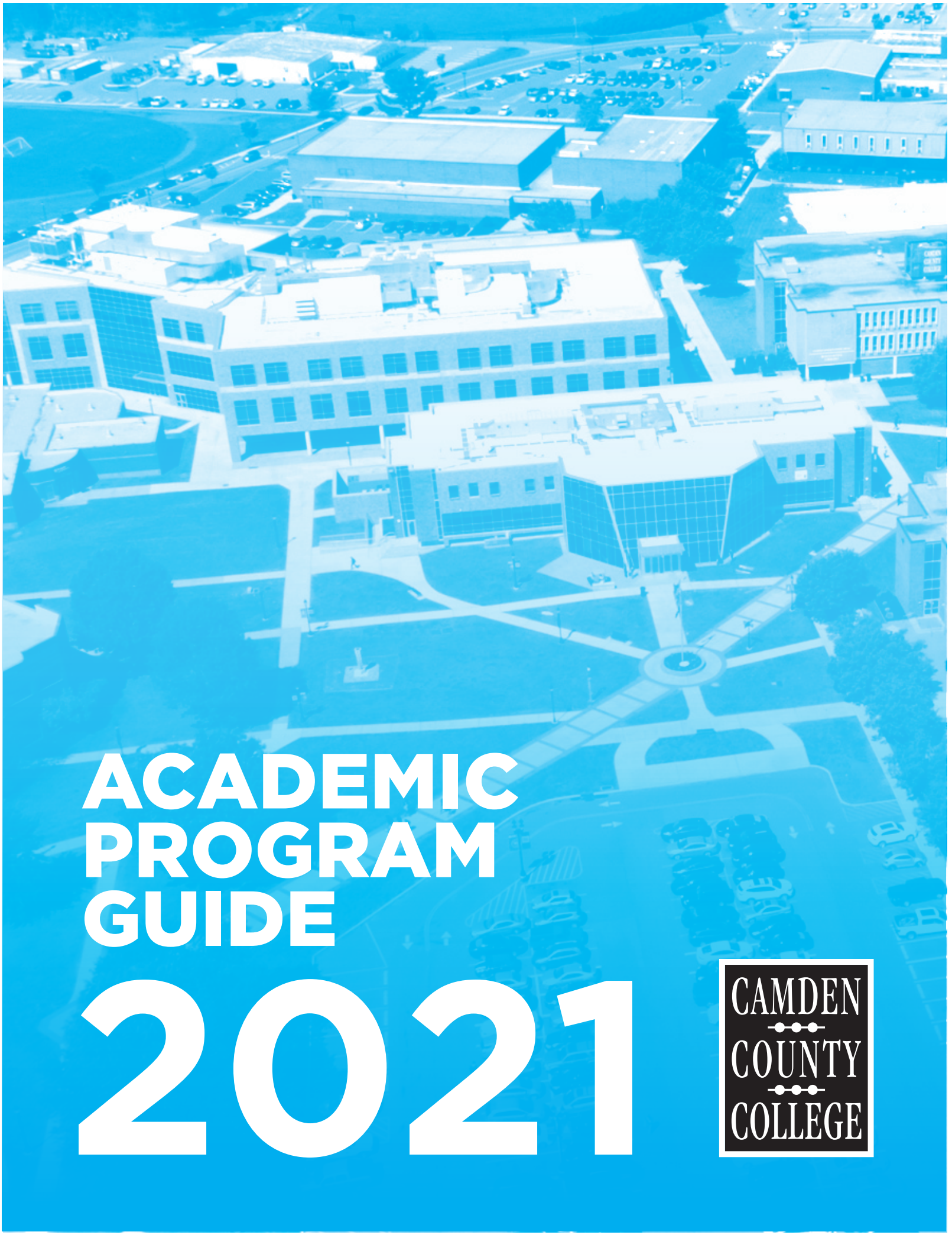

ACADEMIC PROGRAM GUIDE

2021

CAMDEN COUNTY COLLEGE

CAMDEN COUNTY COLLEGE

2021 Academic Program Guide

Mission:

Camden County College is a learning community committed to the success of our diverse student population in achieving their full academic, career, and personal potential while delivering a high-quality, inclusive, affordable, and accessible education.

Vision:

Camden County College will be the regional leader in the provision of innovative academic and workforce training pathways to best serve our community.

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 accredited 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
ASE Education Foundation
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) 669-6650

The Ophthalmic Medical Technician Program is accredited by
International Council of Accreditation for Allied Ophthalmic
Education Programs (ICA)
2025 Woodlane Drive, St. Paul, MN 55125
Phone: (651) 731-7237
CoA-OMP@jcahpo.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

<table>
<tr><th>Workforce Track</th><th colspan="4">Academic Track</th><th>Accelerated Track</th><th>College Level</th></tr>
<tr><td rowspan="2">ENG-005
Pathways to
Reading & Writing
PLA.ENG-PRW</td><td>Reading Courses</td><td>ENG-012
Reading Skills II
PLA.ENG-R2</td><td>ENG-002
Reading Skills II Express
PLA.ENG-RS2A</td><td>ENG-013
Reading Skills III
PLA.ENG-R3</td><td rowspan="2">ENG-055/ENG101
ALP
Accelerated
Learning Program
PLA.ENG-ALP</td><td rowspan="2">ENG-101
English Comp I
PLA.ENG-CLE
or
450 or higher on the
SAT Evidence Based
Reading/Writing</td></tr>
<tr><td>Writing Courses</td><td>ENG-022
Writing Skills II
PLA.ENG-WS2</td><td></td><td>ENG-023
Writing Skills III
PLA.ENG-WS3</td></tr>
</table>

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, except in the case of ALP placement.

Department Contacts Academic Skills English:

Reneé Pollard, (856) 227-7200, ext. 4442, rpollard@camdencc.edu
Lesley Fredericks, Coordinator, lfredericks@camdencc.edu

Academic Skills Math

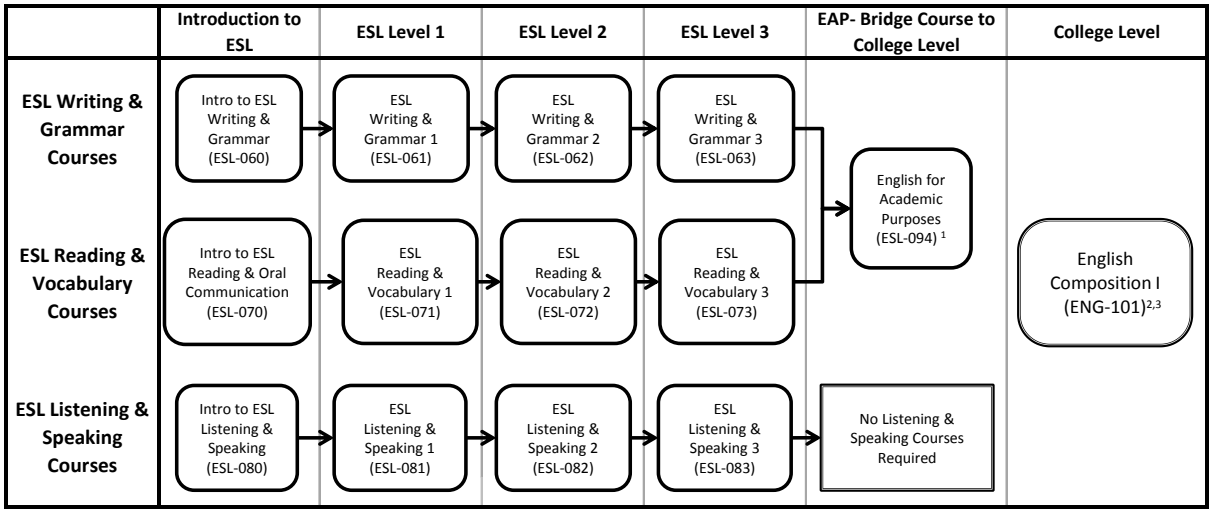
The Academic Skills Math Department offers developmental math courses designed to help students prepare for college-level math, science and business courses. Placement into the various levels is determined by scores on the Accuplacer placement test. Students who test into any of the developmental levels 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.

Department Contacts Academic Skills Math:

Sherri Bonafiglia, Administrative Assistant, (856) 227-7200, ext. 4468
Sandi Tannen, Department Chair, stannen@camdencc.edu

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



1 – Student must either 1) complete ESL-063 and ESL-073; or 2) receive an Essay Score of 5 and a Reading Score of 105-115 in order to take ESL-094.
2 – ENG-101 is NOT part of the ESL Course Sequence.
3 – Student must either 1) complete ESL-094; or 2) receive an Essay Score of 6 and a Reading Score of 116+ in order to take ENG-101.

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:

Kim Reitano, Secretary, (856) 227-7200, ext. 4382
Martine Howard, Department Chair, Languages and Communications, mhoward@camdencc.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)

ASSOCIATE IN ARTS

CIP Code 24.0101

Liberal Arts and Science: Applied & Fine Arts Option

APA.AA

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
ART-123	Basic Drawing I – AFA	3	
ART-166	Two Dimensional Design – AFA	3	
HIS-101	World Civilization I	3	
MTH-107	Mathematics for Liberal Arts	3	Must test into College Level Math or complete all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG 101
ART-124	Basic Drawing II-AFA		
or ART-134	Life Drawing I	3	**Prerequisite:** ART 123
HIS-102	World Civilization II	3	
SOC-101	Introduction to Sociology	3	
MTH-101	Concepts of Mathematics		
or COM-105	Media Literacy	3	
SECOND YEAR/FIRST SEMESTER			
ART-111	Art History I	3	
ART-167	Three Dimensional Design-AFA	3	
PSY-101	Basic Psychology	3	
ELECTIVE	Laboratory Science General Education Elective	4	
ELECTIVE	Language Elective	3	Must take 6 credits in one language
SECOND YEAR/SECOND SEMESTER			
ART-112	Art History II	3	
ART-165	Color: Theory and Practice	3	
SPE-102	Public Speaking	3	
ELECTIVE	Language Elective	3	Must take 6 credits in one language
CIS-106	Introductory Computing using Google Apps	2	
	TOTAL CREDITS	**60**	

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 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.

CONTACT PERSON

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

ASSOCIATE IN ARTS

CIP Code 24.0101

Liberal Arts and Science: Music Option

MUS.AA

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
HIS-101	World Civilization I	3	
MUS-123	Music Theory I	3	
MUS....	Ensemble Elective	1	
MTH-107	Mathematics for Liberal Arts	3	Must test into College level Math or complete all appropriate prerequisites
CIS-106	Introductory Computing Using Google Apps (G Suite)	2	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
HIS-102	World Civilization II	3	
MUS-124	Music Theory II	3	**Prerequisite:** MUS-123
MUS-103	Intermediate Music Lessons	1	
MUS....	Ensemble Elective	1	
MTH-111	Introduction to Statistics	3	
SECOND YEAR/FIRST SEMESTER			
MUS-225	Music Theory III	3	**Prerequisite:** MUS-124
MUS-105	Advanced Music Lessons I	1	**Prerequisite:** MUS-103
MUS....	Ensemble Elective	1	
BIO-106	Living in the Environment		
or CHM-140	Chemistry & Society	4	
SPE-102	Public Speaking	3	
ELECTIVE	Language General Education Elective	3	Must take 6 credits in one language
SECOND YEAR/SECOND SEMESTER			
MUS-113	Jazz History		
or MUS-106	World Music Cultures	3	
MUS-202	Advanced Music Lessons II	1	**Prerequisite:** MUS-105
PSY-101	Basic Psychology	3	
SOC-101	Introduction to Sociology	3	
ELECTIVE	Humanities Arts General Education Elective	3	
ELECTIVE	Language Science General Education Elective	3	Must take 6 credits in one language
	TOTAL CREDITS	**60**	

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 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, choir and ensemble.
3. Present a collegiate recital showcasing a variety of music and techniques.
4. Explain and apply music theory.

CONTACT PERSON

Professor Mike Billingsley, Coordinator
(856) 227-7200 ext. 4563
Email: mbillingsley@camdencc.edu

ARTS

ASSOCIATE IN APPLIED SCIENCE

CIP Code 10.0203

Audio Production

MUS.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
MTH-100	Algebraic Concepts	4	Must test into College level Math or complete all appropriate prerequisites
MUS-129	Introduction to Audio Recording	3	
MUS-133	Audio Recording Techniques I	3	
MUS-135	MIDI/DAW I	3	**Co-requisite:** MUS-129 and MUS-133
FIRST YEAR/SECOND SEMESTER			
SPE-102	Public Speaking		
or ENG-102	English Composition II	3	**Prerequisite:** ENG-101
MUS 107	Digital Music Composition	1	
MUS-134	Audio Recording Techniques II	3	**Prerequisite:** MUS-133
MUS-136	MISI/DAW II	3	**Prerequisite:** MUS-135; Co-requisite: MUS-134
MUS-227	Live Sound Reinforcement	3	**Prerequisite:** MUS-129
MUS-228	Business of Music	3	
SECOND YEAR/FIRST SEMESTER			
ELECTIVE	Humanities – Arts General Education Elective	3	
BIO-106	Living in the Environment		
or CHM-140	Chemistry & Society	4	
MUS-229	Basic Studio Maintenance		
or FLM-110	Filmmaking I	3	**MUS-229 Prerequisite:** MUS-129
MUS-230	Audio Production	3	**Prerequisite:** MUS-134
MUS-231	Mixing Audio	3	**Prerequisite:** MUS-136
SECOND YEAR/SECOND SEMESTER			
MUS-113	Jazz History		
or MUS-106	World Music Cultures	3	
MUS-232	Sound Design	3	**Prerequisite:** MUS-134 and MUS-136
MUS-233	Advanced Audio Production and Mixing	3	**Prerequisite:** MUS-230 and MUS-231
MUS-275	Audio Internship	3	**Prerequisite:** MUS-230
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

The Audio Production degree begins with the development of the fundamental skills needed in the field 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 an 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 STUDENT LEARNING OUTCOMES

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

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

CONTACT PERSON

Professor Michael Billingsley, Coordinator
(856) 227-7200 ext. 4563
Email: mbillingsley@camdencc.edu

ARTS

CERTIFICATE OF ACHIEVEMENT

CIP Code 10.0203

Music Recording

MUS.CA

FIRST YEAR/FIRST SEMESTER				
Course #	**Course Name**	**Credits**	**Notes**	
MUS-107	Digital Music Composition	1		
MUS-129	Introduction to Audio Recording	3		
MUS-133	Audio Recording Techniques I	3		
MUS-135	MIDI/DAW I (Digital Audio Workstation)	3	**Co-requisite:** MUS-129 and MUS-133	
FIRST YEAR/SECOND SEMESTER				
MUS-134	Audio Recording Techniques II	3	**Prerequisite:** MUS-133	
MUS-136	MIDI/DAW II (Digital Audio Workstation)	3	**Prerequisite:** MUS-135; **Co-requisite:** MUS-134	
MUS-227	Live Sound Reinforcement	3	**Prerequisite:** MUS-129	
MUS-228	Business of Music	3		
	TOTAL CREDITS	**22**		

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 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.

