)

Corequisites: HSR-030

HSR-040 Introduction to Careers (3.00 cr.)

This course is designed for the students in the Certificate of Vocational Studies (VOC.CPS). This course will promote practical strategies and resources to help the students understand the relationship between career self-assessment and career selection. This course is a continuation of Career Exploration.

Lecture (45.00)

Prerequisites: HSR-030

HSR-045 Advocacy Development (2.00 cr.)

This course is designed for students in the Certificate of Vocational Studies (VOC. CPS). This course will promote practical strategies and resources to improve employability skills. This course is part four of a four part series oriented in the areas of college/vocational readiness: Academic Development; Employment Development; Career Development; Advocacy Development. In addition, the students will have the opportunity to work directly with their mentors who will assist them in each area.

Lecture (15.00)

Laboratory (30.00)

Corequisites: HSR-040

HSR-050 Vocational Practicum (1.00 cr.)

This course provides students the opportunity to apply the skills they have developed in an employment setting. All students are required to complete 240 hours of practicum hours over the course of the two years to receive their certificate.

Field Work (60.00)

HSR-101 Introduction to Human Services (3.00 cr.)

This course surveys the basic principles, scope, and functions of the various "settings" in human services. A broad view of the field of human services is presented, and an effort is made to link learning to experience. The philosophy of human services is discussed, and the history of social welfare is explored.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HSR-102 Social Work Processes (3.00 cr.)

This course surveys the practices, concepts, and methods, as well as the current trends, in human services work. Basic skills inherent in casework, group work, and community organization are stressed.

Lecture (45.00)

Prerequisites: HSR-101

HSR-103 Introduction to Counseling (3.00 cr.)

This course emphasizes the role that counseling activities play in the human services field. It also studies the characteristics of a workable counseling and guidance program and the techniques used to collect, record, interpret, and employ guidance data.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HSR-104 Contemporary Issues in Social Welfare (3.00 cr.)

This course will introduce the student to current issues being addressed within the social work field. The student will be given the opportunity to develop their knowledge in the area of contemporary social welfare. Historical perspectives will be explored with a comparison to current issues. Critical debate will be used to heighten an understanding of the issues, which will allow contradictions to be resolved. Critical thinking is encouraged.

Lecture (45.00)

Prerequisites: ENG-012, ENG-022 and HSR-101

HSR-105 Group Dynamics (3.00 cr.)

To understand and learn concepts of group effectiveness. Focus will be on the history of group theory and an analysis of the forces, which bring about group interaction. This course will introduce the beginning student to the group experience, which will be necessary in developing an understanding of group skills.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

HSR-107 Field Work (3.00 cr.)

Field experience is traditional in educational programs for Community and Human Services. It is the “learning by doing” under educational guidance. It usually involves giving direct service. Field work offers the student the opportunity to work directly with people, staff, and other helping individuals. It allows the student to test his/her interest and aptitude for a career in the Human Services field. Students will use lecture time to reinforce their field work experience. Students are encouraged to find field work internships prior to registration. Background checks may be required at some agencies or schools. Field work is required for a total of 100 hours during the semester.

Lecture (15.00)

Field Work (100.00)

Prerequisites: HSR-101 and HSR-103 or ADD-101

HSR-134 Quantitative Concepts / Pre-School Child (3.00 cr.)

This course considers children’s quantitative concepts and the relationship of these concepts to the child’s total environment. Various methods of understanding these concepts, such as games, finger plays, use of relevant objects and materials, rhymes, songs and stories, and the development of a simple number vocabulary are discussed. Students explore how number concepts relate to experiences and activities that are real and purposeful to young children.

Lecture (45.00)

HSR-136 Social Stud & Sci Concepts:Preschool (3.00 cr.)

Both social studies and science concepts that can be learned by pre-school children will be introduced. Social studies concepts will include the child’s feelings about him/herself, the child’s relationship with others, as well as selected topics in the social studies field. The child’s understanding of scientific phenomena with a Piagetian framework, as well as developing inquiry skills through selected topics, will also be explored.

Lecture (45.00)

Prerequisites: HSR-133

HSR-151 Survey in Developmental Disabilities (3.00 cr.)

This course provides an in-depth understanding of the many ways in which developmental disabilities affect the lives of individuals and families. It also prepares direct support professionals for a variety of roles in the field, and examines the history of the systems that have evolved to support persons with developmental disabilities and their families.

Lecture (45.00)

HSR-152 Health Issues Across the Lifespan (3.00 cr.)

This course discusses theoretical etiologies of developmental disabilities, current thinking, and current trends in the field of health and wellness of the developmentally disabled. Its intent is to provide students with comprehensive information about health problems often linked to specific disabilities and quality health care and/or lifestyles that promote health and wellness.

Lecture (45.00)

Prerequisites: HSR-151

HSR-153 Developmental Disabilities Program Plan (3.00 cr.)

The intent of this course is to explore the range of services and support that people with disabilities and their families currently use, and the laws and regulations that both establish and manage those services. The course will discuss best practices in the provision of family support, residential and vocational services. Particular attention will be paid to assessment, planning, implementation and evaluation of services.

Lecture (45.00)

Prerequisites: HSR-151

HSR-154 Critical Issues in Dev Disabilities (3.00 cr.)

This course provides an overview of the most significant, current issues in the field of Developmental Disabilities. The specific issues to be examined will reflect the most current topics in the field, such as Self-Determination, Public Policy, and Positive Behavior Supports. This course is recommended for direct support professionals working in the areas of family support and respite, self-determination, residential, and vocational settings. The course will also be relevant to persons with disabilities and their families, as well as supervisors in

the Developmental Disabilities field. The course will be formatted into modules relating to specific current issues under discussion and will utilize weekly reading, lecture and discussions, group activities, video presentations, and guest speakers with expertise in specific areas.

Lecture (45.00)

Prerequisites: HSR-151

HOSPITALITY TECHNOLOGY**HTS-101 Introduction Hospitality Technology (3.00 cr.)**

This course provides an overview of elements and segments of the hospitality industry. Students will be introduced to different career pathways and the organizational structure within the hospitality spectrum. Discussion will include the history of and current issues facing all segments of the hotel industry. Students will be exposed to the factors that affect and influence industry customers. Students will engage in career exploration activities and identify appropriate specialty tracks. Guest speakers, field trips, industry publications and web site review will enhance learning opportunities for students.

Lecture (45.00)

Prerequisites: ENG-012 and ENG-022

HTS-105 Housekeeping Management (3.00 cr.)

This course provides current and potential managers with professional concepts and skills to achieve the world-class standards expected by guests in modern lodging and food service establishments. Essential technical information is provided for individuals who will make housekeeping decisions on a daily basis and others desirous of entering the specialty. Competencies developed include planning, organizing, budgeting and supervising. Activities are conducted in the classroom and in a field experience setting.

Lecture (45.00)

Prerequisites: HTS-101

HTS-115 Food Safety Training (1.00 cr.)

This comprehensive seminar course is designed for food handlers and managers in the food and hospitality industries. The course is designed as a study of the principles of food-borne illness, sanitation, safety, personal hygiene, rodent and insect controls, regulations, and equipment affecting safe food handling in all operations. Students will study common pathogens and learn how pathogenic organisms can contaminate foods, principles of safe and sanitary food handling, and safety principles used to select, preserve, thaw, cook, and store foods. The course will highlight the many benefits that safe food handling offers for facilities and their guests. The course is designed to meet the requirements of local, state and national certification exams.

Lecture (15.00)

HTS-201 Front Desk Management (3.00 cr.)

This course develops skills in effective management responsibilities as front desk, guest service representatives, the primary contact between guests and the hotel organization. Students learn a systematic approach to front office procedures, from the reservations process through checkout and account settlement. Particular attention is paid to effective interactions between hotel guests and the lodging organization’s services. Front desk human resources management is placed within the context of the overall operation of the hotel, including monitoring of revenue streams and occupancy status.

Lecture (45.00)

Prerequisites: HTS-101

HTS-205 Meeting and Special Event Planning (3.00 cr.)

This function of hotel operations coordinates the activities of various departments to accommodate meetings, conventions and special events. Event planners meet with representatives of groups or organizations to plan the number of rooms to reserve, the configurations of meeting spaces, and the banquet services. During the event, the planners resolve unexpected problems and monitor activities to ensure that hotel operations confirm to the expectations of the group.

Lecture (45.00)

Prerequisites: HTS-101

LIBERAL STUDIES/INTERDISCIPLINARY

IDY-205 The Holocaust (3.00 cr.)

The freely elected government of Nazi Germany, and its accomplices, persecuted and murdered many civilians; people with handicaps, political and religious dissidents, Gypsies (Ramanies), and others. From 1933 through 1945, the orchestrated assault on Jews exploited widespread anti-Semitic stereotypes and prejudices. Discrimination, elimination of citizenship, violence, and isolation were followed by “The Final Solution” of systematic genocide. This state sponsored mass murder remains unparalleled in the relentless cruelty perpetrated against victims of all ages, the number of victims, and the bureaucratic and technological efficiency of the perpetrators. Grounded in the historical facts, this course will explore the Holocaust through the diverse prisms of victim testimony, film, art, music, and literature.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

IDY-209 Academic Interest Workshop (1.00 cr.)

This course is designed for students who are interested in expanding their knowledge and understanding of the subject matter that they teach. They will be offered an array of subject-matter workshops that will provide them with an in-depth study of topics in disciplines related to the New Jersey Department of Education’s Core Curriculum Content Standards. Upon completion of this course students (teachers) will be able to meet the New Jersey Core Curriculum Standard in related academic areas and to partially fulfill the 100 hours of State-approved professional development.

Lecture (15.00)

INTERPRETER EDUCATION

IEP-201 American Sign Language for Interpreters (3.00 cr.)

This course is designed to enhance student skills in American Sign Language in preparation for the ASL English Interpreting Program. Particular attention will be placed on contrastive linguistics. In addition, attention will be given to students overall ability to use ASL, including accuracy and advanced vocabulary through translations of English text into ASL.

Lecture (45.00)

Prerequisites: ASL Proficiency Test

IEP-202 Consecutive Interpreting (3.00 cr.)

This course is designed to give the student a base in the practical aspects of consecutive interpretation. Specific subtasks, for focused skills development, will be assigned in this course to prepare the student in the performance of interpretation tasks in prepared (rehearsed) and spontaneous consecutive interpretation. This is a lecture/class discussion course with lab assignments outside of class.

Lecture (45.00)

Prerequisites: IEP-201 with a grade of C or higher

Corequisites: IEP-204

IEP-203 Simultaneous Interpreting (3.00 cr.)

This course is designed to introduce students to the tasks involved in simultaneous interpretation. Unlike consecutive interpretation, simultaneous interpretation requires processing information and transmitting that information into a second language within the same time frame. Particular attention will be given to the process involved in transition from consecutive to simultaneous interpreting. The advantages and limitations of both types of interpretation will be compared. This is a lecture / class discussion course with lab assignments outside of class.

Lecture (45.00)

Prerequisites: A grade of C or higher in IEP-202 and IEP-204

IEP-204 Interpreting Seminar (3.00 cr.)

This course provides students in the Interpreter Education Program information regarding various interpreting career opportunities. Students will be exposed to a variety of specialized interpreting situations such as legal, deaf-blind, medical, mental health, rehabilitation, and educational environments. Students will have the opportunity to interact with professional interpreters who have in-depth experience in the above mentioned environments.

Lecture (45.00)

Prerequisites: A grade of C or higher is required in IEP-201

Corequisites: IEP-202

IEP-205 Voicing (3.00 cr.)

This course introduces the student to the theory and practice of processing a signed message into spoken English. The course emphasizes appropriate vocabulary selection, use of syntactically correct English sentences, and the development of an appropriate voicing register.

Lecture (45.00)

Prerequisites: A grade of C or higher is required in IEP-202 and IEP-204

Corequisites: IEP-203

IEP-206 Interpreting Lab (3.00 cr.)

This course provides students with the opportunity to enhance interpreting / transliterating skills. Students will use the Interpreting Media Lab to enhance strengths and minimize weaknesses that become evident during the practicum.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: A grade of C or higher in IEP-203 and IEP-205

Corequisites: IEP-207

IEP-207 Interpreting Practicum (3.00 cr.)

Under the supervision of experienced interpreters, students will interpret for deaf clients in a variety of settings. The student, employer, and practicum supervisor will jointly establish learning objectives to meet the needs of the students learning experience. Students will meet with the instructor one hour each week for discussion of issues, which arise during the practicum and to receive feedback on their performance. Class discussions with clinical assignments are included.

Lecture (15.00)

Field Work (90.00)

Prerequisites: A grade of C or higher is required in IEP-203 and IEP-205

Corequisites: IEP-206

IEP-208 Two-Way Bilingual Immersion (3.00 cr.)

This course will compare the usage of American Sign Language and English in a bilingual environment. Topics will include compounding, verb agreement, role taking, topic comment construction, pronoun usage, tense and aspect. This course will contain an equal number of hearing (English speaking) and deaf (ASL speaking) students. This course will be taught in ASL and English via a computer network.

Lecture (45.00)

IEP-209 Interpreting in Specialized Settings (3.00 cr.)

This course will explore various types of sign language interpreting. Special emphasis will be placed on specific vocabulary, ethical concerns, client needs and strategies in various interpreting situations. Topics will include medical interpreting, legal interpreting, educational interpreting, mental-health interpreting, interpreting for AA and NA, theatrical interpreting, and deaf-blind interpreting.

Lecture (45.00)

Prerequisites: ASL Proficiency Test

IEP-211 Language Develop/Educational Interpreter (3.00 cr.)

This course is designed to provide educational interpreters with an understanding of the principles and theories of childhood language development and will compare the development of language for children with various degrees of hearing loss with the language development of children without educational disabilities. Students will survey language intervention models for students who are deaf and hard of hearing. Additional issues impacting language development in children with hearing loss will also be discussed, including, but not limited to, alternative forms of communication, bilingual/bicultural issues, assistive technology and cochlear implants.

Lecture (45.00)

IEP-212 Legal/Ethical Issues Educ Interpreting (3.00 cr.)

This course will look at the unique roles and responsibilities of the educational interpreter and the various interpreter assignments within multiple educational settings. Particular attention will be paid to ethics of the educational interpreter and federal and state laws that outline the provision of educational interpreting as a related service.

Lecture (45.00)

IEP-213 Curr Dev & Methods of Instruc/Edu Inter (3.00 cr.)

This course is designed to provide educational interpreting students with a basic knowledge of curriculum development and instructional Strategies based on the learning theories of students as they are used in the classroom for primary and secondary age students. Students will review the New Jersey Core Curriculum Content Standards (CCCS), and the unique curricula designed for students who are deaf/hard of hearing in the content areas. Instructional strategies for the educational interpreters with an emphasis on vocabulary acquisition and language comprehension for the students will be addressed. Collaborative strategies for educational interpreters working with regular teachers and special education teachers and the related services personnel in a variety of educational settings will be discussed. This course will present assessment of academic materials and completion of learning objectives according to established criteria in the students' individualized educational programs (IEP).

Lecture (45.00)

IEP-214 Deaf-Blind Inter Strategies/Edu Interpre (3.00 cr.)

This course is designed to provide a strong foundation and build the knowledge and skills of interpreters in the area of deaf-blindness and deaf-blind interpreting strategies. The course will address physiological, linguistic, environmental and cultural components that affect the interpreting process. The roles and expectations of the interpreter and effective communication strategies will also be covered.

Lecture (45.00)

ITALIAN**ITA-101 Elementary Italian I (3.00 cr.)**

This course introduces the student to the language and culture of the Italian-speaking world. It provides the student with basic working information of the language (listening, speaking, reading, writing) in order to interact and communicate with others, while gaining a greater understanding of the different Italian-speaking cultures. This course is intended for students beginning the language or for those who have received a grade below C in two years of high school Italian. This course is not intended for native speakers.

Lecture (45.00)

Prerequisites: ENG-012 and ENG-022

ITA-102 Elementary Italian II (3.00 cr.)

This course continues the basic elements of the language and the understanding of the Italian-speaking world. It provides the student with basic working information of the language (listening, speaking, reading, and writing) in order to interact and communicate with others at a novice high-level, while gaining a greater understanding of and respect for the Italian-speaking cultures. This course is not intended for native speakers.

Lecture (45.00)

Prerequisites: ENG-012, ENG-022 and ITA-101 or two years of high school Italian

ITA-201 Intermediate Italian I (3.00 cr.)

This course continues the study of the basic working structures of the language (listening, speaking, reading, and writing) at the intermediate-low level in order to interact and communicate with others, while gaining a greater understanding of and respect for the Italian-speaking cultures.

Lecture (45.00)

Prerequisites: ITA-102 or two years of high school Italian, and (ENG-013 and ENG-023) or ENG-046

ITA-202 Intermediate Italian II (3.00 cr.)

This course completes the study of the working structures of the language (listening, speaking, reading, and writing) at the intermediate-mid level in order to interact and communicate with others, while gaining a greater understanding of the different cultures in the Italian-speaking world through literature and film.

Lecture (45.00)

Prerequisites: ITA-201

LATIN**LAT-101 Elementary Latin I (3.00 cr.)**

This course introduces students to the Classical Latin language and provides him/her with a basic working knowledge of the language (listening, speaking, reading, writing). It also introduces the student to the Roman history and the influence of the classical world on Western civilization. This course is intended for students beginning the language or for those who have received a grade below C in two years of high school Latin.

Lecture (45.00)

Prerequisites: ENG-012 and ENG-022

LAT-102 Elementary Latin II (3.00 cr.)

This course is a continuation of Elementary Latin I. Students are introduced to the basic elements of the grammar and syntax of the language. Students will also be exposed to Roman history, Greco-Roman civilization, and the influence of the Classical world on Western civilization.

Lecture (45.00)

Prerequisites: ENG-012, ENG-022 and LAT-101 or two years of high school Latin

LAT-201 Intermediate Latin I (3.00 cr.)

This course, a continuation of Elementary Latin II, emphasizes the translation of Latin texts. Students will read Latin prose and poetry, paying careful attention to accurate translation. The principles of grammar and syntax presented in Elementary Latin are reinforced during the translation of texts. Students will also develop and advanced understanding of Roman history and institutions, Greco-Roman civilization, and the influence of the classical world on Western civilization.

Lecture (45.00)

Prerequisites: LAT-102 or two years of high school Latin, and ENG-013 and ENG-023, or ENG-046

LAW**LAW-101 Legal Environment/Business Law I (3.00 cr.)**

This course is an introduction to law in general and of legal issues involved in the business world. Topics covered include Rights, Sources of Law - Administrative Agencies - Torts - Crime Consumer Protection, Protection, Employment Law, Governmental Regulations of Business, Environmental Law and Basic Contract Law. Suggested optional topics include Ethics and Social Forces of the Law and International Trade.

Lecture (45.00)

Prerequisites: ENG-013

LAW-102 Business Law II (3.00 cr.)

This course covers the major areas of business law, including security devices, commercial papers, agency, employment, business organizations, property and estates, and government regulation of business.

Lecture (45.00)

LAW-104 Hospitality Law (3.00 cr.)

This course is designed to acquaint the student with the types of liabilities restaurateurs and hotel proprietors find in today's litigation-oriented society and the types of insurances necessary to protect their businesses and themselves. After an introduction to law and legal systems, students will learn the many types of laws applicable to the hospitality industry. By learning these laws, students learn how to prevent legal problems from escalating, the importance of their positions in preventing legal catastrophes, and the roles of all parties involved in potential and actual legal situations. This course is not designed to make students into lawyers or to make them managers who attempt to handle legal problems on their own.

Lecture (45.00)

PHOTONICS (LASER & FIBER OPTICS)**LFO-101 Intro to Photonics & Photonic Safety (4.00 cr.)**

This course introduces the elements of a laser, operation of a helium-neon gas laser, laser physics, optical-cavities, properties of laser light, and a survey of laser

systems. Safety procedures concerning lasers and related equipment are presented in this course.

Lecture (45.00)

Laboratory (45.00)

Corequisites: MTH-125

LFO-103 Laser Safety/App Medicine & Related Flds (3.00 cr.)

This course will discuss the properties of light, elements of a laser, and an explanation of various laser systems will be given. Safety procedures concerning lasers and related equipment will be discussed. The course will concentrate on laser applications in various branches of medicine and related fields.

Lecture (30.00)

Laboratory (30.00)

LFO-201 Photonic Materials (3.00 cr.)

Photonic Materials is a course designed to provide the laser electro-optic technology and fiber-optic technology students an up-to-date knowledge of the laser peripheral materials. The material selection and characterization of different laser materials and peripheral materials, such as electro-optic, acousto-optic, and nonlinear materials will be included in the course. In the course the basis for material selection and suitability for laser application will be stressed. Laboratory experiments will supplement the basic non-mathematical theory. Practical applications will be stressed in this course.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: LFO-101

LFO-211 Photonic-Optic Principles & Components (4.00 cr.)

This course covers the fundamentals of geometric and physical optics, including Huygen's principle, wave motion, properties of waves, and optical instruments.

Lecture (45.00)

Laboratory (45.00)

Corequisites: LFO-101

LFO-212 Pulsed & CW Lasers (3.00 cr.)

This course covers the laser power and energy measurements, characteristics of flashlamps, discharge circuits, and pulse forming networks for optically pumped solid lasers, CW arc lamps and power supplies for CW lasers, cooling systems for CW-pumped lasers, safe operation and measurements with argon, CO₂, ruby, Nd:YAG, dye and semiconductor lasers, study of laser Q-switching and mode-locking using solid state laser systems.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: LFO-101, PHY-101 and EET-101

LFO-221 Photonic & Electro-Optic Devices (3.00 cr.)

This course will discuss the photodetectors, calorimeters and laser power meters, holographic equipment and supplies, and techniques and setups for making holograms. It covers photographic instrumentation, including oscilloscope, SLR, streak cameras and special purpose imaging devices. Laser modulation and Q-switching devices, including electro-optic, rotating prism, acousto-optic and bleachable dye methods, use of laser collimators and autocollimators, spatial filters, beam expanders, and Faraday isolators, are also covered in this course.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: LFO-201, LFO-211 and LFO-212

LFO-231 Photonics Measurements (3.00 cr.)

This course will discuss wave length, dispersion, and refractive index measurements with divided-circle prism/grating spectrometer, use of monochromators and spectrophotometers, use of scanning Fabry-Perot interferometer for observation of longitudinal modes in a laser output, use of fixed spacing Fabry-Perot etalon, Michelson interferometer, use of Twyman-Green interferometer in optical testing, use of Mach-Zehnder interferometer for measuring refractive index of gas, spatial resolution, concept of the modulation transfer function (MTF), and use of USAF 1951 resolution target to measure MTF of a lens.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: LFO-211

LFO-241 Introduction to Fiber Optics (3.00 cr.)

This course will discuss elements of fiber optics including: integrated optics, waveguide transmission, optical circuitry, and fiber optic components.

Lecture (30.00)

Laboratory (30.00)

Corequisites: LFO-101

LFO-242 Advanced Fiber Optics (3.00 cr.)

This course will continue to develop concepts in Fiber Optics that are introduced in Introduction to Fiber Optics (LFO-241). However, much greater emphasis will be placed on splicing, coupling, optical systems, and optoelectronics.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: LFO-241

LFO-243 Fiber Optic Communication & Installation (3.00 cr.)

This course will continue to develop concepts introduced in the course LFO-241 (Introduction to Fiber Optics). It is designed for the certificate in Fiber Optics with great emphasis put on the tasks and functions needed to perform different fiber optic installations, connections, and testing and troubleshooting optical communication systems.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: LFO-101, LFO-211 and LFO-241

LFO-292 Photonics Seminar (1.00 cr.)

Photonics seminar provides an opportunity for the photonic and fiber optic student to become familiar with the current job market, resume writing and interview techniques. Also, a discussion of current events in photonics technology will take place.

Lecture (15.00)

Prerequisites: LFO-241

LFO-294 Fiber Optic Project (3.00 cr.)

This course is designed to introduce the student to creative fiber optic design by participation in small project groups. Each group will be assigned a fiber optic problem to solve by using innovative optical circuitry and possibly the construction of a working model.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: LFO-241

MESSAGE THERAPY

MAS-200 Therapeutic Massage (6.00 cr.)