CONTACT PERSON

Professor Michael Billingsley, Coordinator
(856) 227-7200 ext. 4563
Email: mbillingsley@camdencc.edu

THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

ASSOCIATE IN ARTS

CIP Code 24.0101

Liberal Arts and Science: Theatre Option

SPT.AA

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
HIS-101	World Civilization I	3	
THE-131	Voice and Diction	3	
THE-253	Stagecraft I	3	
MTH-107	Mathematics for Liberal Arts	3	Must test into College level Math or complete all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
HIS-102	World Civilization II	3	
THE-141	Acting I	3	
THE-121	Theatre Appreciation	3	
ELECTIVE	Mathematics General Education Elective	3	
SECOND YEAR/FIRST SEMESTER			
SPE-102	Public Speaking	3	
THE-233	Playwriting	3	
BIO-106	Living in the Environment		
or CHM-140	Chemistry & Society	4	
ELECTIVE	Social Science General Education Elective	3	
ELECTIVE	Language General Education Elective	3	Must take 6 credits in one language
SECOND YEAR/SECOND SEMESTER			
THE-252	Children's Theatre	3	
CIS-106	Introductory Computing Using Google Apps (G Suite)	2	
ELECTIVE	Language General Education Elective	3	Must take 6 credits in one language
ELECTIVE	Diversity General Education Elective	3	
ELECTIVE	Social Science General Education Elective	3	
	TOTAL CREDITS	**60**	

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 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.

CONTACT PERSONS

Professor Michael Billingsley, Coordinator
(856) 227-7200 ext. 4563
Email: mbillingsley@camdencc.edu

Professor Marjorie Sokoloff
(856) 227-7200, ext. 4737
Email: msokoloff@camdencc.edu

ASSOCIATE OF FINE ARTS IN STUDIO ART

CIP Code 50.0702

Studio Art

STA.AFA

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
ART-123	Basic Drawing Design - AFA	3	
ART-166	Two Dimensional Design	3	
MTH-107	Mathematics for Liberal Arts	3	Must test into College level Math or complete all appropriate prerequisites
PSY-101	Basic Psychology	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
ART-124	Basic Drawing II - AFA	3	**Prerequisite:** ART-123
ART-167	Three Dimensional Design - AFA	3	
ART-165	Color: Theory and Practice	3	
ART-103	Visual Culture	3	
SECOND YEAR/FIRST SEMESTER			
ART-111	Art History I	3	
FLM-205	Film Animation I	3	
ELECTIVE	Studio Elective	3	
ELECTIVE	Studio Elective	3	
ENG-191	The Myths of the World		
or ENG-271	World Literature I	3	**Prerequisite:** ENG-101 **Co-requisite:** ENG-102
SECOND YEAR/SECOND SEMESTER			
ART-112	Art History II	3	
ART-201	Visual Arts Seminar	3	**Prerequisite:** ENG-101 and ENG-102
PHO-226	Photo Illustration	3	
ELECTIVE	Studio Elective	3	
ELECTIVE	Studio Elective	3	
	TOTAL CREDITS	**60**	

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 STUDENT LEARNING OUTCOMES

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

1. Discuss the history of western art.
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.
5. Draw from life (observational drawing).

CONTACT PERSON

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ARTS

ASSOCIATE IN APPLIED SCIENCE

CIP Code 10.0202

Film and Television Production FLM.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
FLM-201	Film Appreciation	3	
PHO-106	Beginning Digital Photography	3	
ART-166	Two Dimensional Design – AFA Majors	3	
MTH-101	Concepts of Mathematics		
or MTH-107	Mathematics for Liberal Arts	3	Must test into College level Math or take all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
FLM-110	Filmmaking I	3	
ART-123	Basic Drawing I – AFA Majors	3	
ART-167	Three Dimensional Design – AFA Majors	3	
PSY-101	Basic Psychology	3	
SECOND YEAR/FIRST SEMESTER			
FLM-210	Filmmaking II	3	**Prerequisite**: FLM-110
PHO-226	Photo Illustration		
or MUS-133	Audio Recording Techniques I	3	
FLM-101	Television Appreciation	3	
THE-253	Stagecraft		
or ART-143	Sculpture I	3	
ART-111	Art History		
or ART-112	Art History II		
or PHO-111	History of Photography	3	
SECOND YEAR/SECOND SEMESTER			
FLM-215	Production Internship I	3	**Prerequisite:** FLM-110 and FLM-210
FLM-205	Film Animation	3	
ART-201	Visual Arts Seminar	3	
ART-103	Visual Culture	3	
ART-111	Art History		
or ART-112	Art History II		
or PHO-111	History of Photography	3	
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

An understanding of the role of film and television is intrinsic to an understanding of popular culture. Film and television production changes with advances in technology. This program balances introducing students 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 STUDENT LEARNING OUTCOMES

At 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.

CONTACT PERSON

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Professor Tom Murray
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AUTOMOTIVE

ASSOCIATE IN APPLIED SCIENCE

CIP Code 15.0803

Automotive Technology (Apprentice) AUT.AAS

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
AUT-101	Automotive Fundamentals	3	
AUT-111	Automotive Brake Systems	3	
AUT-121	Steering & Suspension Systems	4	
CIS-105	Computer Literacy	3	
ELECTIVE	Diversity: Humanities Education Elective	3	
FIRST YEAR/SECOND SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
AUT-131	Automotive Heating and Air Conditioning	3	
AUT-141	Automotive Electrical/Electronic Principles	4	
MTH....	Mathematics General Education Elective	3 or 4	Must test into College level Math or complete all appropriate prerequisites
ELECTIVE	Social Science General Education Elective	3	
SECOND YEAR/FIRST SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
AUT-242	Automotive Electrical/Electronic Systems	4	
AUT-253	Automotive Engines	4	
AUT-261	Manual Drive Trains and Axles	4	
PHY-103	Physics I (for the Non-Science major)	4	
SECOND YEAR/SECOND SEMESTER			
AUT-262	Automatic Transmissions & Transaxles	4	
AUT-271	Advanced Automotive Systems I	4	
AUT-272	Advanced Automotive Systems II	4	**Corequisite:** AUT-271
AUT-286	Automotive Capstone Practicum (360 hours)	3	
	TOTAL CREDITS	**66/67**	

PROGRAM DESCRIPTION

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

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 CCC is fully certified as a master training program by the ASE Education Foundation.

CONTACT PERSON

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(856) 227-7200 ext. 4544
Email: cgallo@camdencc.edu

AUTOMOTIVE

ASSOCIATE IN APPLIED SCIENCE

CIP Code 15.0803

Automotive Technology: General Motors / ASEP Option

GMA.AAS

Course #	Course Name	Credits	Notes
FIRST SEMESTER (FALL) 15 WEEKS			
AUT-101	Automotive Fundamentals	3	
AUT-111	Automotive Brake Systems	3	
AUT-141	Automotive Electrical/Electronic Principles	4	
ELECTIVE	Diversity-Humanities General Education Elective	3	
SECOND SEMESTER (SPRING) DEALERSHIP EXPERIENCE 1ST 9 WEEKS			
AUT-181	Automotive Practicum	3	
SECOND SEMESTER 2ND 9 WEEKS			
AUT-121	Automotive Steering & Suspension Systems	4	
AUT-131	Automotive Heating & Air Conditioning	3	
CIS-105	Computer Literacy	3	
ELECTIVE	Social Science General Education Elective	3	
DEALERSHIP EXPERIENCE (SUMMER) 9 WEEKS			
AUT-182	Automotive Practicum II	3	
THIRD SEMESTER (FALL) 9 WEEKS			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
AUT-242	Automotive Electrical/Electronic Systems	4	
AUT-253	Automotive Engines	4	
DEALERSHIP EXPERIENCE 9 WEEKS			
AUT-283	Automotive Practicum III	3	
FOURTH SEMESTER (SPRING) 9 WEEKS			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
AUT-271	Advanced automotive Systems I	4	
AUT-272	Advanced automotive Systems II	4	**Corequisite:** AUT-271
MTH....	Mathematics General Education Elective	3	Must test into College level Math or complete all appropriate prerequisites
DEALERSHIP EXPERIENCE 9 WEEKS			
AUT-284	Automotive Practicum IV	3	
FIFTH SEMESTER (SUMMER) 9 WEEKS			
AUT-261	Manual Drive Trains & Axles	4	
AUT-262	Automatic Transmissions & Transaxles	4	
PHY-103	Physics I (for the Non-Science major)	4	
	TOTAL 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 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.

CERTIFICATION

The Automotive Technology program at CCC is fully certified as a master training program by the ASE Education Foundation.

SPECIAL ADMISSION 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.
- 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.

CONTACT PERSON

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Email: cgallo@camdencc.edu

AUTOMOTIVE

CERTIFICATE OF ACHIEVEMENT

CIP Code 47.0604

Automotive General Technician

GAT.CA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
AUT-101	Automotive Fundamentals	3	
AUT-111	Automotive Brake Systems	3	
AUT-121	Automotive Steering and Suspension Systems	4	
FIRST YEAR/SECOND SEMESTER			
AUT-131	Automotive Heating and Air Conditioning	3	
AUT-141	Automotive Electrical/Electronic Principles	4	
SECOND YEAR/FIRST SEMESTER			
AUT-242	Automotive Electrical/Electronic Systems	4	
AUT-253	Automotive Engines	4	
AUT-261	Manual Drive Trains and Axles	4	
SECOND YEAR/SECOND SEMESTER			
AUT-262	Automotive Transmissions and Transaxles	4	
AUT-271	Advanced Automotive Systems I	4	
AUT-272	Advanced Automotive Systems II	4	**Corequisite:** AUT-271
AUT-286	Automotive Capstone Practicum (360 hours)	3	
	TOTAL CREDITS	**44**	

PROGRAM DESCRIPTION

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

SPECIAL PROGRAM REQUIREMENTS

The basic skills placement test must be taken for admittance. It is highly recommended that any basic skills classes be completed by graduation.

CONTACT PERSON

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AUTOMOTIVE

CERTIFICATE OF ACHIEVEMENT

CIP Code 47.0604

Automotive General Motors Technician GMT.CA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
AUT-101	Automotive Fundamentals	3	
AUT-111	Automotive Brake Systems	3	
AUT-141	Automotive Electrical/Electronic Principles	4	
FIRST YEAR/SECOND SEMESTER			
AUT-131	Automotive Heating and Air Conditioning	3	
AUT-121	Steering & Suspension Systems	4	
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.

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.

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.
- 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.

CONTACT PERSON

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(856) 227-7200 ext. 4544
Email: cgallo@camdencc.edu

THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

Career & Technical Institute of Camden County College

Automotive

CTI

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 the NATEF (National Automotive Technical Education Foundation).

Included in this program are topics in vehicle construction and design as they apply to mechanical, hydraulic, and electrical system service. These sections include: engine design and operation, brake system operation and service, steering system service, suspension systems and alignment, engine control systems, electrical and electronic systems, tires and wheels. Also covered is an introduction to hand and power tools, shop equipment, hand held test equipment, and shop safety practices. Additional instruction is provided in fasteners, gaskets, seals and sealants used in the automotive trade, measuring instruments, service manuals, sources of electronic service information and technical certification requirements.

Students will take nationally recognized competency exams in Braking System Operation and Service, Electrical System Operation and Service, Engine Performance and Steering / Suspension/ Wheel Alignment systems. These exams are supported by ASE but are NOT the voluntary ASE Technician Certification Exams taken by technicians already employed in the automotive service industry.

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 or Pennsauken Campus

CE.TRD-011 *Hours: 382* *CEUs: 38.2*

SCHOOL BUS DRIVER

(CDL-B with P & S endorsement)
This course is being offered in partnership with Mike's Driving School in Williamstown, NJ. The purpose of this course is to provide the student with the knowledge and preparation to obtain a class B NJ driver's license with Passenger and School Bus endorsements. This course will prepare students with the basic knowledge of handling a vehicle with a gross rating of 26,001 or more pounds, the understanding of the airbrake system, how to inspect your vehicle, safe operation behind the wheel of the vehicle with skill maneuvers and on the road experience. Also included, and state mandatory, will be behavioral training for special needs students and a certification in CPR training.

Pre-requisites:
Must be 21 years of age or older, driving abstract without multiple violations or any major violations, be able to pass DOT physical and drug screen. In order to complete course and take final road test, student will need to be pre-hired and fingerprinted by a school bus company of sponsorship. All efforts will be made to assist students in finding sponsorship but it is not guaranteed.

CE.TRD-011 *Hours: 120* *CEUs: 12.0*

CAREER & TECHNICAL INSTITUTE OF CAMDEN COUNTY COLLEGE
(856) 374-4955
tradetraining@camdencc.edu
www.camdencc.edu/ce

Business

CIP Code 52.0201

ASSOCIATE IN SCIENCE
Business Administration

ABA.AS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG 101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
ACC-104	Financial Accounting	3	
CIS-105	Computer Literacy		
or ELECTIVE	Technology General Education Elective	3	
MGT-101	Introduction to Business	3	
ELECTIVE	General Education Elective	3	
FIRST YEAR/SECOND SEMESTER			
ENG 102	English Composition II	3	**Prerequisite:** ENG-101
ACC-105	Managerial Accounting	3	**Prerequisite:** ACC-104
ECO-101	Macroeconomics	3	
ELECTIVE	General Education Elective	3	
ELECTIVE	Laboratory Science General Education Elective	4	
SECOND YEAR/FIRST SEMESTER			
ECO-102	Microeconomics	3	
HIS-101	World Civilization I	3	
MGT-102	Introduction to Management	3	
MTH-111	Introduction to Statistics	3	Must test into College level Math or take all appropriate prerequisites
CIS-106	Introductory Computing Using Google Apps (G Suite)	2	
SECOND YEAR/SECOND SEMESTER			
HIS-102	World Civilization II	3	
LAW-101	Legal Environmental/Business Law I	3	
MKT-101	Principles of Marketing	3	
ENG-271	World Literature I	3	**Prerequisite:** ENG-101 **Co-requisite:** ENG-102
MTH-122	Applied Calculus	3	Must test into MTH-122 or take all prerequisites (MTH-100 and MTH-114)
	TOTAL CREDITS	**60**	

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 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. Apply financial data to making business decisions.
3. Research and communicate business information using information technology.
4. Describe the legal implications of business descriptions.