The course teaches students how to integrate the body, mind and spirit through the art and science of Swedish massage. Students will be exposed to the basic components for massage: hands-on techniques, observation and palpation, business and marketing, record keeping, and basic theory. Professional standards and ethical guidelines are included along with recognition of endangerment sites and contraindications for massage.

Lecture (60.00)

Laboratory (60.00)

MAS-201 Student Massage Clinic (1.00 cr.)

This supervised course teaches students how to integrate the body, mind, and spirit through the art and science of Swedish massage to the general community. Students will be exposed to the basic components for massage: hands-on techniques, observation and palpation, recordkeeping, and basic theory. Professional standards and ethical guidelines are included along with recognition of endangerment sites and contraindications for massage.

Clinical (100.00)

Prerequisites: MAS-200

MAS-205 Environmental Management (1.00 cr.)

Since massage and bodywork is physically, spiritually and mentally demanding, students need to learn how to take proper care of themselves. This course will instruct on proper body mechanics, stretching and strengthening exercises. This course also addresses the importance of creating a healthy and environmentally

stable massage space. Students will be exposed to the various ways to use safe, environmentally sound practices to create a healthy massage/bodywork space for both practitioner and client.

Lecture (15.00)

MAS-209 Structures & Functions - Bodyworker I (4.00 cr.)

This lecture-laboratory course is designed to increase the student's knowledge base in applied human anatomy, physiology and kinesiology by reviewing and expanding upon the foundational level of information presented in the Human Biology (BIO-103) course. Specific emphasis will be placed on further developing the student's understanding of those human systems that most directly affect the practice of body workers. Aspects of human disease, injury, nutrition and wellness concepts will also be introduced. The objective of this course is to provide the student with a working knowledge base of applied human anatomy, physiology and kinesiology that will assist them in preparation for national certification examinations, state certification, safe and effective practice, professional communication with clients and health care professionals, understanding massage and medical information, and participation in other advanced massage therapy courses.

Lecture (45.00)

Laboratory (30.00)

MAS-211 Structures & Functions - Bodyworker II (2.00 cr.)

This course will help to integrate the bodyworker's knowledge of applied anatomy and physiology into various methods of both eastern and western massage. In addition, this course will prepare the student for the anatomy and physiology requirements for the massage therapy national exam.

Lecture (30.00)

Prerequisites: MAS-209

MAS-215 Therapeutic Sensory Applications I (1.00 cr.)

This course introduces the student to the therapeutic benefits and uses of aromatherapy. Emphasis will be placed on developing a respectful appreciation and understanding of the nature of essential oils and how the student can utilize them in their professional and personal life. This course explains the history of aromatherapy, the properties of essential oils, blending techniques, choosing the correct carriers, contraindications and safety factors of essential oil use, as well as the physical, emotional, and spiritual aspects of essential oil use.

Lecture (15.00)

MAS-220 Eastern Therapeutic Concepts (1.00 cr.)

Traditional Chinese Medicine is a foundation for understanding Chinese medicinal theory and Chinese healing arts. The course links up fundamental Chinese Medicine concepts to the diagnosis and treatment of disharmony and disease. The course first covers the basic concepts of Chinese medicine - Tao, Qi, yin and yang, the five element correspondences and cycles known as wu xing - and how they relate to human health. Building on this foundation, students learn the significance of signs and symptoms of disease by studying various approaches to diagnosis, and forming a treatment strategy.

Lecture (15.00)

MAS-225 Therapeutic Sensory Applications II (2.00 cr.)

This course is designed to give the student basic skills in aromatherapy education. The therapeutic properties of aromatherapy oils and the multitude of ways the oils can be utilized are discussed. Safe, responsible use of aromatherapy is emphasized. This course follows the National Association for Holistic Aromatherapy Guidelines for Level 1 certification for family and friends practice.

Lecture (30.00)

MAS-230 Therapeutic Herbal Applications (2.00 cr.)

This course will cover approximately 48 herbs that are used for both pharmaceutical and culinary purposes. Information will be given about an herb's flavor, properties, organ meridians affected, clinical applications and corresponding indications in terms of biomedical diagnosis. The course will familiarize the students with the way of diagnosis, the causes of disease, and the diagnostic systems of Traditional Chinese Medicine as applicable to the herbal pharmacology.

Lecture (30.00)

MAS-240 Specialized Massage Techniques (3.00 cr.)

This course introduces massage students to three very distinct and important

massage techniques: myofascial structural bodywork, foot reflexology, and deep tissue massage. The myofascial hand use and technique will be introduced in principle and practice. Students will be presented with structural theory and begin to look at the body while standing and in simple motion. The deep tissue segment of this course is designed to give massage therapists added skills to safely assist clients with special conditions. It introduces the student to deeper pressure than that used in the Swedish Massage course and the foot reflexology component teaches students the ancient systems of applying pressure and massage techniques on reflex points of the feet to alleviate energy blocks that cause pain or tension.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: MAS-200

Corequisites: MAS-209 and MAS-260

MAS-241 Business Management/Massage Professional (2.00 cr.)

This course provides information regarding the business aspect of massage therapy and helps the student glean information about their personal priorities in order to facilitate success within their business practice. The student will leave the course prepared with a business plan, marketing materials and practice at promotion and public speaking. The student will have identified their own specific goals and begun to put them into practice. They will have achieved a business focus and direction and will have the effective tools and information needed to accomplish their goals.

Lecture (30.00)

MAS-243 Integrated Myofascial Structural Tech (2.00 cr.)

This course seeks to have the student develop a greater depth of experience, understanding, and abilities in myofascial work. It is designed to allow for more experience in seeing structural organization in the human body and understanding of its importance. This course includes an anatomy review, structural observations, demonstrations and practice which assists the students in achieving a greater understanding of the function of each anatomical section and its relationship to the whole structure. In addition, movement activities will be included so that students can sharpen their kinesthetic sense and experience the structure "from the inside." This will give them a better "feel" for structure, which they can take directly to their work with clients. Focus will be placed on the quality of hand contact made by the student as they do this work. The myofascial hand feels into and through the tissue in a kind of dance with the recipient. This course is designed to enhance the students' feel for this. 1 lecture hour, 2 laboratory hours weekly.

Lecture (15.00)

Laboratory (30.00)

Prerequisites: MAS-209 and MAS-240

MAS-250 Shiatsu Therapy - Level I (4.00 cr.)

This course is designed to teach the ancient Oriental healing art of Shiatsu acupressure massage in a comprehensive certification program for career advancement and personal development. The program ranges from a simple introductory framework to the application of advanced energy-balancing techniques. Level I focuses on specific concepts of traditional and Zen Shiatsu and reinforces these concepts to establish a firm foundation for more advanced study and development of the student's personal skills.

Lecture (45.00)

Laboratory (30.00)

MAS-255 Massage Therapy Integration/Application (3.00 cr.)

This course is designed to integrate various massage techniques, concepts, and principles to effectively meet the unique needs of the individual client. The use of assessment, effective reasoning skills, and the execution of the treatment plan will be based on knowledge obtained in the core curriculum. The interpretation and prioritization of all case information will allow the student to be a safe and productive practitioner in this profession.

Laboratory (90.00)

Prerequisites: MAS-211, MAS-243, MAS-260 and MAS-261

MAS-260 Palpation & Kinesiology/Massage Therapy (3.00 cr.)

This course is designed to give the massage student an introduction to human movement. This class will cover the skeletal system, architecture of joints, structure and function of skeletal muscle, muscle insertions and levers, innervations of muscles, roles of muscles, and types of bone, tendons, ligaments, and other tissues of the body. Unlike the traditional academic approach to anatomy and

physiology, the palpation section of this course will provide a more practical and sensory-based experience with a focus on locating and/or identifying the qualities of muscle, tendon, bone and ligaments.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: MAS-200

MAS-261 Pathology for Massage Therapy (4.00 cr.)

Pathology affords the student a basic understanding of the disease processes of the human body. Students gain an appreciation of the mechanics that generate pain, and the transmission, perception and control of that pain. Students will study the principles of disease control and universal precautions. They will learn symptoms of infectious diseases and how these diseases are transmitted, including hepatitis and HIV. Students will have the opportunity to formulate a massage plan, using knowledge of indications and contraindications for specific diseases and physical disorders.

Lecture (60.00)

Prerequisites: MAS-200 and MAS-209

MECHANICAL ENGINEERING TECHNOLOGY

MET-221 Quality Control (2.00 cr.)

Quality Control covers the fields of statistical process control, nondestructive testing, automated measurement and corrective feedback.

Lecture (15.00)

Laboratory (30.00)

Prerequisites: MTH-125

MET-228 Statics for Technologists (3.00 cr.)

This course introduces the subject of mechanics of rigid bodies. Statics teaches the effects of forces acting upon stationary (or at least non-accelerating) rigid bodies.

Lecture (45.00)

Prerequisites: CIM-101, PHY-101 or PHY-201, and MTH-124 or MTH-125

MET-231 Strength of Materials (4.00 cr.)

This course is an analytical study of the effects of applied forces acting on structural members. Topics in this course include stress and strain, torsion, shear and moment diagrams, stresses in and deflection of beams, columns, connections, and the properties of materials. In this course, verification and theoretical analysis is conducted through laboratory experiments involving both destructive and nondestructive testing procedures.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: CIM-101, and MTH-124 or MTH-125, and PHY-101 or PHY-201

MET-232 Manufacturing Processes (4.00 cr.)

This course involves a classroom, laboratory, and field study of the basic methods of producing materials and products in the industrial community and a comprehensive view of the latest processes used in manufacturing. Topics in this course include technological properties of materials, the various cutting and noncutting processes, automation, safety, and the economics of manufacturing processes. Laboratory experience in this course involves the actual mass production of a product.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: MET-231 and CIM-101

MET-233 Project Design (3.00 cr.)

This is a capstone course designed to introduce the student to principles of comprehensive design in a mechanical engineering technology project. The student may work within a small engineering team to design and develop a project, or the student may work alone on a project, depending on class size. Students are expected to develop a complete plan from feasibility study, cost analysis and mechanical design and documentation through the building of a prototype. Interaction among students with different disciplines is desired. All students must make a formal written and verbal presentation at the completion of the course.

Lecture (15.00)

Laboratory (60.00)

Prerequisites: MET-231, MTH-132, PHY-102 and CIM-101

MET-236 Mechanics of Materials (3.00 cr.)

This course is an analytical study of the effects of applied forces acting on structural members. Topics in this course include stress and strain, torsion, shear and moment diagrams, stresses in and deflection of beams, column connections, and the properties of materials. In this course, verification and theoretical analysis is conducted through laboratory experiments involving both destructive and non-destructive testing procedures.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: MET-228

MET-237 Manufacturing Methods (3.00 cr.)

This course involves a classroom, laboratory, and field study of the basic methods of producing materials and products in the industrial community and a comprehensive view of the latest processes used in manufacturing. Topics in this course include technological properties of materials, the various cutting and noncutting processes, automation, safety, and the economics of manufacturing processes. Laboratory experience in this course involves the actual production of a product using mass production techniques.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: CIM-101, PHY-101 or PHY-201, and MTH-124 or MTH-125

MET-241 Machine Design (4.00 cr.)

This course concerns itself with the basic principles of the mechanics and strength of materials applied to the mechanical design of various machine elements, integrating groups of elements for unified mechanical systems, and the analysis and design of various detailed machine elements by mathematical and graphical methods. Also included in this course is the design of tools, jigs, and fixtures for basic manufacturing processes, from both the functional and economic aspects.

Lecture (30.00)

Laboratory (60.00)

Prerequisites: MET-221, MET-231, and PHY-101 or PHY-201

MET-242 Design of Machine Elements (3.00 cr.)

This course concerns itself with the basic principles of the mechanics and strength of materials applied to the mechanical design of various machine elements, integrating groups of elements for unified mechanical systems, and the analysis and design of various detailed machine elements by mathematical and graphical methods. Also included in this course is the design of tools, jigs, and fixtures for basic manufacturing processes; functional specifications and economic analyses will be discussed.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: MET-221 and MET-236

MANAGEMENT

MGT-101 Introduction to Business (3.00 cr.)

This course surveys the internal and functional complexity of business organizations. Emphasis is placed upon examining the ethical issues and demographic diversity faced by organizations, the understanding of business terminology, and the impact of technology upon business.

Lecture (45.00)

MGT-102 Introduction to Management (3.00 cr.)

This course introduces the basic principles and major theoretical approaches as well as the application of these theories and contemporary philosophies as related to current managerial situations. Areas such as employee motivation, leadership, organizational structure and change, planning and control methods will be discussed.

Lecture (45.00)

MGT-212 Human Resource Management (3.00 cr.)

This course covers those areas which are crucial to the effective management of the human resources within an organization. Topics covered include: organizational philosophy of personnel management, administrative policies and processes, recruitment and selection, evaluation, training and development, promotion,

wage and salary administration, safety, motivation, union-management relations, grievance handling and discipline administration. The emphasis is placed upon developing and maintaining a positive atmosphere for the mutual benefit of the employees, and the organization. Case studies and practical examples are used to illustrate the application of basic concepts and principles.

Lecture (45.00)

Prerequisites: MGT-102

MGT-213 Operations Management (3.00 cr.)

This course presents an analysis of the management of planning as applied in the design of production and operations systems, with emphasis on location, layout, methods study, product design, and product line determination. Analysis is also made of the control functions of the enterprise, including inventory control, purchasing, quality maintenance, materials and work measurement.

Lecture (45.00)

Prerequisites: MGT-102 and MTH-111

MGT-214 Office Management (3.00 cr.)

This course presents a study of the management of information and the coordination of personnel, equipment and organizational objectives in the area of business administration. The student is trained in all phases of a business organization, including the role of office manager. The skills required in office work production are taught in such a way as to enhance the effectiveness of distribution, sales personnel administration, accounting and management.

Lecture (45.00)

MGT-215 Labor Relations (3.00 cr.)

The course studies the process of collective bargaining and labor law. An analysis will be made of labor contract negotiations, grievances, and arbitration by using case method, text, and readings, and by having management and labor representatives present their points of view.

Lecture (45.00)

Prerequisites: MGT-102

MGT-216 Human Relations in Business & Industry (3.00 cr.)

This course consists of the study of behavior in organizational and work settings and the application of the methods, facts, and principles of psychology to individual and groups in organizational and work settings. Drawing from several areas of behavioral science, this course is designed for students in business and technical fields.

Lecture (45.00)

Prerequisites: MGT-102

MGT-221 Small Business Management I (3.00 cr.)

This course is designed to provide the student with practical knowledge about starting a small business and establishing its market function. The subjects covered include how to select the type of business, planning the legal, financial, and administrative structure of the business, marketing strategies, sales promotion and pricing.

Lecture (45.00)

MGT-222 Small Business Management II (3.00 cr.)

This course continues the study of small business management techniques. Emphasis is placed on planning physical facilities, purchasing and controlling materials and inventory size, planning personnel requirements (recruitment and selection), dealing with unions and collective bargaining, evaluating the financial health of the business, what accounting records are needed, and safeguarding the assets.

Lecture (45.00)

Prerequisites: MGT-221

MGT-223 Introduction to International Business (3.00 cr.)

Products have been traded across borders throughout recorded civilization. What is new about this phenomenon is the large number of companies with interrelated production and sales operations located around the world. The complex and constantly evolving realities of the global environment will be explored in International Business.

Lecture (45.00)

Prerequisites: MGT-101

MARKETING

MKT-101 Principles of Marketing (3.00 cr.)

The goal of this course is to introduce students to the complexities faced by a company/ organization as it markets its goods, services, and/or ideas. The course will explore the nature, function, and scope of modern marketing; analysis of the market, the product, and the distributions structure from producer to consumer; principles, practices, and policies of the price system; promotional activities; including the sales and advertising program; planning and evaluating the marketing system.

Lecture (45.00)

Prerequisites: ENG-013

MKT-102 Retail Management (3.00 cr.)

The fundamental principles of retailing and their application in small, medium-sized, and large retail organizations are presented. Problems of store location, layout, organization, employment, training, merchandising, management and control, e-commerce and current trends in global retailing are discussed.

Lecture (45.00)

MKT-123 Introduction to Promotion (3.00 cr.)

Media selection for retail stores is developed as well as concepts which help to determine effective ads and websites, and advertising budget, and the target market for a stores advertising campaign. The promotion aspect of the course concentrates on in-store displays, display windows and other layout considerations which encourage consumers to buy.

Lecture (45.00)

MKT-124 Fundamentals of Selling (3.00 cr.)

Selling in the marketing and retailing fields is developed through a survey of principles of salesmanship and techniques of effective selling.

Lecture (45.00)

MKT-125 Principles of E-Commerce (3.00 cr.)

This course provides an introduction to the market of electronic commerce. Real world examples, case studies and on-line observations will be used to explain technical and business aspects of this technology and their impact on traditional business models. The Internet will be used extensively to allow students to link the concepts in the text and current literature with real life situations. Business strategies and legal issues of electronic commerce will also be discussed. The course will emphasize the development and expansion of the students understanding of the importance of the following skill sets for business persons competing in this newly emerging economy: Communication, Critical Thinking, Self-Directed Learning, Information Technology Skills, Internet Skills, Documentation, Management Information Systems, Problem Solving.

Lecture (45.00)

Prerequisites: MGT-101 and CSC-101

MKT-212 Strategies in Marketing (3.00 cr.)

This course teaches the application of the case method to actual marketing problems with an emphasis on independent and group planning for problem solving.

Lecture (45.00)

Prerequisites: MKT-101

ACADEMIC SKILLS – MATHEMATICS

MTH-005 Consumer Math (3.00 cr.)

This course is designed for the college student who needs training in basic numerical processes with whole numbers, fractions, decimals, ratios, proportions and percents, and their applications. (Credits do not apply toward graduation requirements).

Lecture (45.00)

MTH-011 PreAlgebra Traditional (3.00 cr.)

This course is designed for the college student who needs training in basic numerical processes with whole numbers, fractions, decimals, ratios, proportions, percentages, signed numbers and linear equations. (Credits do not apply toward graduation requirements). Basic computation is a fundamental objective of this course. Therefore the use of calculators is prohibited.

Lecture (45.00)

Laboratory (15.00)

MTH-016 PreAlgebra Express (1.00 cr.)

This course is designed for the college student who needs training in basic numerical processes with whole numbers, fractions, decimals, ratios, proportions, percentages, signed numbers, and linear equations. (Credits do not apply toward graduation requirements). Basic computation is a fundamental objective of this course. Therefore, the use of calculators is prohibited.

Lecture (15.00)

Prerequisites: MTH-011

MTH-029 Elementary Algebra Traditional (4.00 cr.)

This course is designed for students who require a background of elementary algebra before taking further college mathematics courses. The course provides the students a familiarity with mathematical symbols and operations in order to formulate and solve first-degree and second-degree equations, graph equations and systems of equations, and work with polynomials, rational expressions, and radicals. Students will apply appropriate mathematical and statistical concepts and operations to interpret data and to solve problems. (Credits do not apply toward graduation requirements.) Basic computation is a fundamental objective of this course. Therefore, the use of calculators is prohibited.

Lecture (60.00)

Laboratory (15.00)

Prerequisites: MTH-011

MTH-035 Elementary Algebra Express (1.00 cr.)

This course is designed for students who require a background of elementary algebra before taking further college mathematics courses. The course provides the students a familiarity with mathematical symbols and operations in order to formulate and solve first-degree and second-degree equations, graph equations and systems of equations, and work with polynomials, rational expressions, and radicals. Students will apply appropriate mathematical and statistical concepts and operations to interpret data and to solve problems. (Credits do not apply toward graduation requirements.) Basic computation is a fundamental objective of this course. Therefore, the use of calculators is prohibited.

Lecture (15.00)

Prerequisites: MTH-029

MATHEMATICS

MTH-100 Algebraic Concepts (4.00 cr.)

This course covers the study of algebraic concepts with emphasis on algebraic manipulations and problem solving. Topics include factoring & special factorizations; rational expressions; rational exponents; solving rational, radical, and quadratic equations; solving systems of equations; graphing linear functions; linear inequalities; functions and relations; complex numbers; function composition and inverse functions; graphs of exponential and logarithmic functions; and solving exponential and logarithmic equations. Students are required to have a scientific, non-graphing calculator for Chapter 9.

Lecture (60.00)

Prerequisites: MTH-029 and ENG-013

MTH-101 Concepts of Mathematics (3.00 cr.)

Concepts of Mathematics is designed for students intending to major in a Liberal Arts area other than Math or the Physical Sciences. The course consists of a core of problem solving and mathematical modeling, sets and logic. In addition to this core, at least one of the following will be incorporated: Topics in Geometry, Probability, Discrete Mathematics.

Lecture (45.00)

Prerequisites: MTH-029 and ENG-013

MTH-105 Mathematical Systems I: Structures (3.00 cr.)

This course is designed for students majoring in a Liberal Arts area other than Mathematics or the Physical Sciences as well as education majors, with the exception of students intending to become secondary math or science teachers. Topics include problem solving techniques; sets; numeration systems; properties of counting numbers, whole, integers, rational and real numbers; number theory; equations and functions.

Lecture (45.00)

Prerequisites: MTH-029 and ENG-013

MTH-106 Mathematical Systems II: Geometry (3.00 cr.)

This course is designed for students majoring in a Liberal Arts area other than Mathematics or the Physical Sciences as well as education majors, with the exception of students intending to become secondary math or science teachers. This course introduces a series of different but related concepts in geometry. Geometric relationships and their corresponding mathematical arguments are studied with the goal of analyzing characteristics of two and three-dimensional geometric shapes. An introduction to probability and statistics is also covered.

Lecture (45.00)

Prerequisites: MTH-029 and ENG-013

MTH-107 Mathematics for Liberal Arts (3.00 cr.)

Mathematics for the Liberal Arts is designed for students intending to major in a Liberal Arts area other than Mathematics or the Physical Sciences. Students taking this course will be exposed to an assortment of mathematical methods and ideas and will examine their significance and interconnection, historical development, and applicability.

Lecture (45.00)

Prerequisites: MTH-029 and ENG-013

MTH-111 Introduction to Statistics (3.00 cr.)

This course provides students majoring in health, criminal justice, or liberal arts with a basic introduction to statistical concepts and methods. Topics covered include: frequency distributions; measures of central tendency and variability; linear regression and correlation; fundamentals of probability; binomial and Normal distributions; sampling distributions and the Central Limit Theorem; confidence intervals; and hypothesis testing on a single population. Many majors require a more rigorous introductory statistics course and students are advised to check their major requirements prior to registration. Students are required to purchase a Texas Instruments TI-83/84 or TI-83/84 Plus calculator.

Lecture (45.00)

Prerequisites: MTH-029 and ENG-013

MTH-112 Elements of Statistics II (3.00 cr.)

This course is designed to follow Introduction to Statistics. It will provide additional elementary statistical research tools and techniques. Topics covered include: hypothesis testing on two populations, Chi-square and F distributions, analysis of variance, regression, correlation, and nonparametric tests.

Lecture (45.00)

Prerequisites: MTH-111

MTH-114 College Algebra / Business & Soc Science (3.00 cr.)

This college algebra course is designed for business and social science majors. Topics include operations on algebraic and exponential expressions; linear equations; using technology for linear, polynomial, exponential, and logarithmic regression; inverse functions; theory and applications of polynomial, rational, exponential, and logarithmic functions; solving exponential and logarithmic equations; graphs and transformations; mathematics of finance; and an introduction to limits. The use of graphing calculators is an integral part of the course; their use throughout the course will facilitate understanding of salient concepts. Students are required to purchase a Texas Instruments TI-83/84 or TI-83/84 Plus calculator.

Lecture (45.00)

Prerequisites: ENG-013 and MTH-100 or MTH-109

MTH-117 Explorations in Mathematical Thoughts (3.00 cr.)

This is a general education mathematics course in which students are exposed to basic concepts and principles in the philosophy of mathematics and mathematical logic; including set theory; axiomatic systems and algebraic structures; the concept of infinity; number theory; and proof; among other topics. This course is for the student majoring in liberal arts; it is not intended for students majoring in mathematics or science.

Lecture (45.00)

Prerequisites: ENG-013 and MTH-100 or MTH-109

MTH-117H Honors Exploration/Mathematical Thoughts (3.00 cr.)

This is a general education mathematics course in which students are exposed to basic concepts and principles in the philosophy of mathematics and mathematical logic; including set theory; axiomatic systems and algebraic structures; the concept of infinity; number theory; and proof; among other topics. This course is for the student majoring in liberal arts; it is not intended for students majoring

in mathematics or science. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.

Lecture (45.00)

Prerequisites: ENG-013 and MTH-100 or MTH-109

MTH-122 Applied Calculus (3.00 cr.)

This course was developed for business and social science majors. Topics include functions, limits, derivatives, maxima and minima problems, integration, and the application of the calculus to problems in business and social sciences. Students are required to purchase a Texas Instruments TI-83/84 or TI-83/84 Plus calculator.

Lecture (45.00)

Prerequisites: ENG-013, and MTH-114 or MTH-120 or MTH-125

MTH-123 Pre-Calculus Mathematics I (4.00 cr.)

As the first of a two semester pre-calculus sequence, this is a rigorous course designed for science, technology, engineering, and mathematics majors. Topics include functions and graphs, theory of polynomial equations, polynomial, rational, logarithmic, and exponential functions and applications, linear systems and matrices. The teaching and use of graphing calculators are an integral part of the course to facilitate understanding of salient concepts. Students are encouraged to purchase a Texas Instruments TI-83/84 Plus calculator.

Lecture (60.00)

Prerequisites: ENG-013 and MTH-100 or MTH-109

MTH-124 Pre-Calculus Mathematics II (4.00 cr.)

This course is a continuation of Pre-calculus Mathematics I for science, technology, engineering and mathematics majors. In addition to trigonometry, other topics covered include conics, sequences, polar coordinates, parametric equations, vectors in plane, the dot product, and an introduction to limits. The teaching and use of graphing calculators are an integral part of the course to facilitate understanding of salient concepts. Students are encouraged to purchase a Texas Instruments TI-83/84 Plus calculator.

Lecture (60.00)

Prerequisites: ENG-013 and MTH-120 or MTH-123

MTH-125 Accelerated Precalculus (4.00 cr.)

This is a fast-paced, rigorous precalculus course designed for science, technology, engineering, and mathematics majors. Topics include algebraic equations; functions; graphing; and exponential, logarithmic, and trigonometric functions; vectors and the complex plane; sequences, series, and limits. Students are required to have a calculator in their possession for all class meetings and are encouraged to purchase a TI-83/84 calculator. STUDENTS WHO FAIL TO MEET THE MATHEMATICS PREREQUISITE MUST REGISTER FOR THE TWO SEMESTER SEQUENCE--MTH-123 & MTH-124.

Lecture (60.00)

Prerequisites: ENG-013, and earned an "A" in MTH-100 or MTH-109 or proper Mathematics Placement Exam Score

MTH-129 Discrete Mathematics (4.00 cr.)

This is an introductory course to the principles, concepts, and applications of discrete mathematics intended for mathematics and computer science students. Topics such as logic and proof; sets, functions and relations; graphs and trees; and combinatorics will be presented. The study and use of algorithms will be emphasized.

Lecture (60.00)

Prerequisites: MTH-140

MTH-132 Statistics for Technology (4.00 cr.)

This course is designed for technology students who need a basic knowledge of statistical and elementary research techniques. Topics covered include: frequency distributions, sigma notation, measures of central tendency, measures of variability, fundamentals of probability, binomial distribution, normal distribution, sampling distributions, Central Limit Theorem, confidence intervals, sample size determination, hypothesis testing on a single population, regression and correlation, and Statistical Process Control (SPC).

Lecture (60.00)

Prerequisites: ENG-013, and MTH-100 or MTH-109

MTH-134 Biostatistics (4.00 cr.)

This course emphasizes experimentation and application of statistical methods to the biological sciences. Topics include exploring, describing, and organizing data; discrete and continuous random variables and probability distributions; one and two sample estimation and hypothesis testing; linear regression and correlation; contingency tables; analysis of variance; and non-parametric methods. A statistical software package will be used to manipulate data, carry out statistical analyses and formally present results. Biology majors will comprise most of the students registering for this course. Lab sessions are taught by a member of the Biology department.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: MTH-140, BIO-111 and ENG-101

MTH-140 Calculus I (4.00 cr.)

This is the first course of the calculus sequence intended for science, technology, engineering, and math majors. Topics covered include: limits and continuity of functions, differentiation of algebraic, and transcendental functions, applications of the derivative, anti-differentiation of algebraic and transcendental functions.

Lecture (60.00)

Prerequisites: MTH-124, MTH-125 or MTH-130

MTH-140H Honors Calculus I (4.00 cr.)

This is the first course of the calculus sequence intended for science, technology, engineering, and math majors. Topics covered include: limits and continuity of functions, differentiation of algebraic, and transcendental functions, applications of the derivative, anti-differentiation of algebraic and transcendental functions. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.

Lecture (60.00)

Prerequisites: MTH-124, MTH-125 or MTH-130

MTH-145 Linear Algebra (4.00 cr.)

This course covers topics including matrices, determinants, solutions of linear systems, vectors, vector spaces, linear transformations, eigenvalues and eigenvectors, orthogonality, least-squares, applications and inner product spaces.

Lecture (60.00)

Prerequisites: MTH-140

MTH-150 Calculus II (4.00 cr.)

This course is a continuation of Calculus I. Topics include: applications of the definite integrals including areas, volumes, lengths of curves, work, fluid pressure and forces, center of mass; techniques of integration, improper integrals, sequences, series, parametric and polar curves.

Lecture (60.00)

Prerequisites: MTH-140

MTH-171 Statistics I (3.00 cr.)

This course is designed for business, social science, and other majors requiring knowledge of the basic principles and methods of statistics and elementary research techniques. Topics include measures of central tendency and dispersion; probability theory; descriptive methods in linear regression and correlation; random variables and probability distributions; binomial, normal, and t-distributions; sampling distributions and the central limit theorem; confidence intervals; 1-sample and 2-sample hypothesis testing for means and proportions. Students will learn to use a statistical software package through assigned projects.

Lecture (45.00)

Prerequisites: ENG-013, and MTH-114 or MTH-123 or MTH-125 or MTH-120

MTH-172 Statistics II (3.00 cr.)

This course is a continuation of Statistics I. Topics covered include a review of confidence intervals and hypothesis testing, type I and type II errors, power of the test; F distributions and analysis of variance; chi-square tests for goodness-of-fit, independence, and homogeneity; nonparametric tests; time series, forecasting, and index numbers. Students will use a statistical software package for assigned projects.

Lecture (45.00)

Prerequisites: MTH-171

MTH-210 Calculus III (4.00 cr.)

This course is a continuation of MTH-150 (Calculus II). Topics include: Calculus of polar and parametric equations, differential calculus of several variables, multiple integration, two and three-dimensional vectors, vector valued functions and vector analysis.

Lecture (60.00)

Prerequisites: MTH-150

MTH-220 Differential Equations (4.00 cr.)

Topics covered include solution of first order differential equations, higher order linear differential equations and applications; undetermined coefficients; Laplace transforms; systems of differential equations; and numerical techniques to solve initial value differential equations.

Lecture (60.00)

Prerequisites: MTH-150

Corequisites: MTH-210

MUSIC**MUS-100 Beginner Music Lessons (1.00 cr.)**

Beginner Music Lessons are private instrumental or vocal music lessons required for music majors. This course is required for students who do not meet the minimal score in their placement audition. Technique and repertoire lesson material is generated from beginner-level methodology.

Laboratory (30.00)

MUS-101 Music Appreciation I (3.00 cr.)

This elective course is essentially a course in perceptive listening for non-music majors. Beginning with fundamentals, the student is introduced to music listening in a manner that will enable the student to gain an understanding of the art, its vocabulary, and its techniques. The music used is from the Renaissance through the 20th century. Outside concert attendance is required.

Lecture (45.00)

MUS-101H Honors Music Appreciation (3.00 cr.)

This elective course is essentially a course in perceptive listening for non-music majors. Beginning with fundamentals, the student is introduced to music listening in a manner that will enable the student to gain an understanding of the art, its vocabulary, and its techniques. The music used is from the Renaissance through the 20th century. Outside concert attendance is required. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.

Lecture (45.00)

MUS-103 Intermediate Music Lessons (1.00 cr.)

Intermediate Music Lessons are private instrumental or vocal music lessons required for music majors. It is the first semester in a required sequence of three semesters of music lessons. Technique and repertoire lesson material is generated from intermediate-level methodology.

Laboratory (30.00)

MUS-104 Aural Theory I (2.00 cr.)

Aural Theory I is an advanced course for music majors designed to develop more critical ear-training and sight-singing skills. Students will be expected to extensively practice aural skills outside of class time and during labs. Students are recommended to take this course in conjunction with Music Theory I (MUS 123) and Class Piano I (MUS 125). Students entering into the class should understand key signatures, time signatures and how to read music in treble and bass clefs. Otherwise, it is seriously recommended that the student take Fundamentals of Music (MUS-121) before entering Aural Theory I.

Lecture (15.00)

Laboratory (30.00)

MUS-105 Advanced Music Lessons I (1.00 cr.)

Advanced Music Lessons I are private instrumental or vocal music lessons required for music majors. It is the second semester in a required sequence of three semesters of music lessons.

Laboratory (30.00)

Prerequisites: MUS-103

MUS-106 World Music Cultures (3.00 cr.)

World Music Cultures is a broad-based music course that examines social usages, both current and historical, of music throughout the diverse cultures of our world. Another major aim of this course is to explore the role of music in forming communities. Students will study practical music traditions ranging from those associated with major life events such as birth, marriage and death to those more commonly associated with daily routines such as socialization, expression, and passing time. Course activities include studying Western and non-Western cultures, their diverse social practices and analyzing the music and musical practices associated with each social tradition.

Lecture (45.00)

MUS-111 Music History I (3.00 cr.)

This course treats music as an integral part of the western intellectual heritage. The subject is treated primarily as a history of musical style. The first semester covers from ancient Greece to the age of the Baroque.

Lecture (45.00)

MUS-112 Music History II (3.00 cr.)

This course treats music as an integral part of the western intellectual heritage. The subject is treated primarily as a history of musical style. The second semester covers the period from 1750 to the present. Both semesters contain research skills and assigned listening. Although designed for music majors, Music History can be elected by any student.

Lecture (45.00)

MUS-113 Jazz History (3.00 cr.)

Jazz History is the study of how a variety of world cultures assembled on American soil to create an entirely original art form. Using a highly rhythmic and spontaneous music as its instrument, Jazz History gathers sounds, people and traditions from around the world and examines how they influenced one another over the course of 250 years.

Lecture (45.00)

MUS-115 Jazz Band Ensemble I (1.00 cr.)

This course is for students wanting experience playing in a jazz band ensemble. Music reading ability and facility on an instrument is required. Attendance at weekly rehearsals and concerts is required. Students will learn proper performance styles for the jazz and commercial idiom. Solo opportunities for improvisation are afforded each performer.

Lecture (7.50)

Laboratory (30.00)

MUS-116 Jazz Band Ensemble II (1.00 cr.)

This course is for students wanting additional experience playing in a jazz band ensemble. Music reading ability and facility on an instrument is required. Attendance at weekly rehearsals and concerts is required. Students will learn proper performance styles for the jazz and commercial idiom. Solo opportunities for improvisation are afforded each performer.

Lecture (7.50)

Laboratory (30.00)

Prerequisites: MUS-115

MUS-121 Fundamentals of Music (3.00 cr.)

No previous music training is needed for this course, which is an introduction to the technicalities of music and the skills needed to interpret written music. For music majors, this course is a pre-requisite or may be taken concurrently with Music Theory I. This course also serves as an elective for non-music majors.

Lecture (45.00)

MUS-123 Music Theory I (3.00 cr.)

Music Theory I is an advanced course for music majors in diatonic music analysis. The course covers advanced concepts of key signatures, rhythmic values, time signatures, major/minor scales, triads, seventh chords, inversion figured bass, popular music symbols, cadences, melodic principles, harmonic analysis and nonharmonic tones. Students entering into the class should understand basic key signatures and time signatures, as well as, how to read music in treble and bass clefs. Otherwise, it is seriously recommended that the student take Fundamentals of Music (MUS 121) before entering Music Theory I.

Lecture (45.00)

MUS-124 Music Theory II (3.00 cr.)

Students will learn to identify and construct triads on each step of major and minor scales, primary and secondary triads, rules governing doubling and spacing of root position and 1st and 2nd inversion, phase structure, six cadences, and basic harmonic progressions and substitutions.

Lecture (45.00)

Prerequisites: MUS-123

MUS-125 Class Piano I (1.00 cr.)

Class Piano I is an elementary course in piano instruction designed for a group setting. The class covers basic piano technique and a simple repertoire. Outside piano practice is required. Students interested in taking this class should have prior knowledge of, and experience with, all major key signatures and reading rhythms in both simple and compound meters. Otherwise, it is seriously recommended that the student take Fundamentals of Music (MUS-121) before entering Class Piano I (MUS 125).

Laboratory (30.00)

MUS-127 Fundamentals of Music/Sound Engineers (3.00 cr.)

Fundamentals of Music for Sound Engineers is a course in aural skills development and music theory. Focus is placed on fundamental skills and knowledge necessary for working in a recording studio. This course includes study of pitches and rhythms, the grand staff, various historical styles of music, acoustic and electronic instrument timbres, general instrument ranges and sonic properties, analysis and application of melodic and rhythmic constructions, chord progressions and song forms, harmonic techniques used in commercial music, modern chord notation and chord voicing, tools of the recording process, balance, equalization, panning, reverb, compression and limiting.

Lecture (45.00)

MUS-128 Keyboarding Techniques/Sound Engineers (1.00 cr.)

This course is intended to provide students in the Music Recording Certificate program the means to gain functional proficiency in piano and keyboard skills. The keyboard is the primary musical instrument with which modern recording engineers and producers interact with computer-based recorders and digital audio workstations. Emphasis is on the operation of modern electronic keyboard instruments, MIDI, and developing the fundamental musical skills used in contemporary music production. These skills will be applied to individual projects in the course.

Lecture (15.00)

Laboratory (15.00)

MUS-129 Introduction to Audio Recording (3.00 cr.)

Introduction to Audio Recording is an introduction to the physical properties of sound and to the various technologies used to record and reproduce sound. This course includes a study of the physical attributes of sound and the physics of musical instruments, acoustic properties of the ear and of closed environments, the interrelationships and differences of physical acoustics and psychoacoustics. This course also includes a study of the fundamentals of sound recording techniques and methodology, a general history of recording, acoustics, basic electronics, the decibel, magnetism, tape recorders and tape formats, mixers, signal processing, monitoring systems, acoustic, electronic and wave-form analysis concepts, microphone characteristics, selection, and placement, proper studio etiquette, and professionalism. This course also emphasizes the importance of sound aesthetics and ethics in the sound recording process, signal routing, tape machine operation techniques, console and tape machine theory and operation concepts, studio production procedures including recording, overdubbing, mixing, and editing, reaction of sound to surfaces and time delays. No previous musical background or recording experience required. However, an active interest in digital audio, recording techniques, sound reinforcement and sound studio maintenance is necessary.

Lecture (45.00)

MUS-131 MIDI I (3.00 cr.)

MIDI, the acronym for Musical Instrument Digital Interface, is one of the newest and most exciting areas of the modern recording industry. MIDI is the electronic marriage of music and computer technology and is a revolutionary event in

the history of music composition, recording and arranging. MIDI, specifically, uses three components: a computer (Mac), software (Performer, Mark of the Unicorn), and a controller (keyboard). The students will learn to record music using this equipment in two ways: step recording (entering each note individually) and real time playing. Multitimbre tones (sequencing) may be used and up to sixteen track recording is available.

Lecture (45.00)

MUS-133 Audio Recording Techniques I (3.00 cr.)

Audio Recording Techniques I is an introductory course intended to familiarize students with the technical aspects of the music recording process. Students will explore the concepts and techniques of audio recording, including the nature of sound; theory and operation of recording equipment; live and multi-track recording; and session procedures. This course is designed for students who are interested in pursuing careers in music recording and production.

Lecture (45.00)

Laboratory (15.00)

MUS-134 Audio Recording Techniques II (3.00 cr.)

Audio Recording Techniques II continues the study and application of recording techniques begun in Audio Recording Techniques I. Emphasis is placed on multi-track recording and mix-down, microphone placement and patch bay function. Students will create high quality recordings using advanced techniques, as well as critical and musical listening skills. This course is designed for students who are interested in pursuing careers in music recording and production.

Lecture (45.00)

Laboratory (15.00)

Prerequisites: MUS-133

MUS-135 MIDI/DAW I (Digital Audio Workstation) (3.00 cr.)

This course is an introduction to the techniques of computer-based music recording and editing and advanced MIDI topics using digital audio sequencing software packages on the Macintosh computing platform, principally Logic Pro and GarageBand. This course is designed to give the aspiring student a sound pedagogical foundation in the theory and application of computer-based music technologies, principally MIDI and digital audio recording. Students also explore sequencing, sampling, and synthesis techniques on today's most advanced MIDI synthesizers, samplers, and sound modules. MIDI instruments, operation, and interconnection are also explored in lecture and lab.

Lecture (30.00)

Laboratory (30.00)

Corequisites: MUS-129 and MUS-133

MUS-136 MIDI/DAW II (Digital Audio Workstation) (3.00 cr.)

This course is a continuation of MIDI and the Digital Audio Workstation (DAW) I, expanding upon and adding to the skills learned in the previous semester in the areas of MIDI and digital audio recording. Digital Audio Workstation prepares the students for the real world use of Logic in the music production industries. Students apply previous knowledge of MIDI/DAW I, mixing, tracking, and go fully digital and non-linear with Logic. All aspects of digital editing, clocking, tracking, mixing, mastering, surround / DTS encoding, and MIDI production are explained in detail, and students have their own studio for hands-on training during their labs.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: MUS-135

Corequisites: MUS-134

MUS-141 Ensemble I (1.00 cr.)

This course provides the opportunity for instrumentalists to learn and perform with others the skills of performing in the jazz, pop and classical style. Emphasis will be on acquiring the technique to play scales, cord voicing and styles appropriate to the pieces being studied. Students will learn proper performance styles. Solo opportunities for improvisation are afforded each performer. Skill on an instrument and music reading ability are required.

Lecture (7.50)

Laboratory (30.00)

MUS-142 Ensemble II (1.00 cr.)

This course provides the opportunity for instrumentalists to learn and perform with others the skills of performing in the jazz, pop and classical style. Emphasis will be on acquiring the technique to play scales, cord voicing and styles appropriate to the pieces being studied. Students will learn proper performance styles. Solo opportunities for improvisation are afforded each performer. Skill on an instrument and music reading ability are required.

Lecture (7.50)

Laboratory (30.00)

MUS-161 College Choir I (1.00 cr.)

This choir program is designed to give students the opportunity to sing the great choral music of various eras. Appropriate style, phrasing, vocal production, and musicianship are taught. Performances are required. Open to all students, no audition required.

Laboratory (30.00)

MUS-162 College Choir II (1.00 cr.)

This choir program is designed to give students the opportunity to sing the great choral music of various eras. Appropriate style, phrasing, vocal production, and musicianship are taught. Performances are required. Open to all students, no audition required.

Laboratory (30.00)

Prerequisites: MUS-161

MUS-181 Concert Band I (1.00 cr.)

Acceptance by audition is required for all students who want to rehearse and perform standard and contemporary concert band literature and observe rehearsal methods and techniques. Interpretation, phrasing, and musicianship are taught. Performances at concerts are required.

Lecture (30.00)

MUS-182 Concert Band II (1.00 cr.)

Acceptance by audition is required for all students who want to rehearse and perform standard and contemporary concert band literature and observe rehearsal methods and techniques. Interpretation, phrasing, and musicianship are taught. Performances at concerts are required.

Lecture (30.00)

Prerequisites: MUS-181

MUS-195 Orchestra I (1.00 cr.)

Acceptance by audition is required for all students who want to rehearse and perform standard and contemporary orchestra literature and observe rehearsal methods and techniques. Interpretation, phrasing, and musicianship are taught. Performances at concerts are required.

Lecture (30.00)

MUS-196 Orchestra II (1.00 cr.)

Acceptance by audition is required for all students who want to rehearse and perform standard and contemporary orchestra literature and observe rehearsal methods and techniques. Interpretation, phrasing, and musicianship are taught. Performances at concerts are required.

Lecture (30.00)

Prerequisites: MUS-195

MUS-200 Aural Theory II (2.00 cr.)

Aural Theory II is the second level in a sequence designed to develop ear training and sight singing skills as they apply to music theory and performance.

Lecture (15.00)

Laboratory (30.00)

MUS-201 Class Piano II (1.00 cr.)

Class Piano II is an elementary course in piano instruction designed for a group setting. The class covers basic piano technique and a simple repertoire. Outside piano practice is required.

Laboratory (30.00)

Prerequisites: MUS-125

MUS-202 Advanced Music Lessons II (1.00 cr.)

Advanced Music Lessons II are private instrumental or vocal lessons required for

music majors. It is the third semester in a required sequence of three semesters of music lessons culminating with a music recital. Participants are required to attend one additional student recital during the course of the semester.

Laboratory (30.00)

Prerequisites: MUS-105

MUS-203 Music Major Recital (1.00 cr.)

Music Major Recital is a formal performance prepared and executed by the graduating music major. After completing two years of music instruction, students demonstrate their performance abilities in front of their teachers, peers and an audience.

Laboratory (30.00)

Prerequisites: MUS-105

MUS-217 Jazz Band Ensemble III (1.00 cr.)

This course is a continuation of Jazz Band Ensemble I and II. Music reading ability and facility on an instrument is required. Attendance at weekly rehearsals and concerts is required. Students will learn proper performance styles for the jazz and commercial idiom. Solo opportunities for improvisation are afforded each performer.

Lecture (7.50)

Laboratory (30.00)

Prerequisites: MUS-116

MUS-218 Jazz Band Ensemble IV (1.00 cr.)

Jazz Band Ensemble IV continues the experience offered through previous ensembles. Music reading ability and facility on an instrument is required. Attendance at weekly rehearsals and concerts is required. Students will continue to learn proper performance styles for the jazz and commercial idiom. Solo opportunities for improvisation are afforded each performer.

Lecture (7.50)

Laboratory (30.00)

Prerequisites: MUS-217

MUS-225 Music Theory III (3.00 cr.)

Students will learn to read alto and tenor clef, demonstrate writing and analyzing skills in part writing, write simple melodies with basic harmonies, write four part harmony, identify non-harmonic tones, write dominant and non-dominant seventh chords, secondary chords, and compose music using the Sonata Allegro form.

Lecture (45.00)

Prerequisites: MUS-124

MUS-227 Live Sound Reinforcement (3.00 cr.)

The Live Sound Recording course is designed to give students practical experience in the setup and operation of the audio equipment used for major concert productions. The different positions in a live sound event are introduced, as well as, the differences between studio and live sound engineering. Sound reinforcement, live sound mixing, and engineering live concerts that contain multiple genres of music are explored.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: MUS-129

MUS-228 Business of Music (3.00 cr.)

Business of Music focuses on the history, procedures, standard practices, and economics of the music industry. Students in this course will explore and discuss independent and major record labels, record promotion, distribution and retailing, contracts, music publishing and copyrights, music licensing, music on the radio, television, movies and internet, career planning and development, and historical perspectives of the music industry.

Lecture (45.00)

MUS-229 Basic Studio Maintenance (3.00 cr.)

Basic Studio Maintenance teaches routine maintenance and trouble-shooting skills for use in a recording studio environment. The class discusses issues of grounding, intermittency, equipment failure and system architecture. It also includes a thorough discussion of computer-related issues such as backup, data recovery, installation and hardware integration.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: MUS-129

MUS-230 Audio Production (3.00 cr.)

Audio Production bridges the world of audio engineering and audio production. It continues to practice fundamental audio recording techniques as well as fine tune critical listening and analytic skills in lab settings. During the course of the semester, students will practice hands-on application of production in conjunction with volunteer artists and bands.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: MUS-134

MUS-231 Mixing Audio (3.00 cr.)