CONTACT PERSON

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Email: rsarkisian@camdencc.edu

Business

CIP Code 31.0504

ASSOCIATE IN SCIENCE

Sport Management

SPM.AS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
HPE-130	Consumer Health Decisions		
or HPE-102	Health and Wellness	3	
ACC-104	Financial Accounting I	3	
ELECTIVE	Lab Science General Education Elective	4	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
ECO-101	Macroeconomics		
or ECO-102	Microeconomics	3	
HPE-106	Stress Management	3	
ELECTIVE	Lab Science General Education Elective	4	
ELECTIVE	Free Elective	3	
SECOND YEAR/FIRST SEMESTER			
MGT-102	Intro to Management	3	
MTH-111	Introduction to Statistics	3	Must test into College level Math or complete all appropriate prerequisites
PSY-101	Basic Psychology	3	
HIS-101	World Civilization I	3	
HPE-201	Intro to Sport Management	3	
SECOND YEAR/SECOND SEMESTER			
HPE-170	First Aid, Safety & Prevention of Injuries	3	
SOC-101	Intro to Sociology	3	
ELECTIVE	Technology General Education Elective	3	
HPE-209	Internship: Sport Management	1	**Prerequisites:** CIS-105, ENG-102, HPE-102, HPE-195, HPE-201, MTH-111, PSY-101, HIS-101
ELECTIVE	Humanities: Literature General Education Elective	3	
ELECTIVE	Humanities General Education Elective	3	
	TOTAL CREDITS	**60**	

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.

Note: Farleigh Dickinson University offers seamless completion of a bachelor's degree in Sport Management on the Camden County College Blackwood Campus.

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.

CONTACT PERSON

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Business

CIP Code 52.0302

ASSOCIATE IN APPLIED SCIENCE

Accounting

ACC.AAS

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ACC-104	Financial Accounting	3	
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
LAW-101	Legal Environment/Business Law		
or LAW-102	Business Law II	3	
MGT-101	Introduction to Business	3	
CIS-101	Personal Computer Applications		
or CIS-105	Computer Literacy	3	
FIRST YEAR/SECOND SEMESTER			
ACC-105	Managerial Accounting	3	**Prerequisite:** ACC-104
ACC-213	Computerized Accounting	3	**Prerequisite:** ACC-104
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
FIN-212	Principles of Finance	3	**Prerequisite:** ACC-104
MTH...	Mathematics General Education Elective	3	Must test into College level Math or complete all appropriate prerequisites
SECOND YEAR/FIRST SEMESTER			
ACC-214	Intermediate Accounting I	3	**Prerequisite:** ACC-105 Fall Only
ACC-223	Income Tax Accounting I	3	**Prerequisite:** ACC-104 Fall Only
CIS-102	Spreadsheets	3	
ECO-101	Macroeconomics	3	
MTH....	Mathematics General Education Elective	3	Must test into College level Math or complete all appropriate prerequisites
SECOND YEAR/SECOND SEMESTER			
ACC-216	Intermediate Accounting II	3	**Prerequisite:** ACC-214 Spring Only
ACC-224	Income Tax Accounting II	3	**Prerequisite:** ACC-223 Spring Only
ECO-102	Microeconomics	3	
MGT-102	Introduction to Management	3	
ELECTIVE	Diversity – Humanities General Education Elective	3	
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

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

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, statements of owner's equity, balance sheets and statement of cash flow.
3. Use computer software to design and maintain bookkeeping and accounting systems.

CONTACT PERSON

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Business

ASSOCIATE IN APPLIED SCIENCE

CIP Code 52.0201

Management

MGT.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
ACC-104	Financial Accounting	3	
BMT-101	Business Mathematics I	3	
CIS-105	Computer Literacy	3	
MGT-101	Introduction to Business	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
ACC-105	Managerial Accounting	3	**Prerequisite:** ACC-104
BMT-102	Business Mathematics II	3	**Prerequisite:** BMT-101
LAW-101	Legal Environment/Business Law I	3	
MGT-102	Introduction to Management	3	
SECOND YEAR/FIRST SEMESTER			
ECO-101	Macroeconomics	3	
LAW-102	Business Law II	3	
MGT-212	Human Resource Management	3	**Prerequisite:** MGT-102
MKT-101	Principles of Marketing	3	
MTH-111	Introduction to Statistics	3	Must test into College level Math or complete all appropriate prerequisites
SECOND YEAR/SECOND SEMESTER			
ECO-102	Microeconomics	3	
FIN-212	Principles of Finance		Must test into College level Math or complete all appropriate prerequisites
or BUS-201	Co-op I: Business	3	
MGT-213	Operations Management	3	**Prerequisite:** MGT-212 and MTH-111 Spring Only
MGT-216	Human Relations in Business & Industry	3	**Prerequisite:** MGT-102 Spring Only
ELECTIVE	Diversity General Education Elective	3	
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

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

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.

CONTACT PERSON

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Business

CIP Code 52.1401

ASSOCIATE IN APPLIED SCIENCE
Marketing
MKT.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
ACC-104	Financial Accounting	3	
MGT-101	Introduction to Business	3	
CSC-105	Computer Literacy	3	
MTH-111	Introduction to Statistics	3	Must test into College level Math or complete all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
ACC-105	Managerial Accounting	3	**Prerequisite:** ACC-104; Must test into College level Math or complete all appropriate prerequisites.
MGT-102	Introduction to Management	3	
MKT-101	Principles of Marketing	3	
LAW-101	Legal Environment/Business Law I	3	
SECOND YEAR/FIRST SEMESTER			
MKT-102	Retail Management	3	
ECO-101	Macroeconomics	3	
SOC-205	Social Diversity	3	
LAW-102	Business Law II	3	
ELECTIVE	Humanities General Education Elective	3	
SECOND YEAR/SECOND SEMESTER			
BUS-201	Co-op I: Business	3	
ECO-102	Microeconomics	3	
MKT-124	Fundamentals of Selling		
or MKT-123	Introduction to Promotion	3	
MKT-212	Strategies in Marketing		**MKT-212 Prerequisite:** MKT-101
or MKT-125	Principles of E-Commerce	3	**MKT-125 Prerequisite:** MKT-101 and CIS-105
MTH....	Mathematics General Education Elective	3	Must test into College level Math or complete all appropriate prerequisites
	TOTAL CREDITS	**60**	

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 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.

CONTACT PERSON

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Business

CERTIFICATE OF ACHIEVEMENT
Retail Management

CIP Code 52.1803

RET.CT

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CIS-101	Personal Computer Applications	3	
MKT-101	Principles of Marketing	3	
MGT-102	Introduction to Management	3	
ELECTIVE	Free Elective	3	
FIRST YEAR/SECOND SEMESTER			
ACC-104	Financial Accounting	3	
MGT-212	Human Resource Management	3	**Prerequisite:** MGT-102
MGT-216	Human Relations in Business & Industry	3	**Prerequisite:** MGT-102 Spring Only
MKT-102	Retail Management (Capstone)	3	
CIS-102	Spreadsheet		
or CIS-103	Database Management		
or CIS-206	Advanced Computer Concepts & Applications	3	**CIS-102, CIS-103 and CIS-206 CIS Prerequisite:** CIS-101 or CIS-105
	TOTAL CREDITS	**30**	

PROGRAM DESCRIPTION

This one-year certification provides students with specialized course work in retailing. This program is designed as a pathway to obtain Associates degree credentials in the discipline of retail management. Upon completion, students can continue to pursue a degree in MGT.AAS, BPM.AAS, MKT.AAS, SMB.AAS, ACC.AAS, ASA.AAS, ABA.AS, ADA.AAS, IFP.AAS, SPM.AS.

Retailing offers careers in such areas as selling, sales management, buying advertising, and display. It is an ever changing field that allows much opportunity for innovation. There are options for a student to run a privately owned business or work for a larger organization. Retail buyers study market research reports and monitor sales transactions to determine which products are in demand. They assess resale value of goods and make purchases.

PROGRAM STUDENT LEARNING OUTCOMES

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

1. Demonstrate proficiency and apply the managerial competencies applicable to selection of the optimal methodologies to deal with change management and conflict resolution in the workplace.
2. Analyze the role of Information Systems in supporting organizational strategy, improving business processes, and supporting data-driven decision making.
3. Employ software tools (e.g. Microsoft Word, Excel, Access, PowerPoint) to produce professional quality business communications (e.g. letters, memos, presentations, and emails) to address a variety of business situations and prepare business reports that integrate data from multiple sources to illustrate and facilitate managerial decision-making.
4. Execute the roles, responsibilities, and accountability of managers in planning, organizing, leading, and controlling within an organization.
5. Conduct reviews of Federal and State employment laws applicable to management decisions and integrate statutory provisions as context for evaluating legal and financial implications and human factors in making personnel decisions.
6. Develop and manage customer databases, integrated systems, and buying ad sales forecasting systems for use to support retail businesses.

CONTACT PERSON

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Professor Rondald O'Neal
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THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

Professional Studies

CIP Code 52.0401

ASSOCIATE IN APPLIED SCIENCE

Office Systems Technology Administrative Assistant

ADA.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
ACC-104	Financial Accounting	3	
CIS-105	Computer Literacy	3	
OST-113	Keyboarding & Document Processing	3	
OST-123	Introduction of Microsoft Word	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
ACC-105	Managerial Accounting		
or ACC-213	Computerized Accounting	3	**ACC-105 and ACC-213:** ACC-104
OST-151	PowerPoint 1	3	
OST-224	Advanced Microsoft Word & Desktop Publishing	3	**Prerequisite:** OST-123
MTH...	Mathematics General Education Elective	3	Must test into College level Math or complete all appropriate prerequisites
SECOND YEAR/FIRST SEMESTER			
CIS-191	Internet: Tools & Techniques	3	
ECO-101	Macroeconomics	3	
MGT-102	Introduction to Management	3	
SOC-205	Social Diversity	3	
ELECIVE	Humanities General Education Elective	3	
SECOND YEAR/SECOND SEMESTER			
CIS-102	Spreadsheets	3	
BUS-201	Co-op I: Business		
or CIS-103	Database Management	3	
MGT-212	Human Resource Management	3	**Prerequisite:** MGT-102
OST-241	Administrative Office Procedures		
or MGT-214	Office Management	3	
SPE-102	Public Speaking	3	
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

An administrative assistant performs a large number of administrative tasks in order for a business or organization to run effectively. 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, websites 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 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.

CONTACT PERSON

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Professional Studies

ASSOCIATE IN APPLIED SCIENCE

Paralegal Studies

CIP Code 22.0302

PAR.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CIS-105	Computer Literacy	3	
PAR-101	Introduction to Paralegal Studies	3	
PAR-201	Legal Research & Writing I	3	
MTH....	Mathematics General Education Elective	3	Must test into College level Math or complete all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
OST-123	Introduction to Microsoft	3	
PAR-102	Litigation and Civil Procedure	3	
PAR-202	Legal Research & Writing II	3	**Prerequisite:** PAR-201
POL-101	Introduction to Political Science	3	
SECOND YEAR/FIRST SEMESTER			
PAR-210	Law Office Management	3	**Prerequisite:** PAR-101 and ENG-101
CRJ-105	Criminal Law	3	
LAW-101	Legal Environment/Business Law	3	
SPE-102	Public Speaking	3	
SOC-205	Social Diversity	3	
SECOND YEAR/SECOND SEMESTER			
PAR-203	Family Law	3	**Prerequisite:** PAR-101
PAR-204	Real Estate Law		
or PAR-207	Bankruptcy Basics	3	**PAR-207 Prerequisite:** PAR-101
PAR-205	Estate and Probate	3	
PAR-206	Paralegal Internship	3	
ELECTIVE	Humanities General Education Elective	3	
	TOTAL CREDITS	**60**	

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.

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 in both civil and criminal proceedings.
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.

CONTACT PERSON

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Career & Technical Institute of Camden County College

Business

CTI

Starting your own business

Small, growing businesses need help, especially practical advice and ideas that work. 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 effect 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

CTI

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, who will guide you through the investment spectrum.

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, 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* *CEU's: .25*

RETIREMENT PLANNING AND FUNDING

This course will explore strategies for those planning for retirement by focusing on rollovers, social security, 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* *CEU's: .25*

Various workshops are also available for non-profit management. Camden County College's workshop series on nonprofit management has been created for leadership track NPO managers and others wishing to broaden their skills and knowledge. Program participants learn to identify, understand, and apply a broad spectrum of management skills and practices in critical areas of NOP program management. The curriculum has been curated by the Board of the Nonprofit Development Center of Southern New Jersey. Class offerings fluctuate so please

visit www.camdencc.edu/ce for the most recent course catalog with full details.

Cosmetology CTI

COSMETOLOGY / HAIR STYLIST

In just 10 months students are prepared to pass the NJ State Board of Cosmetology licensure exam. Camden County College Cosmetology students have achieved an extremely high pass rate as a result of the training they receive from our industry experts.

The 1,071-hour program consists of classroom and hands-on training, performing basic designs on mannequins and patrons in a clinical salon setting, which is open to the public. Units of instruction include state laws, shop management, scalp conditioning, shampooing, hair styling and cutting, permanent waving, thermal waving, hair shaping, tinting, coloring, shaving, make-up application, facials, and chemistry. In addition, students are offered instruction in the styling and fitting of wigs and hairpieces. Camden County College is now offering a rolling admission schedule with multiple start dates to choose from. Students will complete their training 10 months after their respective start date.

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.

Because this is a cooperative course, policies and procedures may vary from the College's standard policies governing credit classes.

FIN-215 *Hours: 75*

CAREER & TECHNICAL INSTITUTE OF CAMDEN COUNTY COLLEGE
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COMMUNICATION & MEDIA

ASSOCIATE IN ARTS

CIP Code 24.0101

Liberal Arts and Science: Communications Option

COM.AA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
COM-101	Influence of Mass Media	3	
HIS-101	World Civilization I	3	
ELECTIVE	Language General Education Elective	3	Must take six credits of one language.
MTH-107	Mathematics for Liberal Arts	3	Must test into College level Math or complete all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
COM-102	Theory of Communication	3	
HIS-102	World Civilization II	3	
ELECTIVE	Language General Education Elective	3	Must take six credits of one language.
MTH-111	Introduction to Statistics	3	Must test into College level Math or complete all appropriate prerequisites
SECOND YEAR/FIRST SEMESTER			
COM-103	News Writing & Reporting	3	**Prerequisite:** ENG-101
CIS-106	Intro to Computing Google Apps (G Suite)	2	
GEO-101	Cultural Geography		
or POL-101	Introduction to Political Science		
or POL-103	American Federal Government		
or SOC-101	Introduction to Sociology	3	
ART-101	Art Appreciation		
or FLM-201	Film Appreciation		
or FLM-101	Television Appreciation		
or PHO-111	History of Photography	3	
CHM-140	Chemistry and Society		
or BIO-106	Living in the Environment		
or BIO-130	Plants & Society	4	
SECOND YEAR/SECOND SEMESTER			
COM-143	Introduction to Electronic Media	3	
COM-145	Intercultural Communications (Diversity Gen Ed)	3	
SPE-102	Public Speaking	3	
COM-104	Introduction to Public Relations		
or COM-105	Media Literacy		
or COM 141	Introduction to Broadcasting I	3	
ECO-101	Macroeconomics		
or POL-108	Introduction to International Relations		
or PSY-101	Basic Psychology	3	
	TOTAL CREDITS	**60**	

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 a well-informed media consumer.

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.

CONTACT PERSON

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COMMUNICATION & MEDIA

ASSOCIATE IN ARTS

CIP Code 24.0101

Liberal Arts and Science: Public Relations/Digital Marketing Option PRA.AA

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
HIS-101	World Civilization I	3	
COM-101	Influence of Mass Media	3	
ELECTIVE	Language General Education Elective	3	Must take six credits of one language.
MTH-107	Mathematics for Liberal Arts	3	Must test into College level Math or complete all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
HIS-102	World Civilization II	3	
COM-143	Introduction to Electronic Media	3	
ELECTIVE	Language General Education Elective	3	Must take six credits of one language.
MTH-111	Introduction to Statistics	3	Must test into College level Math or complete all appropriate prerequisites
SECOND YEAR/FIRST SEMESTER			
COM-104	Introduction to Public Relations	3	
GEO-101	Cultural Geography		
or ECO-101	Macroeconomics		
or POL-101	Intro to Political Science		
or POL-103	American Federal Government		
or POL-108	Introduction to International Relations		
or PSY-101	Basic Psychology		
or SOC-101	Introduction to Sociology	3	
SPE-102	Public Speaking	3	
CHM-140	Chemistry and Society		
or BIO-106	Living in the Environment		
or BIO-130	Plants & Society	4	
CIS-106	Intro to Computing Google Apps (G Suite)	2	
SECOND YEAR/SECOND SEMESTER			
COM-208	Public Relations: Digital Marketing	3	
COM-103	News Writing & Reporting	3	**Prerequisite:** ENG-101
COM-145	Intercultural Communications	3	
GEO-101	Cultural Geography		
or ECO-101	Macroeconomics		
or POL-101	Intro to Political Science		
or POL-103	American Federal Government		
or POL-108	Introduction to International Relations		
or PSY-101	Basic Psychology		
or SOC-101	Introduction to Sociology	3	
ART-101	Art Appreciation		
or ENG-141	The Short Story		**ENG-141 Prerequisite:** ENG-101 **ENG-141 Co-requisite:** ENG-102
or FLM-101	Television Appreciation		
or FLM-201	Film Appreciation		
or MUS-101	Music Appreciation		
or PHO-111	History of Photography	3	
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

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

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 its publics.
2. Discuss the history and evolution of public relations in America.
3. Originate messages, including digital, designed to communicate products, brands or ideas to a diverse audience.
4. Choose communication terminology and apply this to the public relations process.

CONTACT PERSON

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Computer Graphics

CIP Code 24.0101

ASSOCIATE IN ARTS

Liberal Arts and Science: Computer Graphics Option

CGR.AA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
HIS-101	World Civilization	3	
CGR-104	Elements and Principles of Graphic Design	3	
CGR-111	Computer Graphics I	3	
ELECTIVE	Language General Education Elective	3	Must take 6 credits in one language
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
HIS-102	World Civilization II	3	
CGR-112	Computer Graphic Design II	3	**Prerequisite:** CGR-111
ELECTIVE	Language General Education Elective	3	Must take 6 credits in one language
MTH-100	Algebraic Concepts		Must test into College level Math or complete all appropriate prerequisites
or ELECTIVE	Laboratory Science General Education Elective	4	
SECOND YEAR/FIRST SEMESTER			
CGR-113	Web Page Design I	3	**Prerequisite:** CGR-111
MTH....	Mathematics General Education Elective	4	Must test into College level Math or complete all appropriate prerequisites
ELECTIVE	Social Science General Education Elective	3	
ELECTIVE	Humanities General Education Elective	3	
SECOND YEAR/SECOND SEMESTER			
CGR-253	Digital Illustration	3	**Prerequisite:** CGR-111
SPE-102	Public Speaking	3	
ELECTIVE	Laboratory Science General Education Elective	4	
ELECTIVE	Diversity General Education Elective	3	
ELECTIVE	Social Science General Education Elective	3	
	TOTAL CREDITS	**60**	

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 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.

CONTACT PERSONS

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ASSOCIATE IN APPLIED SCIENCE

Computer Graphics

CIP Code 10.0303

CGR.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CGR-104	Elements and Principles of Graphic Design	3	
CGR-106	Print Publishing	3	
CGR-111	Computer Graphic Design I	3	
ELECTIVE	Social Science General Education Elective	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
CGR-102	Electronic Publishing & Prepress	3	
CGR-112	Computer Graphic Design II	3	**Prerequisite:** CGR-111
CGR-113	Web Page Design I	3	**Prerequisite:** CGR-112
ELECTIVE	Diversity General Education Elective	3	
SECOND YEAR/FIRST SEMESTER			
CGR-239	2D Animation	3	**Prerequisite:** CGR-111
CGR-214	Web Page Design II	3	**Prerequisite:** CGR-113
CGR-253	Digital Illustration	3	**Prerequisite:** CGR-111
CIS-191	Internet Tools & Techniques	3	
MTH....	Mathematics General Education Elective	3	Must test into College level Math or complete all appropriate prerequisitess
SECOND YEAR/SECOND SEMESTER			
CGR-213	Computer Graphic Design III	3	
CGR-244	Special Effects	3	**Prerequisite:** CGR-112
CGR-252	Portfolio Design	3	**Prerequisite:** CGR-102 and CGR-112
CGR-260	Comic Book Design	3	**Prerequisite:** CGR-111
ELECTIVE	Humanities General Education Elective	3	
	TOTAL 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 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.

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ASSOCIATE IN APPLIED SCIENCE

Computer Graphics: Game Design and Development GDD.AAS

CIP Code 10.0303

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CGR-111	Computer Graphic Design I	3	
CGR-104	Elements & Principles of Graphic Design	3	
CGR-125	Game Design & Development I	3	**Prerequisite:** CGR-111
ELECTIVE	Diversity General Education Elective	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
CSC-111	Introduction to Programming	3	
CGR-115	Digital Storytelling	3	
CGR-200	Game Design & Development II	3	
MTH-111	Introduction to Statistics	3	Must test into College level Math or complete all appropriate prerequisites
SECOND YEAR/FIRST SEMESTER			
ENG-221	Creative Writing	3	**Prerequisite:** ENG-101
CGR-112	Computer Graphic Design II	3	**Prerequisite:** CGR-111
CGR-107	Script Writing	3	
CGR-255	Game Design & Development III	3	**Prerequisite:** CGR-200
CGR-241	Computer Animation I		
or CGR-260	Comic Book Design	3	**Prerequisite CGR-241 and CGR-260**: CRG-111
SECOND YEAR/SECOND SEMESTER			
CGR-242	Computer Animation II		
or CGR-253	Digital Illustration	3	**Prerequisite CGR-242 and CGR-253:** CGR-241 and CGR-111
CGR-244	Special Effects	3	**Prerequisite:** CGR-112
CGR-256	Game Design & Development Final Project	3	**Prerequisites:** CGR-125, CGR-200 and CGR-255
ELECTIVE	Humanities General Education Elective	3	
ELECTIVE	Social Science General Education Elective	3	
	TOTAL CREDITS	**60**	

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 STUDENT LEARNING OUTCOMES

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

1. Create interactive 2D and 3D 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.

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Computer Graphics

CIP Code 11.0801

ASSOCIATE IN APPLIED SCIENCE

Web Design and Development

WEB.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CGR-104	Elements and Principles of Graphic Design	3	
CGR-111	Computer Graphic Design I	3	
CIS-191	Internet Tools and Techniques	3	
MTH...	Mathematics General Education Elective	3	Must test into College level Math or complete all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
CGR-105	Podcasting	3	
CGR-112	Computer Graphic Design II	3	**Prerequisite:** CGR-111
CGR-113	Web Page Design I	3	**Prerequisite:** CGR-111
ELECTIVE	Social Science General Education Elective	3	
SECOND YEAR/FIRST SEMESTER			
CGR-123	Interactive Interface Design	3	**Prerequisite:** CGR-111
CGR-205	Graphics for Web	3	**Prerequisite:** CGR-113
CGR-214	Web Page Design II	3	**Prerequisite:** CGR-113
CGR-231	Video Imaging Technology I	3	**Prerequisite:** CGR-111
ELECTIVE	Humanities General Education Elective	3	
SECOND YEAR/SECOND SEMESTER			
CGR-215	Web Multimedia	3	**Prerequisite:** CGR-113
CGR-220	Web Development	3	**Prerequisite:** CGR-113 and CGR-214
CGR-252	Portfolio Design	3	**Prerequisite:** CGR-102 and CGR-112
CIS-192	Practical Applications of Website Management	3	
ELECTIVE	Diversity General Education Elective	3	
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

The growth of the Internet has increased 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 STUDENT LEARNING OUTCOMES

At the end of the program, the graduate will be able 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.

CONTACT PERSONS

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Computer Information Systems

ASSOCIATE IN SCIENCE

CIP Code 52.1201

Management of Information Systems MIS.AS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG 101	English Composition I	3	Must test into ENG-101 of complete all appropriate prerequisites
ACC-104	Financial Accounting	3	
CIS-105	Computer Literacy		
or CIS-101	Personal Computer Applications	3	
MGT-101	Introduction to Business	3	
MTH-111	Introduction to Statistics	3	Must test into College level Math or complete all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG 102	English Composition II	3	**Prerequisite:** ENG-101
ACC-105	Managerial Accounting	3	**Prerequisite:** ACC-104
CSC-171	Introductory Python Programming	3	
CIS-206	Advanced Computer Concepts and Apps		**CIS-206 Prerequisite:** CIS-101 or CIS-105
or CIS-237	Relational Database Concepts	3	**CIS-237 Prerequisite:** CIS-101 or CIS-105 o CIS-206 | CIS-237 - Offered Spring Semester Only
ELECTIVE	General Education Elective	3	
SECOND YEAR/FIRST SEMESTER			
ECO-101	Macroeconomics	3	
CIS-210	Management of Information Systems	3	**Prerequisite:** ENG-101, MTH-111, and CIS-101 or CIS-105 or CIS-206 | Fall Semester Only.
LAW-101	Legal Environment/Business Law I	3	
HIS-101	World Civilization I		
or HIS-102	World Civilization II	3	
MTH-112	Elements of Statistics II		**Prerequisite:** MTH-111
or MTH-114	College Algebra–Business & Social Science	3	**Prerequisite:** MTH-100
SECOND YEAR/SECOND SEMESTER			
ECO-102	Microeconomics	3	
CIS-112	The Technology of Smartphones	1	
CIS-231	System Analysis and Design	3	**Prerequisite:** CSC-111 or CSC-171 Spring Semester Only
HPE....	Health & Exercise Science Elective	1	
CHM-140	Chemistry & Society		
or BIO-106	Living in the Environment	4	
MTH-122	Applied Calculus	3	Must test into MTH-122 or complete all appropriate prerequisites
	TOTAL CREDITS	**60**	

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 STUDENT LEARNING OUTCOMES

At the end of the 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 solution using both verbal and written communication.
4. Work productively as a team member as well as independently.
5. Demonstrate professionalism and ethical behavior.
6. Adapt to emerging technologies and new environments.

CONTACT PERSON

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Computer Information Systems

ASSOCIATE IN APPLIED SCIENCE

CIP Code 52.1201

Computer Information Systems

CIS.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CIS-105	Computer Literacy	3	
CSC-171	Introductory Python Programming	3	
MGT-101	Introduction to Business	3	
MTH....	Mathematics General Education Elective	3	Must test into College level Math or complete all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
ACC-104	Financial Accounting	3	
CIS-206	Advanced Computer Concepts & Applications	3	**Prerequisite:** CIS-101 or CIS-105
CIS-181	Linux/UNIX Essentials	3	
MTH....	Mathematics General Education Elective	3	Must test into College level Math or complete all appropriate prerequisites
SECOND YEAR/FIRST SEMESTER			
ACC-105	Managerial Accounting	3	**Prerequisite:** ACC-104
CIS-237	Relational Database Concepts	3	**Prerequisite:** CIS-101 or, CIS-105 or CIS-206 Fall Semester Only
CST-103	Microcomputer Operating System I: Workstations	3	
ECO-101	Macroeconomics	3	
CIS-210	Management of Information Systems	3	**Prerequisite:** ENG-101, MTH- 111 and CIS-101 or CIS-105 or CIS-206 Fall Semester Only
SECOND YEAR/SECOND SEMESTER			
CIS-231	System Analysis and Design	3	**Prerequisite:** CSC 111 or CSC 171 Spring Semester Only
ECO-102	Microeconomics	3	
MGT-102	Introduction to Management		
or FIN-212	Principles of Finance	3	**FIN-212 Prerequisite:** ACC-104
CIS-102	Spreadsheets	3	**Prerequisite:** CIS-101 or CIS-105
ELECTIVE	Diversity Humanities General Education Elective	3	
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

The 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 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 achieve business/organizational goals.
3. Implement a designed solution to solve business/organization information systems problems using state of the art programming techniques and applications software.
4. Present technical solutions effectively.