Mixing Audio is a dedicated class to the art and craft of mixing audio productions. This class will approach fundamental mix techniques from styles as diverse as rock, hip-hop, jazz and punk. Because of the nature of mixing being both art and craft; the class will not only approach fundamental uses of various mixing tools, but also aesthetic choice and artistic vision.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: MUS-136

MUS-232 Sound Design (3.00 cr.)

Sound Design acts as both an introduction and practice lab for the art of creating and manipulating sound for film, television and internet accompaniment. The class will cover the logistical aspect of synchronization and scoring as well as advanced mix techniques based around sonic manipulation.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: MUS-134 and MUS-136

MUS-233 Advanced Audio Production and Mixing (3.00 cr.)

Advanced Audio Production and Mixing continues the hands-on exploration of the record production process with an even more detailed hands-on experience. Students will explore more advanced mixing techniques that have evolved in modern music, as well as, participate in a thorough survey of mastering. Mastering will be used collaboratively between students to foster communication skills and critical listening. The class will also shed light on the modern hybrid studio setup and discuss concepts of analog summing, external inserts and combining the digital and analog mediums.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: MUS-230 and MUS-231

MUS-243 Ensemble III (1.00 cr.)

This course provides the opportunity for instrumentalists to learn and perform with others the skills of performing in the jazz, pop and classical style. Emphasis will be on acquiring the technique to play scales, cord voicing and styles appropriate to the pieces being studied. Students will learn proper performance styles. Solo opportunities for improvisation are afforded each performer. Skill on an instrument and music reading ability are required.

Lecture (7.50)

Laboratory (30.00)

MUS-244 Ensemble IV (1.00 cr.)

This course provides the opportunity for instrumentalists to learn and perform with others the skills of performing in the jazz, pop and classical style. Emphasis will be on acquiring the technique to play scales, cord voicing and styles appropriate to the pieces being studied. Students will learn proper performance styles. Solo opportunities for improvisation are afforded each performer. Skill on an instrument and music reading ability are required.

Lecture (7.50)

Laboratory (30.00)

MUS-263 College Choir III (1.00 cr.)

This choir program is designed to give students the opportunity to sing the great choral music of various eras. Appropriate style, phrasing, vocal production, and musicianship are taught. Performances are required. Open to all students, no audition required.

Laboratory (30.00)

Prerequisites: MUS-162

MUS-264 College Choir IV (1.00 cr.)

This choir program is designed to give students the opportunity to sing the great choral music of various eras. Appropriate style, phrasing, vocal production, and musicianship are taught. Performances are required. Open to all students, no audition required.

Laboratory (30.00)

Prerequisites: MUS-263

MUS-275 Audio Production Internship (3.00 cr.)

Audio Production Internship provides the student with work experience within the recording studio, live sound, broadcast or post production fields. The student, with guidance from a mentoring professor, will find an appropriate internship in his/her chosen field. This unpaid position for the duration of the final spring semester aims to give the student practical experience in their chosen field.

Lecture (45.00)

Prerequisites: MUS-230

MUS-283 Concert Band III (1.00 cr.)

Acceptance by audition is required for all students who want to rehearse and perform standard and contemporary concert band literature and observe rehearsal methods and techniques. Interpretation, phrasing, and musicianship are taught. Performances at concerts are required.

Laboratory (30.00)

Prerequisites: MUS-182

MUS-284 Concert Band IV (1.00 cr.)

Acceptance by audition is required for all students who want to rehearse and perform standard and contemporary concert band literature and observe rehearsal methods and techniques. Interpretation, phrasing, and musicianship are taught. Performances at concerts are required.

Laboratory (30.00)

Prerequisites: MUS-283

MUS-297 Orchestra III (1.00 cr.)

Acceptance by audition is required for all students who want to rehearse and perform standard and contemporary orchestra literature and observe rehearsal methods and techniques. Interpretation, phrasing, and musicianship are taught.

Lecture (30.00)

Prerequisites: MUS-196

MUS-298 Orchestra IV (1.00 cr.)

Acceptance by audition is required for all students who want to rehearse and perform standard and contemporary orchestra literature and observe rehearsal methods and techniques. Interpretation, phrasing, and musicianship are taught. Performances at concerts are required.

Lecture (30.00)

Prerequisites: MUS-297

NURSING: OUR LADY OF LOURDES**NOL-110 Health Assessment (2.00 cr.)**

This course will allow students to develop a strong foundation in health assessment needed to care for diverse patients across the lifespan. Emphasis is placed on obtaining a health history, performing a comprehensive assessment and identifying health risks. Concepts of patient-centered care, communication, evidence-based practice and safety will be introduced. Laboratory experiences will provide the student the opportunity to demonstrate assessment skills, identify alterations in health, communicate findings, and develop an appropriate teaching plan to promote health.

Lecture (15.00)

Laboratory (30.00)

Prerequisites: CHM-101, ENG-102, HIS-101, MTH-111, PSY-101 and BIO-118 or BIO-212, and BIO-121 or BIO-221

Corequisites: PSY-109 and NOL-120

NOL-120 Caring for Patients Across Lifespan I (9.00 cr.)

This course provides an introduction to nursing and roles of the nurse, as well as professional and patient care concepts. Emphasis is placed on the knowledge and skills needed to provide safe, quality care. Concepts of patient-centered care, teamwork and collaboration, professional nursing practice, leadership, and health

informatics will be introduced. The student will have the opportunity to care for diverse patients in select in-patient and outpatient settings. The theoretical foundation for nursing knowledge and skills is presented; and the student is given an opportunity to demonstrate these skills and apply knowledge in the laboratory and clinical settings.

Lecture (60.00)

Clinical (240.00)

Prerequisites: CHM-101, ENG-102, HIS-101, MTH-111, PSY-101, and BIO-118 or BIO-212, and BIO-121 or BIO-221

Corequisites: PSY-109 and NOL-110

NOL-130 Caring for Patients Across Lifespan II (9.00 cr.)

This course builds upon the student's knowledge of professional nursing practice through the application of the program concepts of patient-centered care, teamwork and collaboration, evidence-based practice, safety, informatics, leadership, professionalism, and communication. The course focuses on the care of diverse patients across the lifespan with select medical-surgical health alterations. The care of the childbearing family and principles of pediatric care are also presented. Clinical experiences provide the student an opportunity to apply theoretical concepts and implement safe patient care in medical surgical, perinatal, pediatric and selected outpatient settings

Lecture (60.00)

Clinical (240.00)

Prerequisites: NOL-110, NOL-120 and PSY-109

Corequisites: HIT-110

NOL-215 Caring for Patients Across Lifespan III (6.00 cr.)

This course builds upon the student's knowledge of professional nursing practice through the application of the program concepts of patient-centered care, teamwork and collaboration, evidence-based practice, safety, informatics, professionalism, leadership, quality improvement, and communication. The course focuses on the care of diverse patients across the lifespan with select medical-surgical health alterations and perioperative management. The student will have the opportunity to apply theoretical knowledge to safely care for patients in medical-surgical, perioperative and selected outpatient settings.

Lecture (45.00)

Clinical (160.00)

Prerequisites: NOL-110, NOL-120 and PSY-109

Corequisites: SOC-101 and PHL-232

NOL-225 Caring for Patients Across Lifespan IV (9.00 cr.)

This course focuses on advanced concepts of nursing care as they relate to individual and groups of patients across the lifespan with complex, multisystem alterations in health. The course integrates the program concepts of patient-centered care, teamwork and collaboration, evidence based practice, quality improvement, safety, informatics, professionalism, leadership and communication. Emphasis is placed on managing groups of patients and patients with complex needs. Clinical experiences provide the student an opportunity to apply theoretical concepts to safely care for individuals and groups of patients in a variety of settings. This course culminates in a capstone clinical experience to facilitate the student's transition to nursing practice.

Lecture (60.00)

Clinical (240.00)

Prerequisites: NOL-130, HIT-110, NOL-215, PHL-232 and SOC-101

Corequisites: NOL-235

NOL-235 Transition to Practice (3.00 cr.)

This course will allow students to discuss the role of professional nursing in a dynamic health care environment. Students will examine professional, practice, legislative, licensure, and legal issues affecting nursing practice. The course will provide the knowledge and skill to allow students to effectively transition into the role of the Registered Professional nurse. Concepts of communication, evidence based practice, leadership, quality improvement, teamwork and collaboration, and professionalism are emphasized.

Lecture (45.00)

Prerequisites: NOL-130, HIT-110, NOL-215, PHL-232 and SOC-101

Corequisites: NOL-225

NURSING

NUR-102 Introduction to Practical Nursing (3.00 cr.)

This introductory course presents the many facets of the profession of nursing, and the specific role of the practicing Licensed Practical Nurse within the context of current differentiations between healthcare providers, arenas of care, and healthcare delivery systems. Basic theoretical concepts are presented which serve as the underpinnings from which higher-level critical thinking and decision-making capabilities will evolve. The fundamental elements of productive nursing care will be covered, including: effective communication and education, the nursing process, multiculturalism, health and wellness, physiologic balance, pain management, medical terminology, and complementary/alternative therapies. The construct of holism is the unifying thread that provides both a basis for supportive and restorative nursing care practices, and a consistent yardstick with which to evaluate the outcomes of those practices.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

Corequisites: ALH-122 and BIO-103

NUR-103 Intro to Health Care Professions I (1.00 cr.)

This is the first course in a 4 course seminar sequence in the pre-nursing licensure program. This course provides a comprehensive overview of the most current trends and issues occurring in nursing and health care. It is about the exciting evolution of nursing: it's very visible public image and its core foundations, which include nursing theory, nursing education and licensure and certification. This course will serve as a valuable resource for the entry-level nurse.

Lecture (15.00)

NUR-104 Intro to Health Care Professions II (1.00 cr.)

This is the second course in a 4 course seminar sequence in the pre-nursing licensure program. This course provides a comprehensive overview of the most current trends and issues occurring in nursing and health care including health care economics, the evolution of the health care system, health care policy and politics, and legal and ethical issues. This course will serve as a valuable resource for the entry-level nurse.

Lecture (15.00)

Prerequisites: NUR-103

NUR-106 Practical Nursing: Adult Health I (5.00 cr.)

This course builds on the student's basic understanding of the foundational principles of the nursing process which support the development of the individualized nursing plan of care for patients in the acute care setting. Specific theory and procedural techniques focused on the effective evaluation and prioritized address of the physiologic, psychological and socio-cultural impactors on health will be covered. Emphasis is also placed on the role of the Practical Nurse in the collection of data, and the planning and implementation of care for patients from diverse backgrounds experiencing equally diverse health problems. Medication dose calculation and administration, pre-and post-operative care, fluid and electrolyte management, infectious diseases, physical assessment, pain management strategies, diagnostic tests, oncology, responding to emergencies and the older adult will receive primary focus in the theoretical, skills laboratory and clinical settings.

Lecture (45.00)

Laboratory (30.00)

Clinical (90.00)

Prerequisites: ALH-122, BIO-103, HIT-120 and NUR-102

Corequisites: ENG-101, HIT-132 and PSY-101

NUR-107 Practical Nursing Pharmacology (3.00 cr.)

This course introduces the practical nursing student to basic pharmacological concepts including pharmacokinetics, pharmacodynamics, and pharmacotherapeutics. The principles of drug classifications are presented in relation to each body system and the nursing process. The roles of the professional & practical nurse are identified. Drug dosage calculation for safe and effective drug administration in the clinical setting is emphasized.

Lecture (45.00)

Prerequisites: BIO-103 or BIO-117 and BIO-118 or BIO-211 and BIO-212

NUR-110 Maternal/Child Practical Nursing (4.00 cr.)

This course presents an overview of the specialized health care needs of women and children, with content including family health promotion, economic and sociocultural issues influencing the family, the process and potential problems of the childbearing cycle, newborn and pediatric care standards, and common childhood pathologies. Students will apply previously learned microbiological and psychological concepts to reinforce the nursing care plan for patient education, physical care requirements, and basic interventions for the treatment of common maternal, neonatal and pediatric health alterations.

Lecture (30.00)

Laboratory (30.00)

Clinical (90.00)

Prerequisites: ENG-101, HIT-132, NUR-106 and PSY-101

Corequisites: FNS-105, NUR-116 and BIO-121

NUR-113 Intro to Health Care Professions III (1.00 cr.)

This is the third course in a 4 course seminar sequence in the pre-nursing licensure program. This course provides a comprehensive overview of the most current trends and issues occurring in nursing and health care, with a focus on the basic skills that are necessary for nurses to function effectively in the professional nursing role. Topics include leadership role and management theory, effective communication, nursing care delivery models and the role of nursing research and evidence base practice. This course will serve as a valuable resource for the entry-level nurse.

Lecture (15.00)

Prerequisites: NUR-103 and NUR-104

NUR-114 Intro to Health Care Professions IV (1.00 cr.)

This is the fourth and final course of a 4 course seminar sequence in the pre-nursing licensure program. This course provides a comprehensive overview of the most current trends and issues occurring in nursing and health care, preparing the student to embark on a career in the field of nursing. Topics include the transition process from student to professional nurse, contemporary nursing roles and career opportunities, time management and the NCLEX exam. This course will serve as an excellent base for novice students as they build their career into professional nursing.

Lecture (15.00)

Prerequisites: NUR-103, NUR-104 and NUR-113

NUR-116 Practical Nursing: Mental Health (3.00 cr.)

This course builds on the student's basic understanding of the foundational principles of psychology and their direct application to the care of individuals experiencing mental health deviations. Throughout this course the student will explore the role of the Practical Nurse as an integral member of the multidisciplinary team. Course content focuses on the application of previously mastered physical care skill sets and critical thought concepts in conjunction with the active employment of techniques in therapeutic communication. Consistent with the holistic thread that connects this curriculum, the student will continue to expand their knowledge of the ethical, legal, sociocultural and developmental needs which impact the response of all humans to actual or potential threats to their well-being. Clinical experiences may include various levels of mental health care provision - inpatient and outpatient.

Lecture (30.00)

Clinical (90.00)

Prerequisites: ENG-101, HIT-132, NUR-106 and PSY-101

Corequisites: BIO-121, FNS-105 and NUR-110

NUR-206 Practical Nursing: Adult Health II (7.00 cr.)

This course represents the culmination of the student's academic experience in basic theoretical principles and the practice of Practical Nursing. A broadened understanding of the foundational principles of the nursing process now supports the development of the individualized nursing plan of care for patients experiencing acute and rapidly changing physiologic alterations in multiple care settings. Specific theory and intermediate and advanced procedural techniques focused on the effective evaluation and prioritized address of the physiologic, psychological and sociocultural impactors on health will be covered. Emphasis is on the critical role of the Practical Nurse in the collection of data, and planning and implementing care for patients from diverse backgrounds experiencing equally diverse and complicated health problems. Medication dose calculation and administration,

pre-and post-operative care, fluid and electrolyte management, infectious diseases, physical assessment, pain management strategies and interventions, diagnostic tests and common pathologies of the cardiovascular, respiratory, gastrointestinal, genitourinary, musculoskeletal, hematologic, lymphatic, sensory, endocrine, reproductive, integumentary, and immune systems will receive primary focus in the theoretical, skills laboratory and clinical settings.

Lecture (45.00)

Laboratory (30.00)

Clinical (180.00)

Prerequisites: NUR-110 and NUR-116

Corequisites: NUR-210

NUR-210 Trends/Issues/Preparation for Licensure (3.00 cr.)

This course is designed as a realistically based, developmentally focused exploration of the concept of role transition, an overview of the current controversies confronting the practicing Licensed Practical Nurse, prediction of the LPNs place in and contribution to the nursing care provider framework of the future. Emphasis will be on personally applicable techniques promoting success in computerized testing of baseline knowledge in medical-surgical, maternal-child and mental health nursing principles.

Lecture (45.00)

Prerequisites: BIO-121, FNS-105, NUR-110 and NUR-116

Corequisites: NUR-206

OPHTHALMIC MEDICAL TECHNICIAN

OMT-101 Medical History Taking (1.00 cr.)

This lecture class will offer demonstrations and practice sessions to introduce students to techniques of medical history taking. Course emphasizes history taking in relationships to medical terminology, systemic diseases and general anatomy and physiology. This course introduces the fundamentals of legal relationships of the patient and doctor as well as managed care. Medical ethics relating to the practice of ophthalmic assisting is discussed.

Lecture (15.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

OMT-103 Ophthalmic Optics for Medical Technician (4.00 cr.)

This laboratory and lecture course encompasses the study of optical principles and ophthalmic optics and includes hands-on lens and lensometry practice. It examines the theory of light as related to the use of lenses, prisms and optical instruments. Visual errors and the lenses used to correct them are discussed. Lensometry and lens verification is practiced in depth. Students will validate finished eyewear to meet all prescription specifications.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

OMT-104 Clinical Procedures I (3.00 cr.)

This course will introduce students to the basic concepts of an ophthalmic exam. Skills will include: visual acuity, color vision, Amsler, Confrontation fields, pupil exam, extra ocular movements exam, instillation of diagnosis topical medications, stereopsis, assisting visually or physically impaired patients, measurement of intraocular pressure, anterior segment examination, and minor instrument repair and maintenance.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

Corequisites: BIO-103

OMT-201 Ocular Pharmacology (1.00 cr.)

This course presents the basic principles of ocular pharmacology. The sympathetic and parasympathetic systems are explained, and how ocular drugs affect these systems. Ocular toxicity of commonly used systemic drugs is discussed.

Lecture (15.00)

Prerequisites: OMT-101, OMT-103, OMT-104 and OPH-130

Corequisites: OPH-131, OMT-203 and OMT-204

OMT-203 Clinical Rotation I (3.00 cr.)

Students are placed in Ophthalmology offices where they are exposed to practical work experiences. During the rotation the students will assist experienced

technicians and physicians. Weekly clinical hours are assigned for a total of 310 hours during the semester.

Clinical (310.00)

Prerequisites: OMT-101, OMT-103, OMT-104, OPH-130, and HPE-180 or HPE-181

Corequisites: OPH-131, OMT-201, OMT-204 and PSY-101

OMT-204 Clinical Procedures II (3.00 cr.)

This course is a continuation of Clinical Procedures I. This course will review all concepts learned in Clinical Procedures I, as well as introduce advanced slit lamp techniques, applanation tonometry, retinoscopy, and refractometry.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: OMT-104

OMT-213 Clinical Rotation II (4.00 cr.)

This course is a continuation of OMT-203. Students are placed in Ophthalmology offices where they are exposed to practical work experiences. During the rotation the students will assist experienced technicians and physicians. Weekly clinical hours are assigned for a total of 650 hours during the semester.

Clinical (650.00)

Prerequisites: OMT-203

OPHTHALMIC SCIENCE

OPH-104 Ophthalmic Lab I (3.00 cr.)

This lab-based course will teach students how to prepare laboratory orders prior to edging lenses. Students will receive practice in neutralizing and duplicating ophthalmic lenses by means of the vertometer/lensometer; identification of spectacle frames and patterns; practice in hand edging and fitting spherical and compound lenses into plastic (zyl) frames.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

Corequisites: OPH-111

OPH-105 Ophthalmic Lab II (3.00 cr.)

In this lab-based course, students will receive practice in spectacle lens edging by use of focimeters and semi-automatic edging equipment. They will also practice neutralization of single vision and bifocal lenses. Students will learn the process of creating ophthalmic lenses through lens generating, surfacing and polishing.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: OPH-104

Corequisites: OPH-112

OPH-111 Ophthalmic Materials Lecture I (3.00 cr.)

This course discusses the history and development of glass and plastic, basic optical terminology. Ophthalmic lens types, calculation of lens curvature, powers, thickness and prisms.

Lecture (45.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

Corequisites: OPH-104

OPH-112 Ophthalmic Materials Lecture II (3.00 cr.)

In this course the theory of lens design and its use in correcting visual deficiencies in conformity with the refractionist's prescription is discussed. The principles and study of neutralization and duplication of lenses by use of the lensometer/vertometer, and optical standards and tolerances are studied.

Lecture (45.00)

Prerequisites: OPH-111

Corequisites: OPH-105

OPH-130 Anatomy of the Eye (3.00 cr.)

This course is a study of the anatomy of the human eye and its accessory structures. Topics include learning the individual parts of the eye, how the parts work together as a whole, and the role the eye plays in producing the sense of sight. Anatomical and physiological causes of refractive errors and common eye disorders, diseases of the eye, and their treatments are discussed.

Lecture (45.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

OPH-131 Introduction to Contact Lenses (3.00 cr.)

An introduction to the fitting of contact lenses for correction of visual problems, this course covers patient selection, advantages and disadvantages of different contact lens materials, and the basic theory and design of contact lenses. Emphasis is placed on the optical principles behind contacts, and the introduction of instrumentation used in contact lens fitting. Insertion, removal, and care procedures are included.

Lecture (45.00)

Prerequisites: OPH-130

OPH-180 Introduction to Ophthalmic Dispensing (1.00 cr.)

This course is designed to prepare the optical student for their clinical and co-operative education classes during the second year of their Optical courses. Topics to be covered include state and national regulations, standards and exams, frame and lens designs, basic fitting and adjusting, optical organizations and memberships, people skills and problem solving.

Lecture (15.00)

Corequisites: OPH-105 and OPH-112

OPH-203 Ophthalmic Materials Laboratory III (2.00 cr.)

In this course students discuss the operation of automatic edging and blocking equipment, interpretation and analysis of shop orders, preparation of compound lenses and creation of prism through decentration to fit prescription specification. The edging of bifocal lenses is introduced.

Laboratory (60.00)

Prerequisites: OPH-105

OPH-204 Ophthalmic Materials Laboratory IV (2.00 cr.)

Throughout this course students will focus on edging and neutralization of bifocals, trifocals and progressive lenses. Advanced techniques for handling plastic lenses including drilling and mounting of rimless glasses will also be completed. Students will use neutralization skills to duplicate eyewear according to New Jersey prescription tolerances.

Laboratory (60.00)

Prerequisites: OPH-203

OPH-220 Optic Principles (3.00 cr.)

This course examines the nature of light and how light behaves when it encounters various refractive and reflective surfaces. This behavior is then related to the use of lenses, prisms, and optical instruments.

Lecture (45.00)

Prerequisites: OPH-105 and OPH-112

OPH-232 Contact Lens Fitting I (3.00 cr.)

A continuation of OPH-131, this course concentrates on the fundamentals of fitting patients with spherical contact lenses, both soft and rigid. Proper procedures for patient care are presented, from the prefitting examination to follow-up visits. Special attention is given to evaluation of fit, problem solving, practice management, and instrumentation.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: OPH-131

OPH-233 Contact Lens Fitting II (3.00 cr.)

A continuation of OPH-232, this course concentrates on special ocular problems and the special contact lens designs and fitting techniques needed to correct these problems. With additional use of instrumentation and practice management techniques, students will improve their skills.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: OPH-232

OPH-240 Ophthalmic Dispensing I (4.00 cr.)

This course examines ethics, practices and responsibilities of the ophthalmic dispenser; determination of patient needs; prescription analysis and interpretation of single vision, multifocal and prism lenses; consideration in making glasses for occupational use; and tinted lenses and their uses. The student will also learn to take ocular measurements, use of various measuring instruments, principles and techniques

of skillful fitting and adjusting of spectacles by means of optical pliers and other equipment and the evaluation of completed spectacles for accuracy and quality.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: OPH-105 and OPH-112

OPH-241 Ophthalmic Dispensing II (4.00 cr.)

This course is a continuation of OPH-240: In this course, students will learn the psychology of dispensing along with challenges of the low vision patient. Additional scenarios concerning obliquely crossed prisms, front and back vertex powers, anisotropic prescriptions, and spectacle magnification are also discussed. The students will also learn dispensing procedures relating to bifocals and complex prescriptions. Techniques of fitting and adjusting plastic, metal and rimless spectacles and occupational eyewear are covered in detail.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: OPH-240

OPH-250 Ophthalmic Clinic I (1.00 cr.)

In the on-campus Optical Clinic, students shall work with a licensed optician in a controlled environment. They will become experienced in all aspects of the retail optical environment including but not limited to edging, adjustments, ordering, working with a budget, purchasing, record keeping and people skills.

Clinical (45.00)

Prerequisites: OPH-105, OPH-112 and OPH-131

Corequisites: OPH-260

OPH-251 Ophthalmic Clinic II (1.00 cr.)