CONTACT PERSON

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Computer Information Systems

ACADEMIC CERTIFICATE

CIP Code 11.0202

Computer Information Systems

CPG.CT

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
ACC-104	Financial Accounting	3	
CIS 105	Computer Literacy		
or CIS 206	Advanced Computer Concepts and Applications	3	**CIS-206 Prerequisite:** CIS-101 or CIS-105
CSC-171	Introductory Python Programming	3	
MGT-101	Introduction to Business	3	
FIRST YEAR/SECOND SEMESTER			
ACC-105	Managerial Accounting	3	**Prerequisite:** ACC-104
CIS-102	Spreadsheets	3	**Prerequisite:** CIS-101 or CIS-105
CIS-181	Linux/UNIX Essentials	3	
CST-102	Introduction to Networking	3	
MTH....	Mathematics General Education Elective	3 or 4	Must test into College level Math or complete all appropriate prerequisites
	TOTAL CREDITS	**30/31**	

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 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 computer environment.
2. Analyze, design, and implement an information systems approach to a business/organizational environment.
3. Demonstrate an understanding of relational database principles.

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Computer Information Systems

CERTIFICATE OF ACHIEVEMENT

SQL Analyst Certificate

CIP Code 11.0201

SQL.CA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
CSC-171	Introductory Programming with Python	3	
CIS-103	Database Management	3	**Prerequisite:** CIS-101 or CIS-105 | Fall Semester Only
CIS-235	SQL Fundamentals I	3	**Prerequisite:** CIS-101 or CIS-105 or CIS-206 | Fall Semester Only
CIS-237	Relational Database Concepts	3	**Prerequisite:** CIS-101 or CIS-105 or CIS-206 | Fall Semester Only
FIRST YEAR/SECOND SEMESTER			
CIS-225	Project Management Essentials	3	**Prerequisite:** CIS-101 or CIS-105 | Spring Semester Only
CIS-236	SQL Fundamentals II	3	**Prerequisite:** CIS-235 | Spring Semester Only
CIS-238	Database Security and Protection	3	**Prerequisite:** CIS-101 or CIS-103 or CIS-105 C or CIS-181, or CIS-206 | Spring Semester Only
CIS-239	Database Administration Principles	3	**Prerequisite:** CIS-237 | Spring Semester Only
	TOTAL CREDITS	**24**	

PROGRAM DESCRIPTION

The certificate program is designed for individuals who are looking to acquire the skills 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 as 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.

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THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

Computer Information Systems

CIP Code 11.9999

CERTIFICATE OF ACHIEVEMENT
Linux/UNIX Administration

UNX.CA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
CIS-181	Linux/UNIX Essentials	3	
CST-102	Introduction to Networking	3	
CSC-171	Introduction to Python	3	
FIRST YEAR/SECOND SEMESTER			
CIS-285	Linux Networking and Security	3	**Prerequisite:** CIS-181, CST-102 and CSC-171
CIS-288	Linux Administration	3	**Prerequisite:** CIS-181, CST-102 and CSC-171
CIS-289	Linux System and Services	3	**Prerequisite:** CIS-181, CST-102 and CSC-171
	TOTAL CREDITS	**18**	

PROGRAM DESCRIPTION

The 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 STUDENT LEARNING OUTCOMES

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

1. Demonstrate a comprehensive knowledge of popular versions of Linux and UNIX operating systems, commands, VI editor, processes, kernel structures and tables, and associated shells.
2. Use Python to write scripts to perform tasks.
3. Install, configure, and manage a Linux server and relevant services and applications.
4. Perform duties as a junior Linux System Administrator in managing users and groups, monitoring processes and permissions, performing backup and recovery, and evaluating basic security concepts.
5. Demonstrate a strong understanding of Linux system administration by passing a CompTIA Linux+ Certification test which is a recognized credential for IT professionals.

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THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

Computer Science

CIP Code 11.0101

ASSOCIATE IN ARTS
Computer Science

CSC.AA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CSC-121	Structured Programming (C++)	4	
HIS-101	World Civilization I	3	
MTH-140	Calculus I	4	Must test into MTH-140 or complete all appropriate prerequisites
ELECTIVE	Social Science General Education Elective	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
CSC-122	Computer Science I	4	**Prerequisites:** CSC-121 and MTH-100
HIS-102	World Civilization II	3	
MTH-129	Discrete Mathematics	4	**Prerequisite:** MTH-140
ELECTIVE	Social Science General Education Elective	3	
SECOND YEAR/FIRST SEMESTER			
CSC-223	Computer Science II	4	**Prerequisite:** CSC-122, **Co-requisite:** MTH-129
ELECTIVE	Diversity General Education Elective	3	
ELECTIVE	Laboratory Science General Education Elective	4	
ELECTIVE	Language General Education Elective	3	Must take six credits in one language.
SECOND YEAR/SECOND SEMESTER			
CSC-226	Programming Languages		**CSC-226 Prerequisite:** CSC-223
or CSC-240	Computer Organization	3	**CSC-240 Prerequisite:** CSC-121
SPE-102	Public Speaking	3	
ELECTIVE	Language General Education Elective	3	Must take six credits in one language.
ELECTIVE	Humanities General Education Elective	3	
	TOTAL CREDITS	**60**	

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 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.

CONTACT PERSONS

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Computer Science

CIP Code 11.0101

ASSOCIATE IN SCIENCE
Computer Science

CSC.AS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG 101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CSC-121	Structured Programming (C++)	4	
HIS-101	World Civilization I	3	**Prerequisites:** (ENG-013 and ENG-023) or ENG-046
MTH-140	Calculus I	4	Must test into MTH-140 or complete all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG 102	English Composition II	3	**Prerequisite:** ENG-101
CSC-122	Computer Science I	4	**Prerequisites:** CSC-121 and MTH-100
HIS-102	World Civilization II	3	**Prerequisites:** (ENG-013 and ENG-023) or ENG-046
MTH-150	Calculus II	4	**Prerequisite:** MTH-140
ELECTIVE	Social Science General Education Elective	3	
SECOND YEAR/FIRST SEMESTER			
CSC-223	Computer Science II	4	**Prerequisites:** CSC-122 Co-requisites: MTH-129
MTH-129	Discrete Mathematics	4	**Prerequisites:** MTH-140
PHY-201	Physics III	4	**Prerequisites:** MTH-140
CSC-240	Computer Organization	3	**Prerequisite:s** CSC-121
SECOND YEAR/SECOND SEMESTER			
CSC-226	Programming Languages	3	**Prerequisites:** CSC-223
MTH-145	Linear Algebra	4	**Prerequisite:** MTH-140
PHY-202	Physics IV	4	**Prerequisite:** PHY-201
ELECTIVE	Social Science General Education Elective	3	
	TOTAL CREDITS	**60**	

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 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 computer science.

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Computer Systems Technology

ASSOCIATE IN APPLIED SCIENCE

Computer Systems Technology

CIP Code 11.0101

CST.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CIS-181	Linux/UNIX Essentials	3	
CST-103	Microcomputer Operating Systems I: Workstations	3	
MTH-100	Algebraic Concepts	4	Must test into College level Math or complete all appropriate prerequisites
CIS-112	The Technology of Smartphones		
or HPE....	Health and Exercise Science Elective	1	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
CIM-115	Microcontroller Applications	3	
CST-102	Introduction to Networking	3	**Prerequisite:** CST-103
CST-106	Microcomputer Operating Systems II: Server Systems	3	**Prerequisite:** CST-103
MTH-111	Introduction to Statistics	3	Must test into College level Math or complete all appropriate prerequisites
SECOND YEAR/FIRST SEMESTER			
CST-201	Advanced Networking	3	**Prerequisite:** CST-102
ENG-191	The Myths of the World		
or ENG-271	World Literature I	3	
EET-105	Introduction to Electricity & Electronics	3	**Prerequisite:** MTH-100
CSC-171	Introductory Python Programming	3	
CHM-140	Chemistry and Society	4	
SECOND YEAR/SECOND SEMESTER			
CST-109	Building, Upgrading, and Repairing Personal Computers	3	
CST-204	Computer and Network Security	3	**Prerequisite:** CST-102; **Co-requisite:** CST-109
CST-212	Advanced Routing and Switching	3	**Prerequisite:** CST-201
CIS-288	Linux System Administration	3	**Prerequisites:** CIS-181; CST-102 and CSC-171
CIS-285	Linux/UNIX Networking and Security	3	**Prerequisites:** CIS-181; CST-102 and CSC-171
	TOTAL CREDITS	**60**	

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 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.

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Computer Systems Technology

ACADEMIC CERTIFICATE

Computer Systems Technology

CIP Code 11.0101

CST.CT

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CST-102	Introduction to Networking	3	
CST-103	Microcomputer Operating Systems I: Workstations	3	
CST-106	Microcomputer Operating Systems II: Server Systems	3	**Prerequisite:** CST-103
CST-109	Building, Upgrading, and Repairing Personal Computers	3	
FIRST YEAR/SECOND SEMESTER			
CST-201	Advanced Networking	3	**Prerequisite:** CST-102
CST-204	Computer and Network Security	3	**Prerequisite:** CST-102; **Co-requisite:** CST-109
EET-105	Introduction to Electricity & Electronics	3	
CST-212	Advanced Routing and Switching	3	**Prerequisite:** CST-201
ELECTIVE	General Education Elective	3	
ELECTIVE	Computer Information Systems Elective		
or ELECTIVE	Technical Elective	3	
	TOTAL CREDITS	**33**	

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 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.

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THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

Computer Systems Technology

ASSOCIATE IN APPLIED SCIENCE
Cybersecurity

CIP Code 11.1003

CYB.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CIS-181	Linux/Unix Essentials	3	
CST-103	Microcomputer Operating Systems I: Workstations	3	
CRJ-101	Administration of Justice	3	
MTH-100	Algebraic Concepts	4	Must test into College level Math or complete all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** MTH-140
CIS-285	Linux Networking and Security	3	**Prerequisites:** CIS-181, CST-102 and CSC-171
CIS-238	Database Security and Protection	3	**Prerequisites:** CIS-105, CIS-101, CIS-103, CIS-181 OR CIS-206
CST-102	Introduction to Networking	3	
MTH-111	Introduction to Statistics	3	Must test into College level Math or complete all appropriate prerequisites
SECOND YEAR/FIRST SEMESTER			
CRJ-120	Introduction to Homeland Security	3	
CSC-171	Introductory Python Programming	3	
CST-201	Advanced Networking	3	**Prerequisite:** CST-102
CST-210	Digital Forensics and Investigations	3	**Prerequisite:** CST-102
CST-109	Building, Upgrading, and Repairing PCs	3	
SECOND YEAR/SECOND SEMESTER			
CST-204	Computer and Network Security	3	**Prerequisite:** CST-102; **Co-requisite:** CST-109
CST-220	Ethical Hacking and Penetration Testing	4	**Prerequisite:** CST-210
ELECTIVE	Laboratory Science General Education Elective	4	
ELECTIVE	Diversity Humanities General Education Elective		
or ELECTIVE	Diversity Social Science General Education Elective	3	
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

The Cybersecurity program is designed to provide an affordable path toward a career in the fast-growing cybersecurity field, which includes: Network Forensics, Cyber Defense, Network Systems Administration or Systems Security Administration. The degree program utilizes hardware and software systems that align with those currently used in the commercial market. The CYB.AAS program is intended for students who want to enter a career directly after graduating. The curriculum is closely aligned t that of the National Science Foundation's CyberWatch degrees providing a clear path for graduates to transfer to such a program in a four year institution.

PROGRAM STUDENT LEARNING OUTCOMES

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

1. Conduct digital forensics investigations and to investigate potential security breaches of computer data.
2. Examine professional and ethical codes of conduct with respect to cyber forensics.
3. Identify security risks and summarize possible remedies.
4. Develop solutions for networking and security problems, balancing business concerns, technical issues and security.

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Career & Technical Institute of Camden County College

Microsoft Office CTI

MICROSOFT OFFICE SPECIALIST

Within this program students will become proficient in Microsoft Office products including Word, PowerPoint, Excel, Access and Outlook. 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: 75* *CEU's: 7.5*

Information Technology CTI

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 AUTOC

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 viewports 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*

AUTOCAD SPECIALIST

This program is a combination of AutoCAD Levels 1-3 built to prepare students to enter the field of computer-aided design. A few of the skills students will learn include: creating lines, building a drawing using a reference frame, dimension styles, working with text styles, using multiline viewpoints and work with layout templates, using 3D workspace, 3D views, creating an architectural solid design, and much more.

CE.BUN 013 *Hours: 72* *CEUs: 7.2*

COMPUTER TECHNICIAN SUPPORT SPECIALIST

The CTSS Technology Career Track is designed to give someone with little or no computer experience entry level training. The skills learned in this track will provide students the ability to "get their foot in the door." Proficiencies gained will be used in any hands-on technology specialty. This Career Track is great for those students who enjoy hands-on activities.
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: 360* *CEUs: 36*

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: 100* *CEUs: 10*

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: 120* *CEUs: 12*

WEB DESIGN & DEVELOPMENT PROJECT STUDY

The 60-hour curriculum packs an array of marketable skills in Web Design & Development. Students will gain expertise in coding skills using HTML, CSS, JavaScript and content optimization skills for websites. Courses explore software including Dreamweaver, Illustrator, Photoshop. Throughout the program, students develop advanced Internet research techniques and development of website development & design.

CE.PRO 138 *Hours: 60* *CEU's: 6.0*

CAREER & TECHNICAL INSTITUTE OF CAMDEN COUNTY COLLEGE
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EDUCATION
ASSOCIATE IN SCIENCE

CIP Code 13.1206

Elementary/Secondary Education EDU.AS

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
HIS-101	World Civilization I		
or HIS-102	World Civilization II	3	
PSY-101	Basic Psychology	3	
SPE-102	Public Speaking	3	
MTH...	Mathematics General Education Elective	3	Must test into College level Math or complete all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
EDU-100	Teaching: Introduction to the Profession	3	
HIS-121	United States History I		
or HIS-122	United States History II	3	
PSY-105	Child Psychology or		
or PSY-106	Psychology of Adolescence	3	**PSY-105 and PSY-106 Prerequisite:** PSY-101
MTH....	Mathematics General Education Elective	3	Must test into College level Math or complete all appropriate prerequisites
SECOND YEAR/FIRST SEMESTER			
EDU-101	Historical Trends in American Education	3	
PSY-103	Educational Psychology	3	**Prerequisite:** PSY-101
ELECTIVE	Laboratory Science General Education Elective	4	
HPE-102	Health & Wellness		
or HPE-104	Health & Personal Living Elective	3	
ELECTIVE	Elective	3	
SECOND YEAR/SECOND SEMESTER			
SOC-101	Introduction to Sociology	3	
GEO-101	Cultural Geography	3	
ENG-121	Introduction to Literature or		
or ENG-281	American Literature or		
or ENG-282	American Literature II or		
or ENG-271	World Literature I		
or ENG-272	World Literature II	3	**Prerequisite:** ENG-101: **Co-requisite:** ENG-102
ART-101	Art Appreciation		
or ART-111	Art History I		
or MUS-101	Music Appreciation I		
or THE-121	Theatre Appreciation	3	
EDU-105	Educational Technology	2	
	TOTAL CREDITS	**60**	

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.

SPECIAL COURSE SELECTION INSTRUCTIONS*

Elementary Education Majors Select:

HIS-102, MTH-105, MTH 205, PSY-105, EDU-106

Secondary Education Majors Select:

PSY-106, MTH 205, EDU 104

ENG-271 or ENG-272 (History Coordinate)

ENG-281 or ENG-282 (American Studies Coordinate)

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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EDUCATION

ASSOCIATE IN ARTS

CIP Code 13.1210

Early Childhood Education

EED.AA

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
PSY-101	Basic Psychology	3	
EED-112	Inclusive Class: Pedagogy & ECE Seminar	3	
SOC-101	Introduction to Sociology	3	
MTH-105	Mathematical Systems I: Structures	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
HIS-102	World Civilization II	3	
EED-115	Child Development & Learning	3	
BIO....	Biology General Education Elective		
or MTH....	Mathematics General Education Elective	3	
ELECTIVE	Laboratory Science General Education Elective	4	
SECOND YEAR/FIRST SEMESTER			
HIS-121	United States History I		
or HIS-122	United States History II	3	
GEO-101	Cultural Geography	3	
EDU-102	Human Exceptionality	3	
EED-205	Creative Arts in Early Childhood	3	
ELECTIVE	Language General Education Elective	3	Must take six credits in one language.
SECOND YEAR/SECOND SEMESTER			
EDU-101	Historical Trends in American Education	3	
ENG-271	World Literature I	3	**Prerequisite:** ENG-101; **Co-requisite:** ENG-102
ELECTIVE	Language General Education Elective	3	Must take six credits in one language.
CIS-106	Introductory Computing Using Google Apps (G Suite)	2	
SPE-102	Public Speaking	3	
	TOTAL CREDITS	**60**	

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 STUDENT LEARNING OUTCOMES

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

1. Outline the stages of child development within the learning process and discuss the role of prominent early childhood development theorists within the process.
2. Discuss current and historical trends in early childhood education.
3. Articulate both New Jersey State Standards for Early Childhood Education and NAEYC Standards for effective early learning environments.
4. Design developmentally appropriate early childhood curriculum lesson plans.

CONTACT PERSON

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EDUCATION

ASSOCIATE IN APPLIED SCIENCE

CIP Code 13.1210

Preschool Teacher Education

PTE.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
EED-105	Children's Health, Nutrition and Safety	3	
EED-112	Inclusive Class: Pedagogy and ECE Seminar	3	
PSY-101	Basic Psychology	3	
HIS....	History General Education Elective	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
EED-115	Child Development and Learning	3	
EED-120	Language Arts for the Preschool Child	3	
SOC-101	Introduction to Sociology	3	
SPE-102	Public Speaking	3	
SECOND YEAR/FIRST SEMESTER			
EDU-102	Human Exceptionality	3	
EED-205	Creative Arts: Early Childhood Learner	3	
EED-210	Math/Science Concepts for the Preschool Child	3	
MTH...	Mathematics General Education Elective	3	
....	Diversity General Education Elective	3	
SECOND YEAR/SECOND SEMESTER			
EED-220	Behavior Management	3	
EED-230	Applied Preschool Experience	3	**Prerequisite:** EED-110
EED-240	Infant/Toddler Social-Emotional Development	3	
EDU-101	Historical Trends in American Education	3	
BIO-103	Human Biology	3	
	TOTAL 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 setting.

PROGRAM STUDENT LEARNING OUTCOMES

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

1. Design developmentally appropriate early childhood curriculum and plans in five subject areas.
2. Compare and contrast early childhood development theorists such as Piaget, Vygotsky, Gardner and Erikson.
3. Identify the essentials necessary to promote a safe and healthy environment for children.
4. Apply course work to an early childhood field experience.

CONTACT PERSON

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Career & Technical Institute of Camden County College

Teacher Education

CTI

CERTIFIED SUBSTITUTE TEACHER

Camden County College's Faculty Development Institute, in cooperation with the school districts in Camden County, offers a comprehensive training seminar to prepare individuals who seek to become substitute teachers. The Certified Substitute Teacher seminar also reinforces effective strategies for substitutes currently employed by local school districts. Topics of the seminar include: successful classroom management techniques, cultivating positive first impressions, developing rapport with students and colleagues, articulating clear lesson goals, making efficient use of instructional time and professionalism in a school setting, etc. Instructors will assist participants with the state application process, including the completion of related paperwork, and offer tips on resume development. Participants must have completed a minimum of 60 college credits and successfully undergo a criminal background check to qualify as a substitute teacher. A certificate of completion will be awarded at the end of the seminar.

CE.SUB 001

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ENGINEERING, MANUFACTURING & TRADES

ASSOCIATE IN SCIENCE

CIP Code 14.1301

Engineering Science

EGR.AS

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG 101	English Composition I	3	Must test into ENG-101 or compete all appropriate prerequisites
CAD-101	Computer aided Engineering Graphics	4	
CHM-111	Chemistry I - Science	4	**Prerequisite:** MTH-124 or MTH-125
MTH-140	Calculus I	4	Must test into MTH-140 or take all prerequisites
PHY-201	Physics III	4	**Prerequisite:** MTH-140
FIRST YEAR/SECOND SEMESTER			
ENG 102	English Composition II	3	**Prerequisite:** ENG-101
CHM-112	Chemistry II Science	4	**Prerequisite:** CHM-111
MTH-150	Calculus II	4	**Prerequisite:** MTH-150
PHY-202	Physics IV	4	**Prerequisite:** PHY-201
EGR-101	Introduction to Engineering	2	**Prerequisite:** MTH-124 or MTH-125; **Co-requisite:** ENG-101
SECOND YEAR/FIRST SEMESTER			
MTH-145	Linear Algebra	4	**Prerequisite:** MTH-140
MTH-210	Calculus III	4	**Prerequisite:** MTH-150
CSC-121	Structured Programming (C++)	4	
EGR-201	Statics	3	**Prerequisite:** MTH-150
ELECTIVE	Social Science General Education Elective	3	
SECOND YEAR/SECOND SEMESTER			
MTH-220	Differential Equations	4	**Prerequisite:** MTH-150; **Co-requisite:** MTH-210
EGR-211	Engineering Circuit Analysis	3	**Prerequisite:** MTH-150 and PHY- 201
EGR-202	Dynamics	3	**Prerequisite:** EGR-201
ELECTIVE	Humanities General Education Elective	3	
ELECTIVE	Diversity – Humanities General Education Elective	3	
	TOTAL CREDITS	**70**	

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, specialized in a specific discipline.

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.

CONTACT PERSONS

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ASSOCIATE IN APPLIED SCIENCE

CIP Code 15.0303

Engineering Technology: Electrical-Electronic Engineering EET.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
EET-101	Electrical/Electronic Principles	4	**Prerequisite:** MTH-120, MTH-123 or MTH-125
CIM-101	Machine Shop Practices	3	
MTH-125	Accelerated Pre-calculus	4	Must test into Pre-Calculus or take all prerequisites (MTH-100)
ECO-101	Microeconomics	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
CAD-101	Computer Aided Engineering Graphics	4	
EET-211	Electronics I	3	**Prerequisite:** EET-101
PHY-101	Physics I	4	**Prerequisite:** MTH-100; **Co-requisites:** MTH-124 or MTH-125
HIS-101	World Civilization I		
or HIS-102	World Civilization II	3	
SECOND YEAR/FIRST SEMESTER			
EET-201	Electrical Circuits	3	**Prerequisite:** EET-101
EET-212	Electronics II	3	**Prerequisite:** EET-211
CIM-115	Microcontroller	3	
PHY-102	Physics II	4	**Prerequisite:** PHY-101
SECOND YEAR/SECOND SEMESTER			
EET-221	Digital Circuits	3	**Prerequisite:** EET-101
EET-213	Electronic Communication	3	**Prerequisite:** EET-201 AND EET-211; **Co-requisite:** EET-212
EET-251	Electronic Project		**Prerequisite:** EET-201 AND EET-211; **Co-requisite:** EET-212
or EGR-208	Co-op: Engineering	3	
MTH-132	Statistics for Technology	4	**Prerequisite:** MTH-100
	TOTAL CREDITS	**60**	

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 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 REQUIREMENTS

Students should have an adequate background in algebra and trigonometry.

CONTACT PERSONS

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ASSOCIATE IN APPLIED SCIENCE

CIP Code 15.0403

Engineering Technology: Electromechanical Engineering EME.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CIM-101	Machine Shop Practices	3	
EET-101	Electrical/Electronic Principles	4	**Prerequisite:** MTH-120, MTH-123, or MTH-125
MTH-125	Accelerated Pre-calculus	4	Must test into MTH-125 or take all Prerequisites
ELECTIVE	Social Science General Education Elective	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
CAD-101	Computer Aided Engineering Graphics	4	
EET-211	Electronics I	3	**Prerequisite:** EET-101
PHY-101	Physics I	4	**Prerequisite:** MTH-100, **Co-requisite:** MTH-124 or MTH-125
ELECTIVE	Diversity: Humanities General Education Elective	3	
SECOND YEAR/FIRST SEMESTER			
EET-221	Digital Circuits	3	**Prerequisite:** EET-101
EET-241	Robotics	3	**Prerequisite:** EET-101
CIM-211	PLC Programming	4	
PHY-102	Physics II	4	**Prerequisite:** PHY-101
SECOND YEAR/SECOND SEMESTER			
CIM-115	Microcontroller Applications	3	
CIM-231	Motors, Controllers and Sensors	3	**Prerequisite:** CIM-211
CIM-251	CIM Integration Project	2	**Prerequisite:** CIM-101, CIM-211 and CIM-221; Co-requisite: CIM-231
MTH-132	Statistics for Technology	4	**Prerequisite:** MTH-100
	TOTAL CREDITS	**60**	

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 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 electromechanical system problem or electronic project.

SPECIAL PROGRAM REQUIREMENT

Students should have an adequate background in algebra and trigonometry.

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ASSOCIATE IN APPLIED SCIENCE

CIP Code 15.0805

Engineering Technology: Mechanical Engineering

MET.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CAD-101	Computer Aided Engineering Graphics	4	
CIM-101	Machine Shop Practices	3	
MTH-125	Accelerated Pre-calculus	4	Must test into Pre-calculus or take all prerequisites
PHY-101	Physics I	4	**Prerequisite:** MTH-100; Co-requisites: MTH-124 or MTH-125
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
EET-101	Electrical/Electronic Principles	4	**Prerequisite:** MTH-120, MTH-123 or MTH-125
MET-228	Statics for Technologists	3	**Prerequisite:** CIM-101, PHY-101 or PHY-201, and MTH-124 or MTH-125
PHY-102	Physics II	4	**Prerequisite:** PHY-101
SECOND YEAR/FIRST SEMESTER			
CIM-115	Microcontroller Applications	3	
MET-221	Quality Control	2	**Prerequisite:** MTH-125
MET-236	Mechanics of Materials	3	**Prerequisite:** MET-228
CIM-211	PLC Programming	4	
ELECTIVE	Social Science General Education Elective	3	
SECOND YEAR/SECOND SEMESTER			
MTH-132	Statistics for Technology	4	**Prerequisite:** MTH-100
MET-233	Project Design		**MET-233 Prerequisite:** MET-231, MTH-132, PHY-102 and CIM-101
or EGR-208	Co-op I: Engineering I	3	
MET-242	Design of Machine Elements	3	**Prerequisite:** MET-221 and MET-236
ELECTIVE	Diversity Humanities General Education Elective	3	
	TOTAL CREDITS	**60**	

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 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.

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ENGINEERING, MANUFACTURING & TRADES

ASSOCIATE IN APPLIED SCIENCE

CIP Code 15.1301

CADD: Computer Aided Drafting & Design

CAD.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CAD-101	Computer Aided Engineering Graphics	4	
CIM-101	Machine Shop Practices	3	
CST-103	Microcomputer Operating Systems I: Workstations	3	
EGR-103	Technical Drawing	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
CAD-102	Advanced Computer Aided Engineering Graphics	3	
CAD-107	Parametric Design: Autodesk Inventor	3	
CAD-208	AutoCAD Civil 3D Level I	3	**Prerequisite:** CAD-101
HPE....	Health & Exercise Science Elective	1	
SECOND YEAR/FIRST SEMESTER			
CAD-201	CADD Applications: MicroStation	3	
MTH-125	Accelerated Precalculus	4	Must test into MTH-125 or take all prerequisites
PHY-103	Physics I for Non-Science Majors		
or PHY-101	Physics I	4	**PHY-101 Prerequisite:** MTH-100; **PHY-101 Co-requisites:** MTH-124 or MTH-125
ELECTIVE	Diversity-Humanities General Education Elective	3	
HPE....	Health & Exercise Science Elective	1	
SECOND YEAR/SECOND SEMESTER			
CAD-202	Advanced CADD Project		
or EGR-208	Co-op I: Engineering	3	
CAD-205	Architectural CADD Using Revit	3	**Prerequisite:** CAD-101
CAD-206	Solids Modeling: Solid Works	3	**Prerequisite:** CAD-101
MTH-132	Statistics for Technology	4	**Prerequisite:** MTH-100
ELECTIVE	Social Science General Education Elective	3	
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

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

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), American Society for Mechanical Engineers (ASME), and/or International Standards Organizational (ISO) specifications.