In the on-campus Optical Clinic, students shall work with a licensed optician in a controlled environment. They will become experienced in all aspects of the retail optical environment including but not limited to edging, adjustments, ordering, working with a budget, purchasing, record keeping and people skills.

Clinical (45.00)

Prerequisites: OPH-250 and OPH-260

Corequisites: OPH-261

OPH-260 Co-Op I: Ophthalmic Science (1.00 cr.)

Students are placed in retail optical establishments where they are exposed to practical work experiences. Students will gain experience in retail eyeglass sales, business practices, eyeglass fabrication and adjustment. Students are to work under a licensed optician.

Co-Op (60.00)

Prerequisites: OPH-105, OPH-112 and OPH-131

Corequisites: OPH-250

OPH-261 Co-Op II: Ophthalmic Science (1.00 cr.)

Students are placed in retail optical establishments where they are exposed to practical work experiences. Students will gain experience in retail eyeglass sales, business practices, eyeglass fabrication and adjustments. Students are to work under a licensed optician.

Co-Op (60.00)

Prerequisites: OPH-260 and OPH-250

Corequisites: OPH-251

OPH-270 Ophthalmic Dispensing Office Procedures (3.00 cr.)

This is a capstone course designed to assist students to use the knowledge and skills learned in the Ophthalmic Science Technology program to make sound decisions while practicing the art of Ophthalmic Dispensing. Information presented will include business practices, patient interactions, office procedures, and management considerations. New Jersey Rules and Regulations for Ophthalmic Dispensing and American National Standards Institute (ANSI) standards will be compared and applied to ethical decisions made in regards to filling and dispensing prescriptions for optical devices. This course will encompass the instructor's experience and perspective, as well as the experiences and perspective of the students. Professional organizations, licensure, and certification of Ophthalmic Dispensers will also be reviewed.

Lecture (45.00)

Prerequisites: OPH-112

OFFICE SYSTEMS TECHNOLOGY

OST-110 Microcomputer Keyboarding (1.00 cr.)

Microcomputer Keyboarding is a beginning keyboarding course designed for persons who interact with microcomputers and need to do so effectively. It is the goal of this course to prepare students for future computer classes by building input skills confidence. Students will be provided with an opportunity to master the skill of entering alphabetic, numeric and symbolic information on a keyboard and a ten-key pad using the touch method of key stroking. Emphasis is placed on development of speed and accuracy, proper technique and correct fingering. The student will also develop skill in formatting basic business documents.

Lecture (15.00)

Laboratory (15.00)

OST-113 Keyboarding & Document Processing (3.00 cr.)

This is an introductory keyboarding course designed for students with little or no previous keyboarding experience. Students are provided with an opportunity to master the skill of entering alphabetic, numeric and symbolic information on a keyboard and a ten-key pad using the touch method of keystroking. Emphasis is placed on development of speed and accuracy, proper techniques and correct fingering. Building on these skills, students are then guided through a variety of mini-simulations that incorporates skills such as proofreading, grammar, spelling, punctuation and capitalization rules. Students must demonstrate their ability to make decisions, abstract information, set priorities, and maintain a smooth work flow under pressure.

Lecture (45.00)

Laboratory (15.00)

OST-123 Introduction to Microsoft Word (3.00 cr.)

This course is designed to provide students with the basic functions and features of one of the most popular word processing programs available. Students will explore the essential functions and features of the software through a step-by-step, project-based approach to develop a mastery-level competency in MS Word. This introductory course focuses not only on concepts, but how to apply those concepts in the workplace, in an academic setting, and for personal use. Students will learn to create, edit, format and customize a range of document types and styles; add and modify graphics and other visual elements, and organize content into tables, lists and other structures that promote reader understanding and efficient management in a collaborative work environment. Students are provided with opportunities to practice learned material using problem-solving and creative abilities to plan, research, write, revise and publish documents to meet specific information needs.

Lecture (45.00)

Laboratory (15.00)

OST-151 PowerPoint (3.00 cr.)

PowerPoint is a program used as a tool for information analysis, presentation and illustration. This course will teach students to understand how information is used to present, reinforce and illustrate concepts. Students will have the opportunity to develop and execute strategies for solving information-processing problems. Given a scenario requiring a presentation solution, students will assess the information requirements and then prepare the materials that achieve the goal efficiently and effectively. Decision-making and problem-solving skills are integrated throughout the course.

Lecture (45.00)

Laboratory (15.00)

OST-201 Virtual Entrepreneurship I (3.00 cr.)

This course is designed for students who choose to work outside of the corporate/business office, who may be entrepreneurs or who wishes to be self-employed. This course will provide the student with the skills and knowledge required to operate a new venture opportunity; to create and operate a virtual business. Students will engage in a simulated virtual office environment: organizing, operating, and financing a virtual business. Emphasis is placed on the integration of theory and practice, virtual market research, and the production and execution of a virtual business model that can become a template for future projects. Design decisions from a technology view will be assessed, along with the economies of a virtual world lifestyle.

Lecture (45.00)

Prerequisites: CSC-101, CGR-111, and (ENG-013 and ENG-023) or ENG-046

OST-202 Virtual Entrepreneurship II (3.00 cr.)

This course is a continuation of Virtual Entrepreneurship I, expanding upon the examination of online culture, design and production. This course will enable students to evaluate the entrepreneurial venture for themselves, as well as assist them in launching their new business. Students will be provided with a framework for selecting, funding, and starting their new venture. In addition, critical factors for starting a new enterprise will be explored. Students will be immersed in a virtual environment, for virtual market research and to produce and execute a virtual business model that can become a template for future projects. Design decisions from a technology view will be assessed, along with the economies of a virtual world lifestyle.

Lecture (45.00)

Prerequisites: OST-201

OST-205 Digital Tools for a Virtual Business (3.00 cr.)

This course is for students who choose to work outside of the corporate/business office, who may be entrepreneurs or who wishes to be self-employed. Because of the ever increasing pace the digital world is changing business as we know it; we need to rethink how to build greater customer awareness and engagement that will allow business management to take place anytime and anywhere. This interactive course introduces new and emerging tools that are quickly becoming a standard in today's workplace. Students will discover how digital technology is used for conducting business and how to identify, critically analyze and to evaluate them. Students are then exposed to various digital services and applications, and how to put the power of the Internet and technology to work for a business. Students will also be engaged with social media tools and platforms, and learn how to appeal to a new type of customer who is always plugged-in and always-on.

Lecture (45.00)

Laboratory (15.00)

Prerequisites: OST-201 and OST-202

OST-210 Virtual Assistant Internship (3.00 cr.)

The internship assists students in obtaining on-the-job work experience in occupations directly related to the student's career choice. This internship reinforces the student's training in the Virtual Assistant program and promotes professional growth. Under the supervision of a Virtual Assistant, the student becomes involved with gaining practical online experience with businesses through observation, exploratory "reflective" experiences, and the completion of individually tailored assignments. Students will take part in weekly online seminars with the College's Program Coordinator to review completed work. Three academic credits are earned for 135 hours of paid or volunteer work of intern experience.

Internship (135.00)

Prerequisites: OST-201, OST 202, OST 205 and Permission Program Coordinator

OST-224 Adv Microsoft Word & Desktop Publishing (3.00 cr.)

This course is designed for students who are already familiar with the basics of Microsoft Word. Students will become familiar with the advanced capabilities of word processing, and then progress to the desktop publishing tools necessary for completing the publication of professional looking documents. Design elements will be utilized and reinforced throughout the course, including the appropriate use of focus, balance, proportion, contrast, directional flow, consistency, color, and page layout. An overview of Microsoft Publisher software will also be provided.

Lecture (45.00)

Laboratory (15.00)

Prerequisites: OST-123

OST-241 Administrative Office Procedures (3.00 cr.)

This course will provide students with a comprehensive coverage of administrative principles, policies and procedures governing the office environment. Basic skills in typewriting (keyboarding) and word processing are assumed, and the emphasis is then placed on the decision-making aspects of executive and administrative office work. Simulated activities will acquaint students with the knowledge and abilities to succeed in the office environment including a review of language skills; proofreading, grammar, punctuation and spelling rules, document creation and distribution, and standard filing procedures. Case problems and projects will help prepare the prospective office professional to meet the challenges he or she will encounter in today's workplace: research and organization of business reports, travel and conference planning, financial and legal procedures, and employment and career advancement are integrated throughout the course.

Lecture (45.00)

PARALEGAL STUDIES**PAR-101 Intro to Paralegal Studies (3.00 cr.)**

This course is an introduction to the theory and practical aspects of the legal system. It includes the study of jurisprudence, its history, philosophy and current trends. Students will develop an understanding of the overall role of the paralegal in law offices, corporations and agencies. This course also emphasizes the ethical aspects associated with paralegals. The course also looks into the responsibilities of the legal court structures and recognized court procedures.

Lecture (45.00)

PAR-102 Litigation & Civil Procedures (3.00 cr.)

This is an introductory course designed to provide the student with the fundamentals necessary to begin a career as a litigating paralegal. Theory and practical aspects of basic civil litigation, including preliminary investigation, pleadings, motions, discovery, trials, appeals, administrative law, arbitrations and alternative dispute resolution will be introduced. Emphasis will be placed on the requirements and restrictions of the Federal Rules of Civil Procedure which apply throughout the United States. The New Jersey Rules of Civil Procedure will also be examined. With this knowledge, the student can develop a solid foundation in the fundamental principles of litigation.

Lecture (45.00)

PAR-201 Legal Research & Writing I (3.00 cr.)

This course provides students with an introduction to case analysis and the fundamentals of legal writing. Students learn how to analyze legal opinions for use as legal precedent. Students also learn how to distinguish various legal opinions and draft persuasive arguments. Emphasis is placed on the identification of key facts, issues, holdings and reasoning in a legal opinion. An understanding of the basic Bluebook citation format will be taught as well as how to prepare client correspondence, legal briefs and memorandums of law. The students are introduced to the concept of legal research through manual means and computer-assisted devices such as Westlaw and Lexis-Nexis.

Lecture (45.00)

PAR-202 Legal Research & Writing II (3.00 cr.)

This course provides a more in-depth look at the paralegal's expectation relative to legal research and writing. Emphasis is placed on providing students with hands-on training in the use of both primary and secondary legal sources including reported court decisions, constitutions, statutes, administrative regulations, ordinances, court rules restatements, treaties, legal encyclopedias and legal periodicals. Various legal and non-legal finding tools such as digests, annotations, citators, annotated statutes, legal dictionaries, legal thesauruses, loose-leaf services and form-books are also discussed. The students will receive training on Westlaw, a computer-assisted legal research device.

Lecture (45.00)

Prerequisites: PAR-201

PAR-203 Family Law (3.00 cr.)

This course introduces the students to the procedural and substantive law affecting the family and domestic relations. The law affecting prenuptial agreements, separation, divorce, annulments, spousal support, alimony, spousal abuse, custody, child support and adoption is discussed. Emphasis is placed on the preparation of relevant legal documents and procedures for various court filings.

Lecture (45.00)

Prerequisites: PAR-101

PAR-204 Real Estate Law (3.00 cr.)

This course provides an introduction to real property law. Emphasis is placed on real estate transactions and the tasks performed by lawyers and their legal representatives in representing buyers and sellers in the transfer of real property interest. Discussions include the possession and ownership of property, attractive nuisances, present and future estates, marital estates, landlord and tenant rights and obligations, easements, conveyancing, recording, land-title assurances, vendor and purchaser rights and obligations, and zoning controls.

Lecture (45.00)

PAR-205 Estate and Probate (3.00 cr.)

This task-oriented course emphasizes the terminology, forms and procedures of probate and estate administration. Students will learn to draft a simple trust and a will.

Lecture (45.00)

PAR-206 Paralegal Internship (3.00 cr.)

Students have the opportunity to obtain practical experience while working as an intern in a law office, governmental agency, non-profit agency or another entity which employs paralegals for legal support.

Lecture (135.00)

PAR-207 Bankruptcy Basics (3.00 cr.)

This course is designed to provide a practical approach to bankruptcy for paralegal students. It offers a review of basic theories of bankruptcy law, as well as a comprehensive background in procedure and the preparation of documents. The instructor will teach students how to use tools available on the internet and in the library and mix them with some common sense to learn what life like a paralegal in a bankruptcy office is like. This is a lecture course, no lab time is required.

Lecture (45.00)

Prerequisites: PAR-101

PAR-210 Law Office Management (3.00 cr.)

This course is designed to provide students with an understanding of how a law office is managed from a practical perspective. A wide range of topics that affect paralegals/legal assistants and their interactions in the law office environment will be discussed, including, but not limited to, ethics and client relations, billing and financial management, and law office systems and procedures. By the end of the course, students will have gained a general overview of the basic principles and structure of management, and administrative and substantive systems as they apply to managing today's law office.

Lecture (45.00)

Prerequisites: PAR-101 and ENG-101

PARAMEDIC EDUCATION & MANAGEMENT

PEM-260 Topics in Paramedic Care (6.00 cr.)

This course is designed to enhance the core knowledge of the experienced Paramedic through the application of knowledge and experience in expanding critical thinking skills. The course will discuss the varied roles and responsibilities of the field provider to include leadership, lifelong learning, the guiding principles of the Oath of Geneva and the EMT Oath, and the role of the field preceptor; the ethical situations peculiar to EMS to include Out-of-Hospital DNR orders, patient confidentiality and HIPAA regulations; medical-legal issues such as informed and implied consent, malfeasance, negligence, and strategies to care for both patients and survivors in the case of death and dying.

Lecture (90.00)

PEM-265 Emergency Medical Services Education (3.00 cr.)

This course is intended to give the student an understanding of the guidelines that are essential to the development, implementation, and coordination of an EMS education program. Topics covered will include, but are not limited to, characteristics of the adult learner, instruction techniques, lesson plans, evaluations, counseling, record keeping, instructor qualifications, media, and course evaluations.

Lecture (45.00)

Prerequisites: PEM-260

PEM-270 Emergency Medical Services Management (3.00 cr.)

This is a lecture course that can be modified for on-line and independent study. This course is designed to provide the student an understanding of the management issues in the administration of an EMS System. Topics covered will include, but are not limited to, management qualifications, medical direction, quality assurance, equipment, vehicles, budgeting, staff retention, and communications.

Lecture (45.00)

Prerequisites: PEM-260

PHILOSOPHY

PHL-101 Introduction to Philosophy (3.00 cr.)

This course introduces students to some of the problems addressed in four main branches of philosophy: logic, metaphysics, epistemology and ethics. Primary texts from both classic and contemporary sources will be read and analyzed.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

PHL-111 Modern Philosophy (3.00 cr.)

This course is designed to expose students to the most significant developments in the various branches of philosophy: metaphysics; epistemology; ethics; social philosophy, from the 18th century to the present. Included in the course are philosophical movements less publicized in the Western tradition, but no less prominent, namely the impact of Eastern philosophy and the contributions of women philosophers.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

PHL-121 Logic & Reasoning (3.00 cr.)

This is a course in informal logic in which students both analyze the arguments of other authors and create arguments of their own. The tools of analysis to be mastered include: argument structure, validity, deductive/inductive forms, fallacies, argument diagrams, modal terms and their implications for argument strength and the framework of thesis/objection/reply. Students will be able to articulate and give reasons to support a position about a debatable topic in both oral and written form.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

PHL-131 Introduction to Ethics (3.00 cr.)

The course requires students to read from primary sources which introduce major ethical theories, both classic and contemporary. Students will then analyze contemporary articles which offer opposing views about ethical dilemmas such as: euthanasia, affirmative action, pornography, abortion, world hunger, capital punishment, etc. This course is not to be taken by students who have taken PHL-232, Biomedical Ethics; credit will not be given for both courses.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

PHL-131H Honors Introduction to Ethics (3.00 cr.)

The course requires students to read from primary sources which introduce major ethical theories, both classic and contemporary. Students will then analyze contemporary articles which offer opposing views about ethical dilemmas such as: euthanasia, affirmative action, pornography, abortion, world hunger, capital punishment, etc. This course is not to be taken by students who have taken PHL-232, Biomedical Ethics; credit will not be given for both courses. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

PHL-232 Biomedical Ethics (3.00 cr.)

This course is an examination of influential ethical theories, both classic and contemporary, and the application of those theories to current dilemmas in the fields of medicine and dentistry. This course is not to be taken by students who have taken PHL-131, Introduction to Ethics; credit will not be given for both courses.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

PHL-232H Honors Biomedical Ethics (3.00 cr.)

This course is an examination of influential ethical theories, both classic and contemporary, and the application of those theories to current dilemmas in the fields of medicine and dentistry. This course is not to be taken by students who have taken PHL-131, Introduction to Ethics; credit will not be given for both courses. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

PHOTOGRAPHY

PHO-101 Photography I (3.00 cr.)

This course is an introduction to the basic principles of black and white photography, concentrating on the 35mm camera, film processing and printing techniques. Emphasis is placed on the potential of the photographic image as a means of visual expression and communication. Students will learn about photographers from the past as a way to understand how to create images that communicate ideas visually. A manually operated, 35 mm camera is required.

Lecture (30.00)

Laboratory (30.00)

PHO-102 Photography II (3.00 cr.)

This course is a continuation of Photography I and emphasizes the development of advanced techniques and ideas in photography. Students will begin preparation of a portfolio.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: PHO-101

PHO-106 Beginning Digital Photography (3.00 cr.)

This course is an introduction to the basics of digital photography. The course will concentrate on the technical aspects of the medium along with emphasis placed on the potential of the photographic image as a means of visual expression and communication. Students will learn about photographers from the past and present as a way to understand how to create images that communicate their ideas visually. A DSLR camera is required. Photography majors must take PHO-101 as part of the photography curriculum.

Lecture (30.00)

Laboratory (30.00)

PHO-111 History of Photography (3.00 cr.)

This course traces the history of the photographic process from its inception to contemporary developments. The course will examine the relationship between photography and society in Europe and the United States as well as approaches to evaluating and interpreting photographs.

Lecture (45.00)

PHO-221 Studio Photography (3.00 cr.)

This course is an introduction to artificial light and large format cameras. Students are expected to gain a working knowledge of lenses and camera functions, exposure techniques, the processing and printing of large format negatives, and studio lighting techniques.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: PHO-101

PHO-226 Digital Photography (3.00 cr.)

This course will introduce the computer as a powerful tool for the photographer. We will discuss the ethical, philosophical and practical considerations regarding the digital image process as it shapes our lives, both as members of a rapidly changing society and as photography professionals. This course will cover multiple ways to digitize images, image editing software, and different forms of outputting the digitized image. We will also discuss image making in the context of contemporary photography art practice.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: PHO-101

PHO-291 Independent Study-Photography (3.00 cr.)

Goals and objectives must be established for an Independent Study in Photography which is not substituting for an existing course. The faculty member conducting the Independent Study must periodically meet with the student to guide the study.

Lecture (15.00)

Field Work (90.00)

Prerequisites: PHO-102

PHYSICS

PHY-101 Physics I (4.00 cr.)

This is the first course of a four semester physics program. The first two semesters are algebra based and the second two are calculus based. Areas covered in the course are elementary mechanics, heat and conservation laws. Topics include scalar and vector quantities, rectilinear, and rotational motion, work, energy and momentum; molecular forces in solids and liquids: heat, temperature, phase changes, and behavior of gases.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: MTH-100

Corequisites: MTH-124 or MTH-125

PHY-102 Physics II (4.00 cr.)

This is the second course of the four-semester Physics program. The first two semesters are algebra based and the last two are calculus based. Areas covered in this course are wave motion, electricity, magnetism and optics. Topics include electromagnetic and sound wave propagation, properties of electric charge, field, force, work, potential, potential difference, current and resistance, nature of magnetism, causes for magnetism, properties of light and its interaction with matter.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: PHY-101

PHY-103 Physics I (for the Non-Science Major) (4.00 cr.)

This course is for Liberal Arts majors and examines a limited number of topics in the physical sciences using the laboratory approach as the mode of instruction.

Lecture (30.00)

Laboratory (60.00)

PHY-201 Physics III (4.00 cr.)

This course is for engineering students and physics majors. It is essential to have high school physics or algebra based physics to take this course. It uses calculus in developing conservation laws as they are applied to mechanical systems. The course covers motion problems involving non-uniform acceleration in both rectilinear and curvilinear cases, elastic and non-elastic collisions and conservation of momentum, the mechanics of heat and heat transfer, fluid dynamics and thermodynamics. Related experiments are performed. PRE-REQUISITE: One full year of college preparatory high school physics.

Lecture (45.00)

Laboratory (45.00)

Corequisites: MTH-140

PHY-202 Physics IV (4.00 cr.)

This is the final semester course of the four-semester Physics program. The first two semesters are algebra-based and the second two are calculus-based. Areas covered in this course are Electricity, with detailed discussion of Gauss' Law, electrostatics and electric current, capacitance and dielectrics, magnetism, with origin of magnetism, electro-magnetic induction and LR and LC-circuits. Geometric and Physical optics with emphasis on Interference and Diffraction; Modern Physics and fundamentals of quantum mechanics and atomic Physics are studied.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: PHY-201

POLITICAL SCIENCE

POL-101 Introduction to Political Science (3.00 cr.)

The purpose of this course is to introduce students to the central concepts, debates, and methods of Political Science. In so doing, the student will have a greater understanding of political phenomena as well their role in both local and global politics. In order to achieve this goal, this course is divided into four parts and is intended to give the student an introduction to as many aspects of political science as possible. The first section introduces students to the basic concepts, terminology, methods and debates within the field of political science. The second part exposes students to political phenomena that originate from society and the more informal sources of political power. The third part introduces students to the more formal institutions of politics and details their function and histories.

The final section of the course focuses on politics at a global level. This includes the world economic and security environments and how states and nations behave within it.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

POL-101H Honors Introduction to Political Science (3.00 cr.)

The purpose of this course is to introduce students to the central concepts, debates, and methods of Political Science. In so doing, the student will have a greater understanding of political phenomena as well their role in both local and global politics. In order to achieve this goal, this course is divided into four parts and is intended to give the student an introduction to as many aspects of political science as possible. The first section introduces students to the basic concepts, terminology, methods and debates within the field of political science. The second part exposes students to political phenomena that originate from society and the more informal sources of political power. The third part introduces students to the more formal institutions of politics and details their function and histories. The final section of the course focuses on politics at a global level. This includes the world economic and security environments and how states and nations behave within it. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

POL-103 American Federal Government (3.00 cr.)

The purpose of this course is to introduce students to the foundations, processes, institutions, and actions of the United States' government. Upon completion of the course, students will also have a better understanding of the broader themes and debates within the study of American government such as the struggle between freedom and power. A major objective of the course is to convince students that democracy requires knowledgeable citizens. Ideally, knowledge gained in this course will encourage students to participate in government and be aware of how government action can affect their lives. In order to achieve these goals and to present the course information in a coherent manner, the course is divided into four parts. The first part introduces students to the basic foundations of the American federal system giving them a basic context for all subsequent material. The second section focuses upon informal political phenomena that originate from the people and help link citizens to the formal institutions of government. The third section introduces students to the formal institutions of American government detailing their functions and histories. The final section covers the policies that government produces and how those policies are formulated.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

POL-108 Introduction to International Relations (3.00 cr.)

The purpose of this course is to introduce students to the terminology, debates, processes, dilemmas and methods of the field of International Relations. Two central goals will guide the learning process in this course. First, students will become familiar with both the causes and results of global change. Second, students will be equipped to assess the ethical ramifications of this change. Upon completion, students will be able to better assume their role as responsible citizens of the world. In order to accomplish these goals the course is divided into five parts. The first unit serves a primer on the basic concepts of International Relations and the historical evolution of the global system. The second part of the course provides students with insight as to how to approach the study of International Relations. The third part exposes students to explanations for one of the most pressing problems of global politics: the persistence of war and international violence. The fourth part of the course focuses upon the complex economic interactions that take place between states and the consequences that those interactions can have on prosperity and the overall quality of life. The last section of the course addresses the future of global politics by focusing upon emerging issues of importance and the new global entities that increasingly deal with these issues.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

POL-111 Public Administration (3.00 cr.)

This course introduces the student to the art and science of public sector management. Administrative principles, policy making, and decision-making in public

organizations are among the topics covered. Particular emphasis is placed on understanding the organizational culture of public agencies.