CONTACT PERSON

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CERTIFICATE OF ACHIEVEMENT

CIP Code 15.1301

Computer Aided Architectural Drafting and Design

CAR.CA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
CAD-101	Computer Aided Engineering Graphics	4	
EGR-103	Technical Drawing	3	
FIRST YEAR/SECOND SEMESTER			
CAD-208	AutoCAD Civil 3D Level I	3	**Prerequisite:** CAD-101
CAD-205	Architectural CADD Using Revit	3	**Prerequisite:** CAD-101
	TOTAL 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. This program is particularly well suited to those students who wish to work with the construction professionals who design and build 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, Autodesk Civil 3D, 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 STUDENT LEARNING OUTCOMES

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

1. Utilize fundamental and advanced two-dimensional and three-dimensional CAD to produce architectural drawings and renderings.
2. Generate a personal portfolio of industry standard documents utilizing a variety of computer drafting applications.
3. Be proficient in manual, hand drafting practices and techniques.
4. Develop complete plans to meet the needs of the (AEC) Architecture, Engineering and Construction industries and explain mechanical, electrical and plumbing building systems.
5. Create 3D parametric building models and related content using BIM software and use it to extract embedded information to analyze and document building characteristics.
6. Develop plans with accurate and correct interpretation of survey data utilizing survey instruments.
7. Collect, manage and process field data in support of geospatial mapping activities.
8. Apply quantity takeoffs and calculate earthwork in civil engineering and architectural projects.

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THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

ENGINEERING, MANUFACTURING & TRADES

CERTIFICATE OF ACHIEVEMENT

CIP Code 15.1301

Computer Aided Mechanical Drafting and Design

CME.CA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
CAD-101	Computer Aided Engineering Graphics	4	
CIM-101	Machine Shop Practices	3	
EGR-103	Technical Drawing	3	
FIRST YEAR/SECOND SEMESTER			
CAD-102	Advanced Computer Aided Engineering Graphics	3	
CAD-107	Parametric Design: AutoDesk Inventor	3	
CAD-206	Solids Modeling: Solid Works	3	**Prerequisite:** CAD-101
	TOTAL CREDITS	**19**	

PROGRAM DESCRIPTION

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, 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.

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 mechanical 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 modeling program.
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 ANSO 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.

CONTACT PERSON

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THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

ENGINEERING, MANUFACTURING & TRADES

ASSOCIATE IN APPLIED SCIENCE

CIP Code 15.9999

Technical Studies

TES.AAS

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CIS-105	Computer Literacy	3	
MTH-100	Algebraic Concepts	4	
ELECTIVE	Technical Studies Credit	4	
ELECTIVE	Technical Concentration	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
PHY-103	Physics for Non-Science Majors	4	
ELECTIVE	Technical Studies Credit	4	
ELECTIVE	Technical Concentration	3	
SECOND YEAR/FIRST SEMESTER			
SPE-102	Public Speaking		
or HSR-105	Group Dynamics	3	
ELECTIVE	Technical Studies Credit	4	
ECO-102	Microeconomics	3	
ELECTIVE	Technical Concentration	3	
SECOND YEAR/SECOND SEMESTER			
ELECTIVE	Technical Studies Credit	4	
ELECTIVE	Technical Concentration	6	
EGR-208	Co-op: Engineering		
or ELECTIVE	Apprentice Co-op	3	
HIS-101	World Civilization	3	
	TOTAL CREDITS	**60**	

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 STUDENT LEARNING OUTCOMES

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

1. 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.

SPECIAL PROGRAM INFORMATION

1. Technical Studies Credit granted upon completion of union apprenticeship program.
2. Concentrations selected with the approval of the Program Coordinator.

CONTACT PERSON

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CERTIFICATE OF ACHIEVEMENT

CIP Code 15.0699

Computer Aided Manufacturing Technician

CAM.CA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
CIM-101	Machine Shop Practices		
or ELECTIVE	Technical Studies Credit	3	
CIM-221	CNC Programming and CAM	4	
CIM-222	Advanced CNC Programming and CAM	3	**Prerequisite:** CIM 221
CAD-206	Solid Modeling: SolidWorks	3	**Prerequisite:** CAD 101
	TOTAL CREDITS	**13**	

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 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.

CONTACT PERSONS

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THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

ASSOCIATE IN APPLIED SCIENCE

CIP Code 15.0699

Computer Integrated Manufacturing Engineering Technology — CIM.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CAD-101	Computer Aided Engineering Graphics	4	
CIM-101	Machine Shop Practices	3	
MTH-125	Accelerated Precalculus	4	Must test into MTH-125 or complete all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
EET-101	Electrical/Electronic Principles	4	**Prerequisite:** MTH-120, MTH-123 or MTH-125
MTH-132	Statistics for Technology		
or MTH-150	Calculus II	4	**MTH-132 Prerequisite:** MTH-100; MTH-150 Prerequisite: MTH-140
PHY-101	Physics I	4	**Prerequisite:** MTH-100; **Co-requisites:** MTH-124 or MTH-125
SECOND YEAR/FIRST SEMESTER			
CIM-211	PLC Programming	4	
CIM-221	CNC Programming & CAM	4	
EET-241	Robotics	3	**Prerequisite:** EET-101
MET-221	Quality Control	2	**Prerequisite:** MTH-125
PHY-102	Physics II	4	**Prerequisite:** PHY-101
SECOND YEAR/SECOND SEMESTER			
CIM-231	Motors, Controllers, and Sensors	3	**Prerequisite:** CIM-211
CIM-251	CIM Integration Project	2	**Prerequisite:** CIM-101, CIM-111, CIM-221; **Co-requisite:** CIM-231
CIM-212	Advanced PLC Programming		
or CIM-222	Advanced CNC & CAM	3	**CIM-212 Prerequisite:** CIM-211; **CIM-222 Prerequisite:** CIM-221
CIM-115	Microcontroller Applications	3	
ELECTIVE	Diversity: Social Science General Education Elective		
or ELECTIVE	Diversity: Humanities General Education Elective	3	
	TOTAL CREDITS	**60**	

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.

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 electromechanical 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 electrical, 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.

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ENGINEERING, MANUFACTURING & TRADES

ASSOCIATE IN APPLIED SCIENCE

CIP Code 15.0699

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

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CAD-101	Computer Aided Engineering Graphics	4	
CIM-101	Machine Shop Practices	3	
CIS-105	Computer Literacy	3	
MTH-100	Algebraic Concepts	4	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
CIM-202	Conventional Machinist	3	**Prerequisite:** CAD-101
CIM-221	CNC Programming & CAM	4	
MTH-123	Pre-Calculus Mathematics I	4	**Prerequisite:** MTH-100
HPE....	Health & Exercise Science Elective	1	
SECOND YEAR/FIRST SEMESTER			
CIM-219	CNC Machinist	3	**Prerequisites:** CIM-101 and CIM-221
CST-103	Microcomputer Operating Systems I: Workstation	3	
MET-221	Quality Control	2	**Prerequisite:** MTH-125
MTH-124	Pre-calculus Mathematics II	4	**Prerequisite:** MTH-123
SECOND YEAR/SECOND SEMESTER			
CAD-206	Solid Modeling: Solid Works	3	**Prerequisite:** CAD-101
CIM-222	Advanced CNC & CAM	3	**Prerequisite:** CIM-221
CIM-255	Precision Machining Project	2	**Prerequisite:** CIM-101, CIM-202, CIM-219 and CIM-221
ELECTIVE	Diversity – Social Science General Education Elective		
or ELECTIVE	Diversity – Humanities General Education Elective	3	
HPE....	Health & Exercise Science Elective	1	
PHY-101	Physics I	4	**Prerequisite:** MTH-100; **Co-requisites:** MTH-124 or MTH-125
	TOTAL CREDITS	**60**	

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 STUDENT LEARNING OUTCOMES

At the end of the program, the graduate 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.

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ENGINEERING, MANUFACTURING & TRADES

CERTIFICATE OF ACHIEVEMENT

CIP Code 15.0699

Precision Machining Technology PMT.CA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
CIM-101	Machine Shop Practices	3	
CIM-221	CNC Programming and CAM	4	
FIRST YEAR/SECOND SEMESTER			
CIM-202	Conventional Machinist	3	
CIM-219	CNC Machinist	3	
	TOTAL 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 STUDENT LEARNING OUTCOMES

At the end of the program, the graduate 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.

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ENGINEERING, MANUFACTURING & TRADES

CERTIFICATE OF ACHIEVEMENT

CIP Code 15.0699

Industrial Controls: Programmable Logic Controller

PLC.CA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
CIM-211	PLC Programming	4	
FIRST YEAR/SECOND SEMESTER			
CIM-212	Advanced PLC Programming	3	**Prerequisite:** CIM-211
CIM-231	Motors, Controllers & Sensors	3	**Prerequisite:** CIM-211
	TOTAL 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 and/or incumbent electrical mechanics in the skills necessary to troubleshoot and program the PLCs used in batch and/or discrete automation. A PLC is a real-time industrially-hardened computer running a specialized Operating System which is typically programmed via the Relay Ladder Logic (RLL) programming language. PLCs are used to control high-speed factory automation equipment and manufacturing processes used in packaging, sorting, chemical processing, amusement parks, textiles, animatronics, conveyor belts, mining, petrochemical, and other manufacturing enterprises to name a few.

The PLC certificate includes courses that will investigate both discrete and analog sensors, pneumatic directional control valves, AC and DC motors, and single-phase and three-phase power. The PLC used will be the Allen Bradley SLC 500 and the CompactLogix 5000-scale processor running RSLogix software. No special skills are required, however prior industrial electrical experience will prove beneficial to the student.

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 RLL program code for Allen-Bradley 500 and 5000 processors
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.

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THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

ENGINEERING, MANUFACTURING & TRADES

CERTIFICATE OF ACHIEVEMENT

CIP Code 47.0303

Industrial Maintenance Technology IMT.CA

FIRST YEAR/FIRST SEMESTER

Course #	Course Name	Credits	Notes
CIM-120	Electricity and Control Systems Apprenticeship	4	Students must be part of the N.J. Apprentice Program
CIM-125	Hydraulics and Pneumatics Apprenticeship	4	Students must be part of the N.J. Apprentice Program
CIM-130	Mechanical Systems Maintenance and Operation Apprenticeship	4	Students must be part of the N.J. Apprentice Program
CIM-135	Welding and Soldering Theory Apprenticeship	3	Students must be part of the N.J. Apprentice Program
CIM-140	Workplace Essentials Apprenticeship	3	Students must be part of the N.J. Apprentice Program
	TOTAL CREDITS	**18**	

PROGRAM DESCRIPTION

This one-year (30 week) Certificate provides students with specialized technical knowledge in industrial maintenance. This program is designed as a pathway to obtain an Apprentice status when sponsored by a New Jersey based company. This program is credit generating; therefore, Associates degrees of programs related to the discipline may be inclined to consider completion of these courses for transfer. Upon completion, students can continue to pursue a degree in CIM.AAS or TES.AAS.

This program prepares individuals to apply technical knowledge and skills to repair and maintain industrial machinery and equipment such as cranes, pumps, engines and motors, pneumatic tools, conveyor systems, and production machinery as a maintenance technician.

PROGRAM STUDENT LEARNING OUTCOMES

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

1. Apply industry-recognized best practices to everyday workplace situations.
2. Recall how to maintain Hydraulic and Pneumatic system components and be able to take the appropriate steps to return a malfunctioning system to a functioning state.
3. Identify a malfunctioning power transmission component and take the appropriate steps to return machine to a functioning state.
4. Explain electricity in all of its forms and how it is used to run motors and control systems of Mechatronic devices.
5. Determine and incorporate proper welding and cutting techniques to create and maintain industrial and commercial mechatronic equipment.

CONTACT PERSONS

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THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

ASSOCIATE IN APPLIED SCIENCE

CIP Code 15.0304

Photonics: Laser/Electro-Optic Technology PHT.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
LFO-101	Introduction to Photonics & Photonic Safety	4	**Co-requisite:** MTH-125
MTH-125	Accelerated Pre-calculus	4	Must test into MTH-125 or take all prerequisites
PHY-101	Physics I	4	**PHY-101 Prerequisite:** MTH-100; **Co-requisites**: MTH-124 or MTH-125
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
LFO-210	Introduction Geometric Optics	3	**Prerequisite:** LFO-101
LFO-231	Photonics Measurements	3	**Prerequisite:** LFO-211
PHY-102	Physics II	4	**Prerequisite:** PHY-101
EET-101	Electrical/Electronic Principles	4	**Prerequisite:** MTH-120, MTH-123 or MTH-125
SECOND YEAR/FIRST SEMESTER			
LFO-241	Principles of Fiber-Optics	3	**Prerequisite:** LFO-101
EET-211	Electronics I	3	**Prerequisite:** EET-101
CIM-115	Microcontroller Applications	3	
ELECTIVE	Social Science General Education Elective	3	
SECOND YEAR/SECOND SEMESTER			
LFO-235	Photonics Applications	3	**Prerequisites:** EET-101, LFO-101, PHY-101
MTH-132	Statistics for Technology	4	**Prerequisite:** MTH-100
EET-212	Electronics II	3	**Prerequisite:** EET-211
LFO-295	Photonics Project		**LFO-295 Prerequisite:** LFO-231
or EGR-208	Co-op I: Engineering	3	
ELECTIVE	Diversity: Humanities General Education Elective	3	
	TOTAL CREDITS	**60**	

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 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 measure 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.

CONTACT PERSON

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CERTIFICATE OF ACHIEVEMENT

CIP code 15.0304

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

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
LFO-101	Introduction to Photonics & Photonic Safety	4	**Co-requisite:** MTH 125
FIRST YEAR/SECOND SEMESTER			
LFO-211	Geometric Optics	4	**Co-requisite:** LFO-101
LFO-231	Photonics Measurements	3	**Co-requisite:** LFO-211
	TOTAL CREDITS	**11**	

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 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.