Lecture (45.00)

Prerequisites: POL-101 or POL-103

POL-112 Public Personnel Administration (3.00 cr.)

This course examines the history, development, and current practice in public sector personnel management. Students will be introduced to specific techniques for the management of human resources. Among the issues reviewed are: recruitment and selection, rewards systems, productivity, leadership, motivation, interpersonal relations and cultural diversity.

Lecture (45.00)

Prerequisites: POL-111

POL-121 Co-op I: Political Science (3.00 cr.)

Cooperative Education is a program designed to award academic credit for work related to a student's major. The learning experience is defined as a combination of professional work experience, the development of measurable learning objectives based on the job description, and the completion of individually tailored Co-op assignments. A Co-op advisor is assigned to each student to establish the academic validity of the cooperative education credits.

Co-Op (135.00)

PARAMEDIC SCIENCE

PRM-100 Introduction to Paramedic Care (5.00 cr.)

This course prepares the student to develop an understanding of the roles and responsibilities of the paramedic, EMS systems, communications, laws that affect EMS, well-being, injury and illness prevention, ethics and stress management. It will also introduce the paramedic student to emergency pharmacology, the history of pharmacology, the sources of drugs, their classifications and various preparations used. Students will learn the basics of pharmacokinetics and pharmacodynamics. They will understand the role of fluids, electrolytes and intravenous therapy. Dosing and drug calculations and administration will be learned. Students will learn the use of disease specific medications.

Lecture (60.00)

Laboratory (30.00)

Prerequisites: EMT-101

Corequisites: BIO-117

PRM-103 Theory of Paramedic Care (3.00 cr.)

This course prepares the student to develop an understanding of the roles and responsibilities of the paramedic, EMS systems, communications, and laws that effect EMS personnel. In addition, the student will learn about well-being, injury and illness prevention, ethics and stress management.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: EMT-100

Corequisites: BIO-103 and PRM-104

PRM-104 Paramedic Pharmacology (3.00 cr.)

The course introduces the paramedic student to the complex and critical discipline of emergency pharmacology. The course will discuss the role of awareness of blood borne pathogens, the history of pharmacology, the sources of drugs, their classifications and various preparations used. Students will learn the basics of pharmacokinetics and pharmacodynamics. They will understand the role of fluids, electrolytes and intravenous therapy. Dosing and drug calculations and administration will be learned. Students will learn the use of disease specific medications.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: EMT-100

Corequisites: BIO-103 and PRM-103

PRM-105 Principles of Paramedic Care I (6.00 cr.)

The course prepares the student to recognize and manage medical emergencies and render appropriate patient care. The course will discuss the pathophysiology, assessment, and management of the most frequently encountered medical emergencies. Subject areas and skills include, but are not limited to; patient assessment, oxygen therapy, basic and advanced airway management, cardiac monitoring, medication administration, intravenous therapy, needle thoracotomy,

pulse oximetry, patient management for; cardiac arrest, respiratory emergencies, cardiac emergencies, and medical emergencies.

Lecture (60.00)

Laboratory (60.00)

Prerequisites: *BIO-103, PRM-103 and PRM-104*

Corequisites: *PRM-106 and PRM-107*

PRM-106 Paramedic Electrocardiography (3.00 cr.)

The course introduces the paramedic student to the complex and critical discipline of emergency electrocardiography (ECG). The course will discuss the history and role of the ECG in care of the pre-hospital emergency patient. Students will learn the basics of waveforms, segments, and complexes. They will understand the meaning of normal and abnormal ECG tracings. Students will learn the application and use of ECG monitoring leads versus diagnostic 12 lead ECG's.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: *PRM-103 and PRM-104*

Corequisites: *PRM-105 and PRM-107*

PRM-107 Paramedic Clinical Practice I (2.00 cr.)

The course prepares the student to recognize the need for and the management of appropriate patient care via clinical observation and the practical application of learned skills.

Clinical (96.00)

Prerequisites: *PRM-103 and PRM-104*

Corequisites: *PRM-105 and PRM-106*

PRM-108 Paramedic Clinical Practice II (5.00 cr.)

This course will provide the educational and clinical experience required to prepare the student to achieve certification as an Emergency Medical Technician-Paramedic. Clinical practice allows the paramedic student to apply learned theory and skills while under the guidance of a preceptor. Skills include, but are not limited to, patient assessment, oxygen therapy, basic and advanced airway management, cardiac monitoring, medication administration, intravenous therapy, needle thoracotomy and pulse oximetry. Students will utilize their patient management skills for cardiac arrest, respiratory emergencies, cardiac emergencies, and medical emergencies.

Clinical (225.00)

Prerequisites: *PRM-105, PRM-106 and PRM-107*

PRM-115 Paramedic Clinical I (1.00 cr.)

The course prepares the student to recognize the need for and the management of appropriate patient care via clinical observation and the practical application of learned skills. Students will attend clinical shifts in the intensive care unit and will attend various sites to practice the techniques of intravenous cannulation and phlebotomy.

Clinical (45.00)

Corequisites: *PRM-100 and BIO-117*

PRM-120 Paramedic Care I (6.00 cr.)

The course prepares the student to recognize the need for and the management of appropriate patient care via clinical observation and the practical application of learned skills. Students will attend clinical shifts in the intensive care unit, operating room, respiratory therapy department, cardiac catheterization lab and cardiac stress lab.

Lecture (60.00)

Laboratory (60.00)

Prerequisites: *PRM-100 and PRM-115*

Corequisites: *PRM-125 and BIO-118*

PRM-125 Paramedic Clinical II (2.00 cr.)

The course prepares the student to recognize the need for and the management of appropriate patient care via clinical observation and the practical application of learned skills. Students will attend clinical shifts in an intensive care unit and emergency department.

Clinical (90.00)

Prerequisites: *PRM-100 and PRM-115*

Corequisites: *PRM-120 and BIO-118*

PRM-130 Paramedic Clinical III (2.00 cr.)

The course prepares the student to recognize the need for and the management of appropriate patient care via clinical observation and the practical application of learned skills. Students will attend clinical shifts in pediatrics, labor and delivery, a trauma center and a psychiatric crisis unit.

Clinical (100.00)

Prerequisites: *PRM-120 and PRM-125*

PRM-200 Paramedic Care II (5.00 cr.)

The course prepares the student to recognize the need for and the management of appropriate patient care via clinical observation and the practical application of learned skills. Students will attend clinical shifts in the intensive care unit, operating room, respiratory therapy department, cardiac catheterization lab and cardiac stress lab.

Lecture (60.00)

Laboratory (30.00)

Prerequisites: *PRM-130*

Corequisites: *PRM-215*

PRM-203 Principles of Paramedic Care II (5.00 cr.)

This course prepares the student to recognize and manage medical emergencies and render appropriate patient care. The course will discuss the pathophysiology, assessment, and management of the most frequently encountered medical emergencies. Subject areas and skills include, but are not limited to; patient assessment, oxygen therapy, basic and advanced airway management, cardiac monitoring, medication administration, intravenous therapy, needle thoracotomy, pulse oximetry, patient management for environmental emergencies, psychiatric emergencies, pediatric emergencies, geriatric emergencies, obstetrical and gynecological emergencies, and neonatal emergencies.

Lecture (60.00)

Laboratory (45.00)

Prerequisites: *PRM-108*

Corequisites: *PRM-204 and PRM-205*

PRM-204 Principles of Paramedic Trauma Care (3.00 cr.)

The course prepares the student to recognize and manage the trauma patient and to evaluate the mechanism of injury to assess the underlying potential for serious injury.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: *PRM-108*

Corequisites: *PRM-203 and PRM-205*

PRM-205 Paramedic Clinical Practice III (2.00 cr.)

This course will provide the educational clinical experience required to prepare the student to achieve certification as an Emergency Medical Technician-Paramedic. Clinical practice allows the paramedic student to apply learned theory and skills while under the guidance of a preceptor. Skills include, but are not limited to patient assessment, oxygen therapy, basic and advanced airway management, cardiac monitoring, medication administration, intravenous therapy, needle thoracotomy and pulse oximetry. Skills also include patient management for cardiac arrest, respiratory emergencies, cardiac emergencies, and medical emergencies.

Clinical (96.00)

Prerequisites: *PRM-108*

Corequisites: *PRM-203 and PRM-204*

PRM-206 Paramedic Field Internship (7.00 cr.)

This course will provide the educational field experience required to prepare the student to achieve certification as an Emergency Medical Technician-Paramedic. Field Internship allows the paramedic student to apply learned theory and skills while under the guidance of a certified paramedic preceptor. Every action and skill performed by the student will be closely monitored and/or assisted by the preceptor. Students will progress through carefully scripted phases with definite cognitive and psychomotor skill sets to be mastered.

Clinical (320.00)

Prerequisites: *PRM-203, PRM-204 and PRM-205*

PRM-207 Paramedic Field Residency (4.00 cr.)

The course is structured to prepare and evaluate the student's ability to demonstrate leadership characteristics in the identification and implementation of

patient treatment plans, initial and continued care; and to select and appropriately transfer patient care to a receiving facility. This course functions as a summary of all prior learning during the preceding four semesters of coursework, clinical rotations, and the field internship.

Clinical (180.00)

Prerequisites: PRM-206

PRM-215 Paramedic Clinical IV (2.00 cr.)

The course prepares the student to recognize the need for and the management of appropriate patient care via clinical observation and the practical application of learned skills. Students will continue their field clinical shifts on paramedic vehicles and preparation for their certification examination.

Clinical (90.00)

Prerequisites: PRM-130

Corequisites: PRM-200

PRM-220 Paramedic Clinical V (6.00 cr.)

To provide the educational field experience required to prepare the student to achieve certification as an Emergency Medical Technician-Paramedic. Field internship allows the paramedic student to apply learned theory and skills while under the guidance of a certified paramedic preceptor. Every action and skill performed by the student will be closely monitored and/or assisted by the preceptor. Students will progress through carefully scripted phases with definite cognitive and psychomotor skill sets to be mastered.

Clinical (270.00)

Prerequisites: PRM-215

PRM-235 Paramedic Clinical VI (3.00 cr.)

The course is structured to prepare and evaluate the student's ability to demonstrate leadership characteristics in the identification and implementation of patient treatment plans, initial and continued care; select and appropriately transfer patient care to a receiving facility. This course functions as a summative clinical practice and evaluation of all prior learning including the preceding five semesters of coursework, clinical rotations, and the field internship.

Clinical (135.00)

PSYCHOLOGY

PSY-101 Basic Psychology (3.00 cr.)

This introductory course covers the major principles and scientific research underlying behavior and mental processes. Topics include history and schools of psychology, careers in psychology, research methods and ethics, biological foundations of behavior, sensation and perception, basic principles of learning, thinking, memory, language, intelligence, motivation, emotion, personality, social behavior, mental disorders, and therapies.

Lecture (45.00)

PSY-101H Honors Basic Psychology (3.00 cr.)

This introductory course covers the major principles and scientific research underlying behavior and mental processes. Topics include history and schools of psychology, careers in psychology, research methods and ethics, biological foundations of behavior, sensation and perception, basic principles of learning, thinking, memory, language, intelligence, motivation, emotion, personality, social behavior, mental disorders, and therapies. **ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.**

Lecture (45.00)

PSY-102 Psychology of Personality & Adjustment (3.00 cr.)

This course encourages personal growth through a study of personality adjustment and maladjustment, utilizing lectures, class discussions and experimental exercises. Theories of personality, ego adjustment mechanisms, love and intimacy, effective communication, managing emotions, identity and self-esteem, developing good human relations, problem solving, and ways of tapping one's potential are among the topics examined. Related research findings are reviewed.

Lecture (45.00)

Prerequisites: PSY-101

PSY-103 Educational Psychology (3.00 cr.)

This course examines scientific research regarding the learning process and the application of psychological principles to the problems of learning and teaching. Student entry characteristics; tasks of instruction; problem-solving; creative behavior; teaching children who are behavior-disordered, learning disabled, delayed or gifted; classroom management; measuring learning outcomes; and teacher accountability are among the areas examined.

Lecture (45.00)

Prerequisites: PSY-101

PSY-104 Abnormal Psychology (3.00 cr.)

This course presents a summary of scientific theories and research on mental disorders and inappropriate behavior. Tension-induced body disorders, sexual problems, loneliness, depression, irrational fears, repetitive ideas and actions, split personality, mood and thought disturbances, paranoia, anorexia nervosa, antisocial behavior and violence, disorders of childhood, adolescence, and old age are among the topics considered as well as therapies and preventative strategies.

Lecture (45.00)

Prerequisites: PSY-101

PSY-105 Child Psychology (3.00 cr.)

Child behavior and development are studied with reference to theories and research findings concerning physical growth, sensorimotor development, intelligence, language, cognition, identity, personality, sex role development, and emotional and social development. Early experiences are related to later personality, methods of child rearing, and power-oriented versus love-oriented patterns of disciplining. Special problems of childhood, adolescence, and parenting are also considered.

Lecture (45.00)

Prerequisites: PSY-101

PSY-106 Psychology of Adolescence (3.00 cr.)

This course examines the theory and research on the adolescent years including physical, emotional, intellectual, social, vocational, and cultural development. Teen alcoholism and drug abuse, their causes, consequences, and treatment will be emphasized. Drug education and prevention relevant to adolescence will also be studied.

Lecture (45.00)

Prerequisites: PSY-101

PSY-107 Psychology of Adulthood Aging (3.00 cr.)

This course examines psychological theories and research on adult development and aging. The effects of the human aging process through adulthood and old age on various aspects of behavior including personality, social adjustment, memory, learning, motivation, intellectual ability, motor performance, problem solving, sexuality, and mental disturbance, are studied.

Lecture (45.00)

Prerequisites: PSY-101

PSY-108 Psychology of Dying & Death (3.00 cr.)

This course looks at dying and death as loss and a challenge for personal growth and a greater awareness of life. Psychological theories and research on topics such as concepts and attitudes, emotional reactions, disease, disaster, accident, or suicide as causes of death, near death experiences, hopes for immortality, Hospice care, and euthanasia will be examined.

Lecture (45.00)

Prerequisites: PSY-101

PSY-109 Developmental Psychology (3.00 cr.)

This course covers the process of psychological development through the life span from infancy up to and including the senior years. It reviews the current theories and scientific research findings. The role of genetic factors, maturation, learning factors in the development of motivation, intellect, social, and emotional adjustment are presented.

Lecture (45.00)

Prerequisites: PSY-101

PSY-110 Social Psychology (3.00 cr.)

This course focuses on how people think about, influence, and relate to one another in their physical and socio-cultural environments. Theories and research

relating to attitude development and change, interpersonal and group processes such as attraction, aggression, conformity and obedience, impression formation, attribution, social perception, prejudice, and social expectations, will be among the areas considered. Methods used in scientific research will be emphasized.

Lecture (45.00)

Prerequisites: PSY-101

PSY-111 Industrial/Organizational Psychology (3.00 cr.)

This course focuses on the application of psychological principles and research methods to human behavior in business and industry. Topics include organizational design, size, climate, and technology; motivating and supervising employees; psychological aspects of unemployment; selecting and developing employees; design of working areas, information aids and other aspects of engineering psychology; accident behavior; consumer psychology; advertising; and salesmanship psychology.

Lecture (45.00)

Prerequisites: PSY-101

PSY-112 Psychology of Women (3.00 cr.)

This course presents a look at current research on the nature and origins of women's experience and behavior; the meaning of sexuality, performance and achievement differences between men and women; and special problems of aging, career choices, singlehood, divorce, and widowhood.

Lecture (45.00)

Prerequisites: PSY-101

PSY-114 Child Development/Education Interpreter (3.00 cr.)

This course is designed to provide Educational Interpreter students with an overview and an understanding of the development of children, especially of those who are deaf and hard of hearing, from birth to adolescence. The interaction of physical, cognitive, emotional, linguistic, social and cultural factors within developmental stages will be studied. Students will compare the development of children who do not have specialized needs with the development and issues facing children and families with specialized needs.

Lecture (45.00)

RUSSIAN

RUS-101 Elementary Russian I (3.00 cr.)

This course introduces students to the Russian language and provides him/her with a basic working knowledge of the language (listening, speaking, reading, writing). It also provides cultural characteristics of the people who use the language natively. This class is intended for students beginning the language or for those who have received a grade below C in two years of high school Russian. This course is not intended for native speakers.

Lecture (45.00)

Prerequisites: ENG-012 and ENG-022

RUS-102 Elementary Russian II (3.00 cr.)

This course continues to introduce students to the Russian language and provides him/her with a basic working knowledge of the language (listening, speaking, reading, writing) at the novice high level. It also provides cultural characteristics of the people who use the language natively. This course is not intended for native speakers.

Lecture (45.00)

Prerequisites: ENG-012, ENG-022 and RUS-101 or two years of high school Russian

SIGN LANGUAGE

SLS-201 ASL Linguistics (3.00 cr.)

This course is designed to introduce the student to the concepts and vocabulary used in the linguistic analysis of American Sign Language. This introduction course includes an examination of the essential features of all languages, types of variation, the physical dynamics and role of intonation, and the basic distinctions made in semantic, morphological, and syntactic analyses.

Lecture (45.00)

Prerequisites: ASL-102

SLS-202 American Deaf Culture (3.00 cr.)

American Deaf Culture is an overview course which examines the cultural attributes and views unique to the Deaf community. Key concepts include Deaf history, rules of social interaction, values, language and traditions, group norms, and identity as defined in Deaf culture. Particular emphasis will be in accordance with various internal and external forces that influence the social, linguistic, and political norms of the Deaf community.

Lecture (45.00)

Prerequisites: ASL-102

SLS-203 Introduction Interpreting Profession (3.00 cr.)

This course provides an introduction to interpreting as a profession. The course will include history of sign language interpreting, specialized terminology, interpreting processes and models, and interpreter evaluation. There will be a strong emphasis on interpreter ethics and etiquette, roles and responsibilities, and interpreting in a variety of specialized settings.

Lecture (45.00)

Prerequisites: ASL-102 or successful completion of the ASL Proficiency Exam

SLS-205 Field Observation & Practicum (4.00 cr.)

This course is designed to provide the student with a working knowledge and experience in a variety of agencies, educational institutions, and organizations serving the deaf community.

Lecture (60.00)

Prerequisites: ASL-201

SOCIOLOGY

SOC-101 Introduction to Sociology (3.00 cr.)

This course is designed to help students understand and think about the behavior of people in groups, with emphasis on mastery of fundamental sociological concepts and an introduction to systematic social analysis. The course may consider newer sociological developments, culture and socialization, social organization, social classes, collective behavior, population, urbanization, and social change.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

SOC-101H Honors Introduction to Sociology (3.00 cr.)

This course is designed to help students understand and think about the behavior of people in groups, with emphasis on mastery of fundamental sociological concepts and an introduction to systematic social analysis. The course may consider newer sociological developments, culture and socialization, social organization, social classes, collective behavior, population, urbanization, and social change. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

SOC-102 Social Problems (3.00 cr.)

This course is an analysis of the relationship between social structure and social problems. Students will become aware of techniques for analyzing social problems and of the limitations on solutions to those social problems.

Lecture (45.00)

Prerequisites: SOC-101

SOC-201 Sociology of the Family (3.00 cr.)

This course is a study of the cross-cultural and evolutionary development of the family as an institution and its interrelationship with government, economy, education and religion. Particular attention will be given to current family structures.

Lecture (45.00)

Prerequisites: SOC-101

SOC-202 Criminology (3.00 cr.)

This course is a study of criminal behavior and the criminal justice system as social phenomena. This course is an analysis of the nature and causes of crime and criminal behavior and of theories and behaviors in intervention and punishment.

Lecture (45.00)

Prerequisites: SOC-101

SOC-205 Social Diversity (3.00 cr.)

This course will encourage students to use their sociological imagination to place themselves and their unique experience into the larger historical and cultural context of the United States. They will learn how they fit into this socially diverse and multi-cultural society, which is the product of centuries of social interaction among African Americans, Asian Americans, European Americans, Hispanic Americans and Native Americans of various gender identities and faiths.

Sociological concepts which will be addressed include social caste, social class, race, ethnicity, gender, power, authority, dominance, colonization, immigration, segregation, genocide, stigma, privilege, master status, prejudice, discrimination, assimilation, pluralism, acculturation, and accommodation. Further, affirmative action, backlash and reverse discrimination will be studied.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

SPANISH

SPA-101 Elementary Spanish I (3.00 cr.)

This course introduces the student to the language and culture of the Spanish-speaking world. It provides the student with basic working information of the language (listening, speaking, reading, writing) in order to interact and communicate with others, while gaining a greater understanding of the different Hispanic cultures. This course is intended for students beginning the language or for those who have received a grade below C in two years of high school Spanish. This course is not intended for native or heritage speakers.

Lecture (45.00)

Prerequisites: ENG-012 and ENG-022

SPA-102 Elementary Spanish II (3.00 cr.)

This course continues the basic elements of the language and the understanding of the Hispanic world. It provides the student with basic working information of the language (listening, speaking, reading, and writing) in order to interact and communicate with others at a novice-high level, while gaining a greater understanding of and respect for the different Hispanic cultures. This course is not intended for native or heritage speakers.

Lecture (45.00)

Prerequisites: ENG-012, ENG-022 and SPA-101 or two years of high school Spanish

SPA-106 Spanish for Heritage Speakers I (3.00 cr.)

This course will focus on the basic grammar points that are needed for the proper usage of the Spanish language. Problem areas arising from English interference will be given special attention. Critical areas such as orthography, accent rules, and verb tenses will be addressed. Reading, writing and vocabulary skills are emphasized. Listening and speaking skills will be stressed. Topics and issues related to the cultural and historical diversity among Hispanics, and the countries where Spanish is spoken, will be presented.

Lecture (45.00)

SPA-150 Spanish for Medical Personnel I (3.00 cr.)

This course is designed to serve those in the medical professions who seek basic skills in medical Spanish. This course provides the necessary tools, both lexical and grammatical, to carry out a basic conversation about a medical problem that needs to be assessed, diagnosed and evaluated. This course does not expect complete fluency. Rather, it strives for a level of comfort when dealing with Spanish-speaking patients so that medical professionals can put the patient at ease.

Lecture (45.00)

SPA-201 Intermediate Spanish I (3.00 cr.)

This course continues the study of the basic working structures of the language (listening, speaking, reading, and writing) at the intermediate-low level in order to interact and communicate with others, while gaining a greater understanding of and respect for the different cultures in the Hispanic world.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046 and SPA-102 or two years of high school Spanish

SPA-202 Intermediate Spanish II (3.00 cr.)

This course completes the study of the working structures of the language (listening, speaking, reading, and writing) at the intermediate-mid level in order to interact and communicate with others, while gaining a greater understanding of

the different cultures in the Hispanic world through literature and film.

Lecture (45.00)

Prerequisites: SPA-201

SPA-203 Introduction to the Hispanic Culture (3.00 cr.)

This course will present topics and issues related to the largest Hispanic groups in the USA: Mexican-Americans, Puerto Ricans, and Cuban-Americans. In addition it will also focus on individual countries where Spanish is spoken. People and events will be discussed in the context of the historical past, as well as in light of new developments. The students will gain insight into Hispanic cultures and civilizations, and achieve a more global understanding of the issues and challenges faced by the Spanish-speaking world.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046 and SPA-102 or SPA-201 or SPA-202

SPA-204 Conversational Spanish (3.00 cr.)

This course emphasizes oral skills and conversation through the use of authentic language and cultural content. This class is intended for students who have completed elementary Spanish II and can be taken concurrently with Intermediate Spanish. This course is not intended for native or heritage speakers.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046 and SPA-102 or SPA-201 or SPA-202

SPEECH

SPE-001 Social Interaction (3.00 cr.)

This course is designed to introduce and provide practice in the social graces. Students will learn and practice appropriate verbal and non-verbal expression. Units of study will include ritual and behavior in everyday etiquette, communication and protocol, dining and entertaining, celebrations and ceremonies.

Lecture (30.00)

Laboratory (30.00)

SPE-002 Social Interaction II (3.00 cr.)

This course is a continuation of SPE-001 Social Interaction and is designed to introduce and provide practice in the social graces as they pertain to the workplace. Students will learn and practice appropriate verbal and non-verbal expression. Units of study will include ritual and behavior in job search, resume writing, writing cover letters, acquiring references, making appointments for interviews, interviewing, appropriate job search courtesies, appropriate interview and workplace wardrobe and grooming and all facets of workplace behavior once hired for a position.

Lecture (30.00)

Laboratory (30.00)

SPE-102 Public Speaking (3.00 cr.)

Public Speaking introduces the principles and techniques of formal communication. Attention will be given to speaker - listener relationships, management and choice of ideas, selection and organization of materials, and use of language and nonverbal elements. Particular attention will be paid to the principles and skills of persuasion and delivery skills as well as audience analysis. Formal presentations will be required.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

SPE-102H Honors Public Speaking (3.00 cr.)

Honors Public Speaking introduces the principles and techniques of formal communication. Attention will be given to speaker-listener relationships, management and choice of ideas, selection and organization of materials, and use of language and nonverbal elements. Particular attention will be paid to the principles and skills of persuasion and delivery skills as well as audience analysis. Formal presentations will be required. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.

Lecture (45.00)

Prerequisites: (ENG-013 and ENG-023) or ENG-046

SPE-211 Interpersonal Communication (3.00 cr.)

This course stresses the development of more effective communication in interpersonal relationships in family, work and social settings. It includes a conceptual

framework for thinking about difficulties and effectiveness in interpersonal relationships; practice in talking, thinking and listening skills central to interpersonal settings; experience analyzing the problems in, and the requirements of, a variety of communicative situations. There is emphasis on the development of skills for choosing communicative actions wisely.

Lecture (45.00)

SPE-212 Small Group Communications (3.00 cr.)

This course will focus on the principles and theories of communications as they relate to the small group process. It will deal with the barriers to effective group discussion and leadership with corresponding remedial measures, as well as an application of small group research as it pertains to hypothetical and actual small group situations. This course will also be the study and application of principles of critical thinking, process, participation, and evaluation to task-oriented groups.

Lecture (45.00)

SURGICAL TECHNOLOGY

SRG-100 Surgical Technology (2.00 cr.)

This course presents an overview of the evolving field of surgical technology. Students will investigate the history of surgery and explore the role of a surgical technician in medical settings.

Lecture (30.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

Corequisites: HIT-120 and BIO-117

SRG-105 Principles of Surgical Technology (4.00 cr.)

This course introduces the student to the practice of surgical technology. An in-depth study of universally accepted perioperative care techniques provides the student with the basic technical knowledge and practical skill-set of an entry-level surgical technologist. Students will gain knowledge of the breadth and scope of the roles and responsibilities of the various members of the perioperative team. The successful student will consistently articulate and demonstrate care precepts that meet or exceed specific standards of patient care.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: MTH-029 and (ENG-013 and ENG-023) or ENG-046

Corequisites: SRG-100

SRG-112 Surgical Procedures I (4.00 cr.)

The goal of this course is to facilitate student mastery of the generic practice principles inherent to the scrub role. The course is constructed to reinforce basic surgical anatomy while familiarizing the student with the standards of instrument handling, equipment maintenance and procedural technique required, assuring safe and effective operating room conduct.

Lecture (45.00)

Laboratory (45.00)

Prerequisites: SRG-100 and SRG-105

SRG-212 Surgical Procedures II (3.00 cr.)

This course proceeds as the continuation of Surgical Procedures I, with content reflecting progression from the generic practice principles inherent to all surgical interventions to the expanded theory foundations of the specialties. The course is constructed to teach basic surgical anatomy, instrumentation, and procedural steps for various operating room techniques.

Lecture (45.00)

Prerequisites: SRG-112

Corequisites: SRG-218

SRG-218 Clinical Rotation (6.00 cr.)

This course will provide an intense period of active application of the knowledge and practical surgical techniques acquired throughout the Surgical Technology curriculum. The goal of this clinical rotation is to provide the surgical technology student with an experience as close to an operating room staff member as possible, including extensive practice in general surgical cases, thus promoting attainment of an "entry-level" technical skill set by semester end. This practicum requires 28 hours per week throughout a 15-week semester.

Clinical (420.00)

Prerequisites: SRG-112

Corequisites: SRG-212

THEATRE

THE-121 Theatre Appreciation (3.00 cr.)

This course is designed to develop a personal understanding and appreciation of theatre as an art form. During the course we will examine, what is the theatre, what is a play, its audience as a critic, the actor, the playwright, the designers and technicians, the director, theatre of yesterday, and theatre of today. Students will also attend live theatre productions.

Lecture (45.00)

THE-131 Voice & Diction (3.00 cr.)

This course is a study of the fundamentals of breathing, tone production, projection, and articulation necessary for communicating. Students will acquire a working knowledge of the phonetic alphabet. Stress will be placed upon correction of individual vocal problems and regionalisms. It is highly recommended for those who will have to use their voices, i.e., teachers, lawyers, business managers, executives, actors, broadcasters, etc.

Lecture (45.00)

THE-141 Acting I (3.00 cr.)

This course introduces beginning students to acting through exercise for the control of the voice, body, and concentration. Theatre games and improvisations are used to make students relaxed and aware of themselves. Students are given a beginning approach to characterization and will present simple scenes for analysis and criticism.

Lecture (30.00)

Laboratory (30.00)

THE-233 Playwriting (3.00 cr.)

This course is an introductory class for both theatre majors and those students interested in the playwriting process. Students will learn specific techniques, practical exercises, candid exploration of famous plays, and methods from award winning playwrights during the course of this class. This course is designed to work with the basic building blocks of dramatic structure, study the exploration of developing characters, analyze the elements of good dialogue writing, research the different methods of how to get published and explore different marketing tools to make a play a success. A showcase of the class's original ten-minute plays will be held during finals and open to the public.

Lecture (45.00)

THE-242 Acting II (3.00 cr.)

This is a further continuation of Acting I. Students are given a deeper approach to basic characterization and are taught how to create a role. Students learn how to create a role with emphasis on script breakdown, scoring a part, approaches to style, and individual problem solving. An emphasis is placed on timing and subtle vocal and body expression. Students are also introduced to the techniques of period acting styles and in different media.

Lecture (30.00)

Laboratory (30.00)

Prerequisites: THE-141

THE-252 Children's Theatre (3.00 cr.)

This course gives the student the theory and application of practice of how to select, mount, and market a children's theatrical production. The student gains an understanding of the complexities of such a production. By testing and displaying his/her skills in a practical production situation, the student becomes more aware of his/her abilities as an artist-creator. The students will be involved in all phases of mounting a children's theatre production which will be performed before South Jersey elementary school children.

Lecture (30.00)

Laboratory (30.00)

THE-253 Stagecraft I (3.00 cr.)

This course is designed to introduce the student to the elements of a theatre production "behind the scenes", through theory, workshop, and stage crew experiences. Subjects covered include set construction and design, paint and color, lighting instruments, lighting design and execution, sound creation, makeup, and stage management.

Lecture (30.00)

Laboratory (30.00)

General Education

Camden County College is committed to providing each student with an educational experience that fosters a respect for the intellectual process and addresses the demands of the modern world. This process cultivates knowledge, intellectual skills and attitudes that enrich our lives and encompass the basic concepts in the humanities, social sciences, mathematics, science and technology. Intellectual skills include the student's ability to think and communicate in a global society.

General education addresses a broad range of learning opportunities for students and establishes high standards for graduates. To accomplish its mission, Camden County College develops its Strategic Agenda through the continuous assessment of the fulfillment of its goals.

Camden County College's general education goals and objectives are consistent with the New Jersey Statewide Transfer Agreement and the general education guidelines approved by the New Jersey Presidents' Council. Camden County College faculty annually review and revise these objectives to reflect the currency of the curriculum and the results of assessments of student learning.

The College's goal is to offer a General Education program that provides students with competence in a broad array of intellectual skills and habits of mind that will enrich their lives and enable them to participate in a democratic society. These competencies reflect the values of a trusting, cooperative academic community that is open to new ideas and a diversity of opinions, convictions and methods of inquiry. General education goals are achieved by the incorporation of general education courses, appropriate student learning outcomes and pedagogy and the construction of regular assessments.

A General Education Foundation for Associate in Arts, Associate in Science, Specialized Associate, and Certificate Programs in New Jersey's Community Colleges

(1997 Adoption, 2007 Reaffirmed, August 15, 2007 Revision) APPROVED BY PRESIDENTS – 9/6/2011

PROGRAMS	ALLOCATION NOTES: The credit allocation below is consistent with the 1997 NJCC Gen. Ed. Foundation grid.
AA	The Associate in Arts (AA) program requires a minimum of 45 semester credit hours of general education coursework from among the indicated categories.
AS	The Associate in Science (AS) program requires a minimum of 30 semester credit hours from among the indicated categories, with minimum distributions as shown. Beyond these minimums, any 30-credit subset of the AA program credit distribution will be accepted. General education coursework in excess of the 24 credits listed should follow the AA distribution limits.
Specialized Associate AAS, AFA, & AS Nursing	The specialized associate degrees shall include Applied Associate in Science (AAS), Associate in Fine Arts (AFA), and AS in Nursing. These programs shall require no fewer than 20 semester credit hours of General Education. Notwithstanding any articulation agreements, the general education courses should support career preparation. General education coursework in excess of the 12 credits listed should follow the AS distribution limits.
Academic Certificate	The Certificate (or Academic Certificate) shall prepare students to read and write effectively. At least one other general education course is required. The Certificate of Achievement (COA) requires no general education courses beyond those that support career education. The Certificate of Completion (COC) is a noncredit certification program, which is not applicable within the general education context.

A General Education Foundation for Associate in Arts, Associate in Science, Specialized Associate, and Certificate Programs in New Jersey's Community Colleges

(1997 Adoption, 2007 Reaffirmed, August 15, 2007 Revision) APPROVED BY PRESIDENTS – 9/6/2011

GENERAL EDUCATION GOAL(S) ADDRESSED								COURSE CATEGORIES (GOAL CATEGORIES)				AA credits	AS credits	AAS, AFA, AS NURSING credits	ACADEMIC CERTIFICATE credits
1								Communication (Written & Oral)				9	6	6	3
	2		3					Mathematics — Science — Technology Mathematics: 3-8 cr. (Quantitative Knowledge & Skills) Science: 3-8 cr. (Scientific Knowledge & Reasoning) Technological Competency: 0-4 cr.				12	9	3	3
				4				Social Science (Society & Human Behavior)				6	3	3	
					5			Humanities (Humanistic Perspective)				9	3		
						6		History (Historical Perspective)				6			
							7	Diversity Courses (Cultural & Global Awareness)				3			
								Unassigned General Education Credits					6	8	
								GENERAL EDUCATION FOUNDATION TOTAL				45	30	20	6

GEN. ED. FOUNDATION COURSE CATEGORIES	NJCC GOAL CATEGORIES*	COURSE CRITERIA: Below are brief descriptions of the course criteria for satisfying the requirements. For fuller descriptions, see the NJCC GE Course Criteria (September 6, 2011)
1 Communication	1 Written and Oral Communication	An array of courses which prepare students to speak, read, and write effectively. At least two of these must be composition courses for A.A. and A.S. degrees. At least one of these must be a composition course for specialized degree programs and certificates.
2 Mathematic	2 Quantitative Knowledge and Skills	Any college level mathematics course including statistics, algebra, or calculus course(s). These courses should build upon a demonstrated proficiency in basic algebra.
3 Science	3 Scientific Knowledge and Reasoning	Any course(s) in the biological or physical sciences – including non-majors survey courses. At least one of these courses must have a laboratory component.
4 Technology	4 Technological Competency	Any course that emphasizes common computer technology skills (e.g. computer science, information technology) that helps students to access, process, and present information. This component is not required for students who can demonstrate competency.
5 Social Science	5 Society and Human Behavior	Any introductory course(s) from among anthropology, economics, geography, political science, psychology, or sociology.
6 Humanities	6 Humanistic Perspective	Any broad-based course(s) in the appreciation of art, music, or theater; literature; foreign language; history; philosophy and/or religious studies.
7 History	7 Historical Perspective	Any broad-based course(s) or sequence of courses in World, Western, non-Western, or American History.
8 Diversity courses	8 Cultural and Global Awareness	Any course whose purpose is to expose students to a multicultural society or people, possibly within the context of non-introductory study of a foreign language. If this goal is integrated into one or more general education course(s), the three credits may be moved from this category to another general education category.
GENERAL EDUCATION INTEGRATED COURSE GOAL		COURSE CRITERIA: Below are brief descriptions of the course criteria for satisfying the requirements. For fuller descriptions, see the NJCC GE Course Criteria
Ethical Reasoning and Action		This ethical reasoning and action goal may be infused in any of the above categories. These courses should include the ethical implications of issues and situations.
Information Literacy		These courses include the requirement for students to address an information need by locating, evaluating and effectively using information.
NOTE: This document should be used in conjunction with the NJCC GE Learning Goals & Suggested Individual College-Wide Learning Obj. (9-6-2011).		

NJCC General Education Learning Goals and Suggested Individual College-Wide Learning Objectives

(1997 Adopted, August 15, 2007 Revision, September 6, 2011 Revision)

New Jersey Community College General Education Philosophy: Students are empowered to meet twenty-first century challenges through learning processes that lead to knowledge acquisition, skills mastery, critical thinking, and the exercise of personal, social, and civic responsibilities.

The Colleges maintain responsibility for offering a general education program whose learning objectives facilitate attainment of all NJCC Gen Ed Learning Goals. Course-level learning objectives must be consistent with the Individual College-Wide Learning Objectives that fulfill the NJCC Gen Ed Learning Goals. (Local general education courses must also be consistent with NJCC GE Course Criteria for satisfying requirements.)

NJCC GOAL CATEGORIES <i>(Course Category)</i>	NJCC GEN. ED. LEARNING GOALS <i>Critical thinking is embedded</i>	SUGGESTED INDIVIDUAL COLLEGE-WIDE LEARNING OBJECTIVES: Colleges have discretion in the establishment of Individual College-Wide Learning Objectives that support the achievement of the NJCC Learning Goals . The following is a list of examples.
1 Written and Oral Communication <i>(Communication)</i>	Students will communicate effectively in both speech and writing.	a. Students will explain and evaluate what they read, hear, and see. b. Students will state and evaluate the views and findings of others. c. Students will logically and persuasively state and support orally and in writing their points of view or findings. d. Students will evaluate, revise, and edit their communication.
2 Quantitative Knowledge and Skills <i>(Mathematics)</i>	Students will use appropriate mathematical and statistical concepts and operations to interpret data and to solve problems.	a. Students will translate quantifiable problems into mathematical terms and solve these problems using mathematical or statistical operations. b. Students will construct graphs and charts, interpret them, and draw appropriate conclusions.
3 Scientific Knowledge and Reasoning <i>(Science)</i>	Students will use the scientific method of inquiry, through the acquisition of scientific knowledge.	a. Applying the scientific method, students will analyze a problem and draw conclusions from data and evidence. b. Students will distinguish between scientific theory and scientific discovery, and between science and its scientific technological applications, and they will explain the impact of each on society.
4 Technological Competency <i>(Technology)</i>	Students will use computer systems or other appropriate forms of technology to achieve educational and personal goals.	a. Students will use computer systems and/or other appropriate forms of technology to present information. b. Students will use appropriate forms of technology to identify, collect, and process information.
5 Society and Human Behavior <i>(Social Science)</i>	Students will use social science theories and concepts to analyze human behavior and social and political institutions and to act as responsible citizens.	a. Students will analyze and discuss behavioral or societal issues using theories and concepts from a social science perspective. b. Students will explain how social institutions and organizations influence individual behavior. c. Students will describe and demonstrate how social scientists gather and analyze data and draw conclusions. d. Students will apply civic knowledge both locally and globally and engage in activities that exercise personal, social, and civic responsibility.
6 Humanistic Perspective <i>(Humanities)</i>	Students will analyze works in the fields of art, music, or theater; literature; and philosophy and/or religious studies; and will gain competence in the use of a foreign language.	a. Students will describe commonly used approaches and criteria for analyzing works*. b. Students will analyze works* and applying commonly used approaches and criteria. c. Students will demonstrate a value added competence in the production and comprehension of a foreign language. *in the fields of art, music, or theater; literature; philosophy and/or religious studies and possibly within the context of studying and using a language other than English.
7 Historical Perspective <i>(History)</i>	Students will understand historical events and movements in World, Western, non-Western or American societies and assess their subsequent significance.	a. Students will state the causes of a major historical event and analyze the impact of that event on a nation or civilization. b. Students will discuss a major idea, movement, invention or discovery, and how it affected the world or American society. c. Students will demonstrate how writers' interpretations of historical events are influenced by their time, culture, and perspective.
8 Cultural and Global Awareness <i>(Diversity courses)</i>	Students will understand the importance of a global perspective and culturally diverse peoples.	a. Students will link cultural practices and perspectives with geographic and/or historical conditions from which they arose. b. Students will explain why an understanding of differences in people's backgrounds is particularly important to American society. c. Students will recognize and explain the possible consequences of prejudicial attitudes and discriminatory actions. d. Students will recognize and assess the contributions and impact of people from various nations and/or cultures.
NJCC INTEGRATED GOALS		
Ethical Reasoning and Action	Students will understand ethical issues and situations.	a. Students will analyze and evaluate the strengths and weaknesses of different perspectives on an ethical issue or a situation. b. Students will take a position on an ethical issue or a situation and defend it.
Information Literacy	Students will address an information need by locating, evaluating and effectively using information.	a. Students will identify and address an information need. b. Students will access information effectively and efficiently. c. Students will evaluate and think critically about information. d. Students will use information effectively for a specific purpose. e. Students will use information ethically and legally.

NOTE: This document should be used in conjunction with the **General Education Foundation** (9-6-2011) and the **NJCC GE Course Criteria** (9-6-2011).

General Education Electives

COMMUNICATION GENERAL EDUCATION ELECTIVES: Written and Oral Communication

ENG-101.....English Composition I	ENG-102H ....Honors English Composition II	SPE-102H .....Honors Public Speaking
ENG-101H ....Honors English Composition I	ENG-241 .....Technical Writing	
ENG-102.....English Composition II	SPE-102 .....Public Speaking	

MATHEMATICS GENERAL EDUCATION ELECTIVES: Quantitative Knowledge and Skills

MTH-100 .....Algebraic Concepts	MTH-117 .....Explorations in Mathematical Thoughts	MTH-134 .....Biostatistics
MTH-101 .....Concepts of Mathematics	MTH-117H.....Honors Exploration/Mathematical Thoughts	MTH-140.....Calculus I
MTH-103* ...Topics in Mathematics	MTH-120* ....College Algebra	MTH-140H.....Honors Calculus I
MTH-105 .....Mathematical Systems I: Structures	MTH-122 .....Applied Calculus	MTH-145 .....Linear Algebra
MTH-106 .....Mathematical Systems II: Geometry	MTH-123 .....Pre-Calculus Mathematics I	MTH-150 .....Calculus II
MTH-107 .....Mathematics for Liberal Arts	MTH-124 .....Pre-Calculus Mathematics II	MTH-171 .....Statistics I
MTH- 109* ...Intermediate Algebra Extended	MTH-125 .....Accelerated Precalculus	MTH-172 .....Statistics II
MTH-111 .....Introduction to Statistics	MTH-129 .....Discrete Mathematics	MTH-210 .....Calculus III
MTH-112 .....Elements of Statistics II	MTH-130* .....Trig & Analytic Geometry	MTH-220 .....Differential Equations
MTH-114 .....College Algebra / Business & Soc Science	MTH-132 .....Statistics for Technology	

SCIENCE GENERAL EDUCATION ELECTIVES: Scientific Knowledge and Reasoning

Lab Science General Education Electives	BIO-220.....Elements of Microbiology	CHM-140H ...Honors Chemistry & Society
BIO-106.....Living in the Environment	BIO-221.....Microbiology I	CHM-145.....Introduction to Forensic Science
BIO-111.....Biology I-Science	BIO-222.....Microbiology II	CHM-150.....Chemistry of Art Materials
BIO-112.....Biology II-Science	BIO-225.....Introduction to Plant Biology	CHM-160.....Fundamentals of Food Science
BIO-117.....Basic Anatomy & Physiology I	BIO-235.....Cell Biology	CHM-210*....Fundamentals in Biochemistry
BIO-118.....Basic Anatomy & Physiology II	BIO-240.....Genetics	CHM-221.....Organic Chemistry I
BIO-121.....Basic Microbiology	CHM-101 .....General, Organic & Biological Chem I	CHM-222.....Organic Chemistry II
BIO-130.....Plants & Society	CHM-101H ...Honors Gen Organic & Biological Chem I	PHY-101 .....Physics I
BIO-140.....The Microbial World	CHM-102.....General, Organic & Biological Chem II	PHY-102.....Physics II
BIO-140H .....Honors - The Microbial World	CHM-111.....Chemistry I - Science	PHY-103.....Physics I (for the Non-Science Major)
BIO-206.....Environmental Sci: Theory & Applications	CHM-112.....Chemistry II - Science	PHY-201.....Physics III
BIO-210.....Human Anatomy & Physiology	CHM-120.....Chemistry for Fire Protection	PHY-202.....Physics IV
BIO-211.....Anatomy & Physiology I	CHM-130.....General/Organic/Biochemistry Dental Hyg	Non-Lab Science General Education Electives
BIO-212.....Anatomy & Physiology II	CHM-140.....Chemistry & Society	BIO-103.....Human Biology

TECHNOLOGY GENERAL EDUCATION ELECTIVES: Technological Competency

CIS-101 .....Personal Computer Applications	CSC-101 .....Computer Literacy	CSC-111 .....Introduction to Programming
CIS-191 .....Internet: Tools and Techniques	CSC-102 .....Information Literacy in a Digital Era	CSC-226 .....Programming Languages
CIS-206 .....Advanced Computer Concepts/Applications	CSC-102H .....Honors Info Literacy in a Digital Era	
COM-105 .....Media Literacy	CSC-105 .....Fundamentals of Programming	

SOCIAL SCIENCE GENERAL EDUCATION ELECTIVES: Society and Human Behavior

ANT-101 .....General Anthropology	POL-101H.....Honors Introduction to Political Science	PSY-106 .....Psychology of Adolescence
ANT-101H ....Honors General Anthropology	POL-103 .....American Federal Government	PSY-107 .....Psychology of Adulthood Aging
ECO-101 .....Macroeconomics	POL-108 .....Introduction to International Relations	PSY-109 .....Developmental Psychology
ECO-102 .....Microeconomics	PSY-101 .....Basic Psychology	SOC-101 .....Introduction to Sociology
GEO-101.....Cultural Geography	PSY-101H.....Honors Basic Psychology	SOC-101H.....Honors Introduction to Sociology
POL-101 .....Introduction to Political Science	PSY-105 .....Child Psychology	

* Terminated

HUMANITIES GENERAL EDUCATION ELECTIVES: Humanistic Perspective

ARA-101.....Elementary Arabic I	ENG-281H ....Honors American Literature I	ITA-102 .....Elementary Italian II
ARA-102.....Elementary Arabic II	ENG-282.....American Literature II	ITA-201 .....Intermediate Italian I
ART-101 .....Art Appreciation	FLM-101.....Television Appreciation	ITA-202 .....Intermediate Italian II
ART-103 .....Visual Culture	FLM-201.....Film Appreciation	LAT-101.....Elementary Latin I
ART-103H.....Honors Visual Culture	FLM-201H ....Honors Films Appreciation	LAT-102.....Elementary Latin II
ART-104 .....Introduction to Visual Arts	FRE-101 .....Elementary French I	LAT-201 .....Intermediate Latin I
ART-111 .....Art History I	FRE-102 .....Elementary French II	MUS-101.....Music Appreciation I
ART-112 .....Art History II	FRE-201 .....Intermediate French I	MUS-101H ...Honors Music Appreciation
ASL-101.....American Sign Language I	FRE-202 .....Intermediate French II	MUS-106.....World Music Cultures
ASL-102.....American Sign Language II	FRE-203 .....Introduction to French Culture	MUS-111 .....Music History I
ASL-201.....American Sign Language III	GER-101 .....Elementary German I	MUS-112.....Music History II
ASL-202.....American Sign Language IV	GER-102 .....Elementary German II	MUS-113.....Jazz History
ASL-203.....American Sign Language V	GER-201 .....Intermediate German I	PHL-101 .....Introduction to Philosophy
CHI-101 .....Elementary Chinese I	GRK-101 .....Elementary Classical Greek I	PHL-111 .....Modern Philosophy
CHI-102 .....Elementary Chinese II	GRK-102 .....Elementary Classical Greek II	PHL-121 .....Logic & Reasoning
DAN-101* ....Dance Appreciation	HIS-101 .....World Civilization I	PHL-131 .....Introduction to Ethics
ENG-121.....Introduction to Literature	HIS-101H ....Honors World Civilization I	PHL-131H.....Honors Introduction to Ethics
ENG-131.....Shakespeare	HIS-102 .....World Civilization II	PHL-141 .....Philosophy of Religion
ENG-141.....The Short Story	HIS-102H ....Honors World Civilization II	PHO-111 .....History of Photography
ENG-181 .....Women's Literature	HIS-103 .....World Civilization III	RUS-101.....Elementary Russian I
ENG-191.....The Myths of the World	HIS-111 .....Western Civilization I	RUS-102.....Elementary Russian II
ENG-261.....English Literature I	HIS-112 .....Western Civilization II	SPA-101 .....Elementary Spanish I
ENG-262.....English Literature II	HIS-121 .....United States History I	SPA-102 .....Elementary Spanish II
ENG-271.....World Literature I	HIS-122 .....United States History II	SPA-201 .....Intermediate Spanish I
ENG-271H ....Honors World Literature I	HIS-131 .....African-American History I	SPA-202 .....Intermediate Spanish II
ENG-272.....World Literature II	HIS-132 .....African-American History II	SPA-203 .....Introduction to the Hispanic Culture
ENG-272H ....Honors World Literature II	HIS-142 .....The History of American Women	SPA-204 .....Conversational Spanish
ENG-281.....American Literature I	ITA-101 .....Elementary Italian I	THE-121 .....Theatre Appreciation

HUMANITIES—Language General Education Electives

ARA-101.....Elementary Arabic I	FRE-202 .....Intermediate French II	LAT-102 .....Elementary Latin II
ARA-102.....Elementary Arabic II	FRE-203 .....Introduction to French Culture	LAT-201 .....Intermediate Latin I
ASL-101.....American Sign Language I	GER-101 .....Elementary German I	RUS-101.....Elementary Russian I
ASL-102.....American Sign Language II	GER-102 .....Elementary German II	RUS-102.....Elementary Russian II
ASL-201.....American Sign Language III	GER-201 .....Intermediate German I	SPA-101 .....Elementary Spanish I
ASL-202.....American Sign Language IV	GRK-101 .....Elementary Classical Greek I	SPA-102 .....Elementary Spanish II
ASL-203.....American Sign Language V	GRK-102 .....Elementary Classical Greek II	SPA-201 .....Intermediate Spanish I
CHI-101 .....Elementary Chinese I	ITA-101 .....Elementary Italian I	SPA-202 .....Intermediate Spanish II
CHI-102 .....Elementary Chinese II	ITA-102 .....Elementary Italian II	SPA-203 .....Introduction to the Hispanic Culture
FRE-101 .....Elementary French I	ITA-201 .....Intermediate Italian I	SPA-204 .....Conversational Spanish
FRE-102 .....Elementary French II	ITA-202 .....Intermediate Italian II	
FRE-201 .....Intermediate French I	LAT-101 .....Elementary Latin I	

HUMANITIES—Arts General Education Electives

ART-101 .....Art Appreciation	DAN-101* ....Dance Appreciation	MUS-111.....Music History I
ART-103 .....Visual Culture	FLM-201.....Film Appreciation	MUS-112.....Music History II
ART-103H.....Honors Visual Culture	FLM-201H ....Honors Films Appreciation	MUS-113.....Jazz History
ART-104 .....Introduction to Visual Arts	MUS-101.....Music Appreciation I	PHO-111 .....History of Photography
ART-111 .....Art History I	MUS-101H ...Honors Music Appreciation	THE-121 .....Theatre Appreciation
ART-112 .....Art History II	MUS-106.....World Music Cultures	

HUMANITIES—Literature General Education Electives

ENG-121.....Introduction to Literature	ENG-261.....English Literature I	ENG-272H ....Honors World Literature II
ENG-131.....Shakespeare	ENG-262.....English Literature II	ENG-281.....American Literature I
ENG-141.....The Short Story	ENG-271.....World Literature I	ENG-281H ....Honors American Literature I
ENG-181 .....Women's Literature	ENG-271H ....Honors World Literature I	ENG-282.....American Literature II
ENG-191.....The Myths of the World	ENG-272.....World Literature II	

* Terminated

HISTORY GENERAL EDUCATION ELECTIVES: Historical Perspective

HIS-101 World Civilization I	HIS-103 World Civilization III	HIS-122 United States History II
HIS-101H Honors World Civilization I	HIS-111 Western Civilization I	HIS-131 African-American History I
HIS-102 World Civilization II	HIS-112 Western Civilization II	HIS-132 African-American History II
HIS-102H Honors World Civilization II	HIS-121 United States History I	HIS-142 The History of American Women

DIVERSITY GENERAL EDUCATION ELECTIVES: Cultural and Global Awareness

ANT-101 General Anthropology	ENG-271H Honors World Literature I	HIS-132 African-American History II
ANT-101H Honors General Anthropology	ENG-272 World Literature II	HIS-142 The History of American Women
ANT-102 Introduction to Physical Anthropology	ENG-272H Honors World Literature II	ITA-201 Intermediate Italian I
ANT-201 African Cultures	FRE-201 Intermediate French I	ITA-202 Intermediate Italian II
ART-103 Visual Culture	FRE-202 Intermediate French II	LAT-201 Intermediate Latin I
ART-103H Honors Visual Culture	FRE-203 Introduction to French Culture	MUS-106 World Music Cultures
ART-104 Introduction to Visual Arts	GEO-101 Cultural Geography	MUS-113 Jazz History
ART-111 Art History I	GER-201 Intermediate German I	PSY-112 Psychology of Women
ART-112 Art History II	HIS-101 World Civilization I	SLS-202 American Deaf Culture
COM-145 Intercultural Communication	HIS-101H Honors World Civilization I	SOC-201 Sociology of the Family
ENG-133 Italian Literature in Translation	HIS-102 World Civilization II	SOC-205 Social Diversity
ENG-181 Women's Literature	HIS-102H Honors World Civilization II	SPA-201 Intermediate Spanish I
ENG-191 The Myths of the World	HIS-103 World Civilization III	SPA-202 Intermediate Spanish II
ENG-271 World Literature I	HIS-131 African-American History I	SPA-203 Introduction to the Hispanic Culture

Diversity—Humanities General Education Electives

ART-103 Visual Culture	FRE-201 Intermediate French I	HIS-142 The History of American Women
ART-103H Honors Visual Culture	FRE-202 Intermediate French II	ITA-201 Intermediate Italian I
ART-104 Introduction to Visual Arts	FRE-203 Introduction to French Culture	ITA-202 Intermediate Italian II
ART-111 Art History I	GER-201 Intermediate German I	LAT-201 Intermediate Latin I
ART-112 Art History II	HIS-101 World Civilization I	MUS-106 World Music Cultures
ENG-181 Women's Literature	HIS-101H Honors World Civilization I	MUS-113 Jazz History
ENG-191 The Myths of the World	HIS-102 World Civilization II	SPA-201 Intermediate Spanish I
ENG-271 World Literature I	HIS-102H Honors World Civilization II	SPA-202 Intermediate Spanish II
ENG-271H Honors World Literature I	HIS-103 World Civilization III	SPA-203 Introduction to the Hispanic Culture
ENG-272 World Literature II	HIS-131 African-American History I	
ENG-272H Honors World Literature II	HIS-132 African-American History II	

Diversity—Social Science General Education Electives

ANT-101 General Anthropology	ANT-101H Honors General Anthropology	GEO-101 Cultural Geography
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INTEGRATED GENERAL EDUCATION ELECTIVES

Ethical Reasoning and Action

BIO-106 Living in the Environment
BIO-140 The Microbial World
CIS-206 Advanced Computer Concepts/Applications
CSC-101 Computer Literacy
ENG-102 English Composition II
PHL-131 Introduction to Ethics
PHL-131H Honors Introduction to Ethics
PHL-232 Biomedical Ethics
PHL-232H Honors Biomedical Ethics
SPE-102 Public Speaking

Information Literacy

ART-101 Art Appreciation
ART-111 Art History I
ART-112 Art History II
CHM-140 Chemistry & Society
ENG-102 English Composition II
SPE-102 Public Speaking

* Terminated

Program Specific Electives

Business Electives

ACC-104 .....Financial Accounting	FIN-201 .....Investment Principles	MGT-222 .....Small Business Management II
ACC-105 .....Managerial Accounting	LAW-101 .....Legal Environment/Business Law I	MGT-223 .....Introduction to International Business
ACC-213 .....Computerized Accounting	LAW-102 .....Business Law II	MKT-101 .....Principles of Marketing
ACC-214 .....Intermediate Accounting I	LAW-104 .....Hospitality Law	MKT-102 .....Retail Management
ACC-216 .....Intermediate Accounting II	MGT-101 .....Introduction to Business	MKT-123 .....Introduction to Promotion
ACC-223 .....Income Tax Accounting I	MGT-102 .....Introduction to Management	MKT-124 .....Fundamentals of Selling
ACC-224 .....Income Tax Accounting II	MGT-212 .....Human Resource Management	MKT-125 .....Principles of E-Commerce
ACC-225 .....Auditing	MGT-213 .....Operations Management	MKT-212 .....Strategies in Marketing
BMT-101 .....Business Mathematics I	MGT-214 .....Office Management	OST-113 .....Keyboarding & Document Processing
BMT-102 .....Business Mathematics II	MGT-215 .....Labor Relations	OST-201 .....Virtual Entrepreneurship I
ECO-101 .....Macroeconomics	MGT-216 .....Human Relations in Business & Industry	OST-202 .....Virtual Entrepreneurship II
ECO-102 .....Microeconomics	MGT-221 .....Small Business Management I	OST-205 .....Digital Tools for a Virtual Business

Computer Information Systems Electives

CGR-104 .....Elements & Principles of Graphic Design	CIS-225 .....Project Management Essentials	CSC-111 .....Introduction to Programming
CGR-115 .....Digital Storytelling	CIS-231 .....System Analysis & Design	CSC-121 .....Structured Programming (C++)
CGR-125 .....Game Design and Development I	CIS-235 .....SQL Fundamentals I	CSC-122 .....Computer Science I
CGR-200 .....Game Design & Development II	CIS-236 .....SQL Fundamentals II	CSC-151 .....HTML Programming
CGR-240 .....Video Production II	CIS-237 .....Relational Database Concepts	CSC-152 .....JavaScript for the Web
CGR-243 .....Computer Animation III	CIS-238 .....Database Security and Protection	CSC-161 .....Introduction to Java
CGR-244 .....Special Effects	CIS-241 .....Relational Database Management I	CSC-213 .....Visual Basic I
CGR-255 .....Game Design & Development III	CIS-242 .....Relational Database Management II	CSC-214 .....Visual Basic II
CGR-260 .....Comic Book Design	CIS-243 .....Relational Database Management III	CSC-215 .....Visual Basic III
CGR-270 .....Computer Graphics Internship/Co-Op	CIS-245 .....Database Administration Using Oracle	CSC-223 .....Computer Science II
CIS-101 .....Personal Computer Applications	CIS-246 .....Database Administration Using Oracle II	CSC-224 .....Advanced C++
CIS-102 .....Spreadsheets	CIS-284 .....SHELL Programming Under Linux/UNIX	CSC-226 .....Programming Languages
CIS-103 .....Database Management	CIS-285 .....Linux/Unix Networking and Security	CSC-240 .....Computer Organization
CIS-181 .....Linux/UNIX Essentials	CIS-288 .....Linux/UNIX Administration II	CSC-252 .....XML and Related Technologies I
CIS-187 .....Linux/Unix Administration I	CIS-289 .....Linux/Unix Server Security	CSC-262 .....Advanced Java
CIS-191 .....Internet: Tools and Techniques	CSC-101 .....Computer Literacy	CST-103 .....Microcomputer Oper Systems I/Workstation
CIS-192 .....Practical Applications of Website Mgt	CSC-102 .....Information Literacy in a Digital Era	CST-106 .....Microcomputer Oper Systems II/Serv Sys
CIS-206 .....Advanced Computer Concepts/Applications	CSC-102H .....Honors Info Literacy in a Digital Era	CST-109 .....Building, Upgrading, Repairing PCs
CIS-210 .....Information Systems Concepts	CSC-105 .....Fundamentals of Programming	CST-204 .....Computer and Network Security

Computer Programming Electives

CIS-235 .....SQL Fundamentals I	CSC-121 .....Structured Programming (C++)	CSC-223 .....Computer Science II
CIS-236 .....SQL Fundamentals II	CSC-122 .....Computer Science I	CSC-224 .....Advanced C++
CIS-241 .....Relational Database Management I	CSC-151 .....HTML Programming	CSC-226 .....Programming Languages
CIS-242 .....Relational Database Management II	CSC-161 .....Introduction to Java	CSC-252 .....XML and Related Technologies I
CIS-243 .....Relational Database Management III	CSC-213 .....Visual Basic I	CSC-262 .....Advanced Java
CSC-105 .....Fundamentals of Programming	CSC-214 .....Visual Basic II	CSC-263 .....Web Component Development in Java
CSC-111 .....Introduction to Programming	CSC-215 .....Visual Basic III	

Criminal Justice Electives

CRJ-107 .....Introduction to Probation and Parole	CRJ-207 .....Terrorism	CRJ-251 .....Crime Assessment
CRJ-108 .....Community Policing	CRJ-211 .....Introduction to Loss Prevention	CRJ-252 .....Intelligence Led Policing
CRJ-120 .....Introduction to Homeland Security	CRJ-220 .....Risk Management and Analysis	CRJ-253 .....Criminal Investigative Analysis
CRJ-200 .....Co-op I: Criminal Justice	CRJ-230 .....Victimology	CRJ-254 .....Crime Mapping
CRJ-206 .....Organized Crime	CRJ-241 .....Fundamentals of Corporate Security	CRJ-256 .....Quantitative Research-Criminal Justice

Ensemble Business Electives

MUS-115.....Jazz Band Ensemble I	MUS-182..... Concert Band II	MUS-263..... College Choir III
MUS-116.....Jazz Band Ensemble II	MUS-195.....Orchestra I	MUS-264..... College Choir IV
MUS-141.....Ensemble I	MUS-196.....Orchestra II	MUS-283..... Concert Band III
MUS-142.....Ensemble II	MUS-217.....Jazz Band Ensemble III	MUS-284..... Concert Band IV
MUS-161.....College Choir I	MUS-218.....Jazz Band Ensemble IV	MUS-297.....Orchestra III
MUS-162.....College Choir II	MUS-243.....Ensemble III	MUS-298.....Orchestra IV
MUS-181.....Concert Band I	MUS-244.....Ensemble IV	

Health & Exercise Electives

HPE-100.....Personal Fitness	HPE-120.....Fitness with Balls and Bands	HPE-146.....Wellspring Fitness Lab II
HPE-101.....Intro to Health and Exercise Science	HPE-121.....Beginning Golf	HPE-161.....Weight Training
HPE-102.....Health & Wellness	HPE-123.....Taekwondo I	HPE-170.....First Aid, Safety & Prevention of Injury
HPE-104.....Health & Personal Living	HPE-124.....Tai Chi	HPE-171.....Emergency Response
HPE-106.....Stress Management	HPE-125.....Self-Defense I	HPE-180.....Community CPR/American Red Cross
HPE-107.....Badminton	HPE-126.....Pilates Based Conditioning	HPE-181.....Basic Life Support (BLS)-"C" Course-AHA
HPE-108.....Aerobic Dance	HPE-127.....Exercise Techniques & Prescription	HPE-195.....Concepts of Individual and Dual Sports
HPE-109.....Physical Conditioning/Police Recruits	HPE-128.....Taekwondo II	HPE-201.....Introduction to Sport Management
HPE-110.....Coed Aerobic Fitness Exercise	HPE-130.....Consumer Health Decisions	HPE-209.....Internship: Sports Management
HPE-113.....Volleyball	HPE-141.....Hatha Yoga	HPE-210.....Internship: Personal Trainer Certificate
HPE-114.....Personalized Fitness	HPE-142.....Intermediate Hatha Yoga	HPE-211.....Theory/Application Physical Training I
HPE-119.....Cardio Kickboxing	HPE-145.....Wellspring Fitness Lab I	

Liberal Arts Electives

Any course with the following designation:

ANT	ARA	ART	ASL	BIO	CHI
CHM	COM	CSC	DAN	ECO	EDU
ENG	FRE	GEO	HIS	IDY (206, 207, 209)	ITA
LAT	MTH	MUS	PHL	PHO	POL
PHY	PSY	RUS	SOC	SPA	SPE
THE					

Studio Electives

ART-121.....Basic Drawing I	ART-166.....Two Dimensional Design - AFA Majors	MUS-141.....Ensemble I
ART-123.....Basic Drawing I - AFA	ART-167.....Three Dimensional Design - AFA Majors	MUS-142.....Ensemble II
ART-124.....Basic Drawing II - AFA	CGR-123.....Interactive Interface Design	MUS-201.....Class Piano II
ART-125.....Creative Arts: Early Childhood Learners	CGR-256.....Game Design & Development Final Project	MUS-202.....Advanced Music Lessons II
ART-134.....Life Drawing I	FLM-105.....Film Basic: Structure Light Sound Space	MUS-203.....Music Major Recital
ART-136.....Watercolor	FLM-110.....Filmmaking I	MUS-217.....Jazz Band Ensemble III
ART-139.....Mural Painting	FLM-210.....Filmmaking II	MUS-218.....Jazz Band Ensemble IV
ART-140.....Painted Finishes for Wood Surfaces	MUS-100.....Beginner Music Lessons	MUS-227.....Live Sound Reinforcement
ART-142.....Sculpture II	MUS-103.....Intermediate Music Lessons	MUS-243.....Ensemble III
ART-143.....Sculpture I - AFA	MUS-105.....Advanced Music Lessons I	MUS-244.....Ensemble IV
ART-144.....Sculpture II - AFA	MUS-115.....Jazz Band Ensemble I	PHO-101.....Photography I
ART-145.....Painting I - AFA	MUS-116.....Jazz Band Ensemble II	PHO-102.....Photography II
ART-146.....Painting II - AFA	MUS-125.....Class Piano I	PHO-103.....Photography I - AFA Majors
ART-151.....Ceramics & Pottery I	MUS-127.....Fundamentals of Music/Sound Engineers	PHO-104.....Photography II - AFA Majors
ART-152.....Ceramics & Pottery II	MUS-128.....Keyboarding Techniques/Sound Engineers	PHO-221.....Studio Photography
ART-153.....Ceramics & Pottery I - AFA	MUS-133.....Audio Recording Techniques I	PHO-223.....Photography & Portraiture
ART-154.....Ceramics & Pottery II - AFA	MUS-134.....Audio Recording Techniques II	PHO-226.....Digital Photography
ART-160.....Two Dimensional Design	MUS-135.....MIDI/DAW I (Digital Audio Workstation)	PHO-230.....Digital Photography - AFA Majors
ART-165.....Color: Theory and Practice	MUS-136.....MIDI/DAW II (Digital Audio Workstation)	

Technical Electives

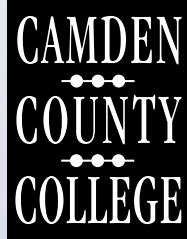
CAD-101.....Computer Aided Engineering Graphics	CIS-238 .....Database Security and Protection	EET-101 .....Electrical & Electronic Principles
CAD-102.....Advanced Computer Aided Eng Graphics	CIS-241 .....Relational Database Management I	EET-201 .....Electrical Circuits
CAD-107.....Parametric Design: AutoDesk Inventor	CIS-242 .....Relational Database Management II	EET-211 .....Electronics I
CAD-205.....Architectural CADD Using Revit	CIS-243 .....Relational Database Management III	EET-212 .....Electronics II
CAD-206.....Solids Modeling: Solids Works	CIS-245 .....Database Administration Using Oracle	EET-213 .....Electronic Communications
CGR-104 .....Elements & Principles of Graphic Design	CIS-246 .....Database Administration Using Oracle II	EET-221 .....Digital Circuits
CGR-106 .....Print Publishing	CIS-284 .....SHELL Programming Under Linux/UNIX	EET-241 .....Robotics
CGR-115 .....Digital Storytelling	CIS-285 .....Linux/Unix Networking and Security	EET-251 .....Electronic Projects
CGR-123 .....Interactive Interface Design	CIS-288 .....Linux/UNIX Administration II	EGR-103 .....Technical Drawing
CGR-125 .....Game Design and Development I	CIS-289 .....Linux/Unix Server Security	EGR-201 .....Statics
CGR-200 .....Game Design & Development II	CSC-101 .....Computer Literacy	EGR-202 .....Dynamics
CGR-239 .....2D Animation	CSC-102 .....Information Literacy in a Digital Era	FIR-106 .....NJ Firefighter II
CGR-240 .....Video Production II	CSC-102H .....Honors Info Literacy in a Digital Era	LFO-101 .....Intro to Photonics & Photonic Safety
CGR-243 .....Computer Animation III	CSC-105 .....Fundamentals of Programming	LFO-103 .....Laser Safety/App Medicine & Related Flds
CGR-244 .....Special Effects	CSC-111 .....Introduction to Programming	LFO-211 .....Photonic-Optic Principles & Components
CGR-255 .....Game Design & Development III	CSC-121 .....Structured Programming (C++)	LFO-212 .....Pulsed & CW Lasers
CGR-256 .....Game Design & Development Final Project	CSC-122 .....Computer Science I	LFO-241 .....Introduction to Fiber Optics
CGR-260 .....Comic Book Design	CSC-151 .....HTML Programming	LFO-243 .....Fiber Optic Communication & Installation
CGR-270 .....Computer Graphics Internship/Co-Op	CSC-152 .....JavaScript for the Web	MET-221 .....Quality Control
CIM-101 .....Machine Shop Practices	CSC-161 .....Introduction to Java	MET-231 .....Strength of Materials
CIM-110 .....Introduction to Technical Careers	CSC-213 .....Visual Basic I	MET-232 .....Manufacturing Processes
CIM-115 .....Microcontroller Applications	CSC-214 .....Visual Basic II	MET-233 .....Project Design
CIM-202 .....Conventional Machinist	CSC-215 .....Visual Basic III	MET-241 .....Machine Design
CIM-219 .....CNC Machinist	CSC-223 .....Computer Science II	MTH-140 .....Calculus I
CIM-221 .....CNC Programming & CAM	CSC-224 .....Advanced C++	MTH-140H .....Honors Calculus I
CIM-231 .....Motors, Controllers, and Sensors	CSC-252 .....XML and Related Technologies I	MTH-145 .....Linear Algebra
CIM-255 .....Precision Machining Project	CSC-262 .....Advanced Java	MTH-150 .....Calculus II
CIS-187 .....Linux/Unix Administration I	CSC-263 .....Web Component Development in Java	MTH-210 .....Calculus III
CIS-192 .....Practical Applications of Website Mgt	CST-102 .....Introduction to Networking	MTH-220 .....Differential Equations
CIS-210 .....Information Systems Concepts	CST-103 .....Microcomputer Oper Systems I/Workstation	PHY-101 .....Physics I
CIS-225 .....Project Management Essentials	CST-106 .....Microcomputer Oper Systems II/Serv Sys	PHY-102 .....Physics II
CIS-235 .....SQL Fundamentals I	CST-109 .....Building, Upgrading, Repairing PCs	PHY-103 .....Physics I (for the Non-Science Major)
CIS-236 .....SQL Fundamentals II	CST-201 .....Advanced Networking	PHY-201 .....Physics III
CIS-237 .....Relational Database Concepts	CST-204 .....Computer and Network Security	PHY-202 .....Physics IV

Free Electives

Any college level course listed in the catalog; providing the prerequisites have been met and the course(s) satisfy the credit requirement.

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