CONTACT PERSON

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THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

Career & Technical Institute of Camden County College

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 log 8,000 hours of on-the-job experience (2,000 hours per year) with a licensed contractor (sponsor) and at least 576 hours of related technical instruction (a minimum of 144 hours per year). Students who have successfully completed a relevant Pre-Apprenticeship program may be eligible for advanced standing in an apprenticeship program. Please contact the County Apprenticeship Coordinator to determine eligibility.

Camden County College 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 17 college credits toward Camden County College's 60-credit Associates Degree in Technical Studies. Enrolling in apprenticeship courses at the College DOES NOT automatically register students as apprentices. Employers (sponsors) and employees (apprentices) must contact the County Apprenticeship Coordinator to facilitate the application process.

For information regarding the Apprenticeship application process, scheduling, pricing, and registration, call (856) 261-9462 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 faulty 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).

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Technology—Construction CTI

CARPENTRY TECHNOLOGY

This program offers both a hands-on and textbook instruction, which requires problem solving and logical thinking skills. All phases of residential carpentry are addressed. Units included are print drawing/reading, estimation time/material, frame construction, roofing/siding, drywall and finish carpentry. Graduates are limited only by their own inventiveness. Any one or part of one unit covered during this program could be expanded into a career. Planning, estimation, drafting, framing, siding/roofing, drywall installation, trim/cabinet installation, painting, surveying, building supply or hardware store person are but a few possibilities.

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 or Pennsauken Campus

CE.TRD-020 *Hours: 382* *CEUs: 38.2*

WELDING TECHNOLOGY

This program offers students the most up-to-date instruction in SMAW (Shielded Metal Arc Welding) and OxyFuel Cutting, as well as Academic instruction which includes math, blueprint reading, drawing interpretation, welding inspection, shop maintenance and most importantly, general hot work safety. Students may also have the opportunity to try GTAW (Gas Tungsten Arc Welding) with Aluminum and Stainless Steel, GMAW (GasMetal Arc Welding). Shop time focuses heavily on SMAW fundamentals with Mild Steel, although, as students progress through the program they may begin working with other processes and materials, when and if available. Students will proceed through each project at their own pace and receive individualized instruction regarding safety, quality and general welding techniques. Upon successful completion of this program, it will be possible for students to graduate with American Welding Society's welding code, D1.1 "Structural Steel" Certifications.

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.

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 or Pennsauken 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.

Additionally, students will 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, and with passing certification exam scores, students will be certified and prepared to enter the trade with confidence in their understanding of HVAC concepts. Students who successfully complete this program may be credited hours towards the affiliated apprenticeship program.

Includes OSHA10 training.

CE.TRD-090 *Hours: 572* *CEUs: 57.2*

ELECTRICAL RESIDENTIAL

Students in this program will be taught extensive electrical theory. The core unit will be a hands-on approach emphasizing house wiring, branch circuits, wire sizing, cable layout, three and four-way switches and ground fault circuit interruption. Additional units include service entrance equipment and calculations which are coordinated with basic electrical theory.

The student will apply electrical subject units, such as: commercial-residential electrical and architectural drawings; branch circuits and feeders; appliance circuits; lamps and lighting; and panel-board selection. Students will learn math as it applies to the electrical trade, which will include: addition, subtraction, multiplication, basic algebra and some trigonometry. Students who successfully complete this program may be credited hours towards the affiliated apprenticeship program.

Includes OSHA 10 training.

Admission Requirements: A high school diploma or GED is not required for admission to this program however, it is required to be eligible for a NJ Electrical Contractors license. In addition, a basic comprehension of reading and intermediate math skills are recommended.

CE.TRD-080 *Hours: 382* *CEUs: 38.2*

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, 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. Students who successfully complete this program may be credited hours towards the affiliated apprenticeship program. Now includes OSHA 10 Training.

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. The New Jersey State Dept. of Community Affairs offers a 75% tuition reimbursement for qualified applicants. 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* *CUE's: 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* *CUE's: 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*

PLUMBING INSPECTOR HHS

This course will provide the knowledge of the plumbing code needed to carry out plumbing inspections. This student will gain familiarity with plumbing and mechanical systems. The student will also learn to perform plan review of commercial buildings and residential dwellings (Class I, II and III structures).

CE.PRO 104 *Hours: 60* *CEUs: 6.0*

Technology—Manufacturing CTI

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
856-374-4955
tradetraining@camdencc.edu
www.camdencc.edu/ce

Dental

CIP Code 51.0601

ASSOCIATE IN APPLIED SCIENCE

Dental Assisting

DAS.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/SUMMER SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
DAS-141	Biological Science for the Dental Assistant	1	**Co-requisite:** DAS-143
DAS-143	Infection Control for the Dental Assistant	2	Formal Acceptance into the Dental Assisting Program
HPE-181	Basic Life Support "C" AHA	1	
PSY-101	Basic Psychology	3	
FIRST YEAR/FALL SEMESTER			
DAS-111	Fundamentals of Chairside Assisting	7	**Prerequisites:** DAS-141 and DAS-143
DAS-120	Dental Radiology	4	**Prerequisites:** DAS-141 and DAS-143
DAS-150	Dental Anatomy for Dental Assisting	2	**Prerequisites:** DAS-141 and DAS-143
DAS-151	Dental Laboratory Procedures I	2	**Prerequisites:** DAS-141 and DAS-143
DAS-170	Medical Emergencies in the Dental Office	1	**Prerequisites:** DAS-141 and DAS-143
FIRST YEAR/SPRING SEMESTER			
DAS-115	Pharmacology	1	**Prerequisites:** DAS-141 and DAS-170
DAS-125	Preventive Dentistry	3	**Prerequisites:** DAS-141, DAS-143, DAS-150, DAS-151, AND DAS-170
DAS-152	Dental Laboratory Procedures II	2	**Prerequisite:** DAS-151, AND DAS-170
DAS-160	Supervised Clinical Experience	6	**Prerequisites:** DAS-111, DAS-120, DAS-150, DAS-151, AND DAS-170
DAS-180	Office Administration	2	
DAS-190	Oral Pathology	1	**Prerequisites:** DAS-141 and DAS-170
SECOND YEAR/FIRST SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
ELECTIVE	Humanities General Education Elective	3	
MTH....	Mathematics General Education Elective	3/4	Must test into College level Math or take all appropriate prerequisites
ELECTIVE	Free Elective	3	
SECOND YEAR/SECOND SEMESTER			
ELECTIVE	Diversity – Humanities General Education Elective	3	
ELECTIVE	Laboratory Science General Education Elective	4	
	TOTAL CREDITS	**60**	

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.

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.
- Physical exam, various immunizations, drug screening verification must be current and will be required prior to beginning of class.
- Interview and 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 or 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 Dental Assisting Program is accredited by the Commission on Dental Accreditation.
- The Dental Assisting radiology course is accredited by the New Jersey Radiologic Technology Board of Examiners.

CONTACT PERSON

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

Dental

CIP Code 51.0601

ACADEMIC CERTIFICATE

Dental Assisting

DAS.CT

Course #	Course Name	Credits	Notes
FIRST YEAR/SUMMER SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
DAS-141	Biological Science for the Dental Assistant	1	**Co-requisite:** DAS-143
DAS-143	Infection Control for the Dental Assistant	2	Formal Acceptance into Dental Assisting Program
HPE-181	Basic Life Support "C" AHA	1	
PSY-101	Basic Psychology	3	
FIRST YEAR/FALL SEMESTER			
DAS-111	Fundamentals of Chairside Assisting	7	**Prerequisites:** DAS-141 and DAS-143
DAS-120	Dental Radiology	4	**Prerequisites:** DAS-141 and DAS-143
DAS-150	Dental Anatomy for Dental Assisting	2	**Prerequisites:** DAS-141 and DAS-143
DAS-151	Dental Laboratory Procedures I	2	**Prerequisites:** DAS-141 and DAS-143
DAS-170	Medical Emergencies in the Dental Office	1	Prerequisites: DAS-141 and DAS-143
FIRST YEAR/SPRING SEMESTER			
DAS-115	Pharmacology	1	**Prerequisites:** DAS-141 and DAS-170
DAS-125	Preventive Dentistry	3	**Prerequisites:** DAS-141, DAS- 143, DAS-150, DAS-151, and DAS-170
DAS-152	Dental Laboratory Procedures II	2	**Prerequisite:** DAS 151, AND DAS 170
DAS-160	Supervised Clinical Experience	6	**Prerequisites:** DAS-111, DAS-120, DAS-150, DAS-151, and DAS-170
DAS-180	Office Administration	2	
DAS-190	Oral Pathology	1	**Prerequisites:** DAS-141 and DAS-170
	TOTAL CREDITS	**41**	

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 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.
- Physical exam, various immunizations, drug screening verification must be current and will be required prior to beginning of class.
- Interview and 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 or 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.

NOTICE

Part-time evening alternative ALL courses will be held Monday-Thursday 5:30-8:30pm

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.

Student must have adequate transportation for the clinical placement requirement.

ACCREDITATION

- The Dental Assisting Program is accredited by the Commission on Dental Accreditation.
- The Dental Assisting radiology course is accredited by the New Jersey Radiologic Technology Board of Examiners.

CONTACT PERSON

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

Dental

ASSOCIATE IN APPLIED SCIENCE

CIP Code 51.0602

Dental Hygiene

DHY.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/SUMMER SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
BIO-117	Basic Anatomy and Physiology	4	
HPE-181	Basic Life Support "C" AHA	1	
FIRST YEAR/FALL SEMESTER			
BIO-118	Basic Anatomy and Physiology	4	**Prerequisite:** BIO-117
DHY-111	Dental Hygiene I Seminar	2	
DHY-120	Dental Radiology	4	
DHY-130	Dental Anatomy	2	
DHY-151	Dental Hygiene I Pre-Clinic	2	
DHY-170	Medical Emergencies in the Dental Office	1	
CHM-130	General/Organic/Biochemistry for Dental Hygiene	4	
FIRST YEAR/SPRING SEMESTER			
BIO-121	Basic Microbiology	4	
DHY-122	Dental Hygiene II Seminar	2	**Prerequisite:** DHY-111, DHY-120, DHY-130, DHY-151, DHY-170
DHY-142	Periodontics I	2	**Prerequisite:** DHY-111, DHY-120, DHY-130, DHY-151, DHY-170
DHY-152	Dental Hygiene II Clinic	3	**Prerequisite:** DHY-111, DHY-120, DHY-130, DHY-151, DHY-170
DHY-162	Dental Lab Procedures	2	**Prerequisite:** DHY-111, DHY-120, DHY-130, DHY-151, DHY-170
DHY-172	Head and Neck Anatomy	2	**Prerequisite:** DHY-111, DHY-120, DHY-130, DHY-151, DHY-170; **Co-requisites:** DHY-122, DHY-142, DHY-152, DHY-162
FNS-106	Foundations of Nutritional Science	3	
SECOND YEAR/SUMMER SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
SOC-101	Introduction to Sociology	3	
SECOND YEAR/FALL SEMESTER			
DHY-223	Dental Hygiene III Seminar	2	**Prerequisite:** DHY-122 and DHY-152
DHY-233	Advanced Techniques in Periodontics	1	**Prerequisite:** DHY-122, DHY-142 and DHY-152
DHY-253	Dental Hygiene III Clinic	6	**Prerequisite:** DHY-122, DHY-142 and DHY-152
DHY-261	Pathology	2	**Prerequisite:** DHY-122, DHY-152 and DHY-272
DHY-271	Pharmacology and Anesthesiology	2	**Prerequisite:** DHY-122, DHY-152
SECOND YEAR/SPRING SEMESTER			
DHY-212	Community Dentistry	2	**Prerequisite:** DHY-111, DHY-120, DHY-130, DHY-142, DHY-151, DHY-152, DHY-162, DHY-170, DHY-172
DHY-224	Dental Hygiene IV Seminar	2	**Prerequisite:** DHY-223
DHY-252	Local Dental Anesthesiology	2	**Prerequisite:** HPE-181, DHY-271 AND DHY-172 OR DHY-261; **Co-requisite:** DHY-224
DHY-254	Dental Hygiene IV Clinic	4	**Prerequisite:** DHY-253
DHY-262	Ethics, Jurisprudence and Practice Management	1	**Prerequisite:** DHY-111, DHY-120, DHY-130, DHY-151, DHY-170
PSY-101	Basic Psychology	3	
	TOTAL CREDITS	**78**	

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 STUDENT LEARNING OUTCOMES

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

1. Integrate and apply basic science, dental science and dental hygiene knowledge and skills.
2. Recognize sources of information and information gathering techniques that enable them to seek and obtain information when needed.
3. Apply computer skills in order to find information, take intraoral photographs, take digital radiographs, obtain periodontal charting information, and manage patient records.
4. Provide humane and compassionate care to all patients without discrimination as outlined in the Patient's Bill of Rights.
5. Provide dental hygiene care utilizing the dental hygiene process of assessment, dental hygiene diagnosis, treatment planning, implementation and evaluation.
6. Present preventative educational programs in various settings.

ACCREDITATION

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

SPECIAL PROGRAM REQUIREMENTS

The Office of Records and Registration will accept applications for the Dental Hygiene Program ONLY between Sept 1 and Feb 1. All prerequisite courses and documentation must be completed by to Feb 1. A class is accepted once a year in the fall semester. For more information on the special requirements of this program, visit the CCC Web page under Programs of Study-Health and Wellness- Dental Hygiene.

CONTACT PERSON

Dawn Conley, Director
(856) 227-7200 ext. 4681
Email: dconley@camdencc.edu

Health & Exercise

CIP Code 24.0101

ASSOCIATE IN SCIENCE

Liberal Arts and Science: Health and Exercise Science Option HPE.AS

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG 101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
BIO-111	Biology I: Science	4	
HPE-130	Consumer Health Decisions	3	
PSY-101	Basic Psychology or		
or SOC-101	Introduction to Sociology	3	
HPE-175	Foundations of Fitness	3	
FIRST YEAR/SECOND SEMESTER			
ENG 102	English Composition II	3	**Prerequisite:** ENG-101
BIO-211	Anatomy & Physiology I	4	**Prerequisite:** BIO-111
HPE-211	Theory/Application Physical Training I	4	
HPE-195	Concepts of Individual and Dual Sports	3	
SECOND YEAR/FIRST SEMESTER			
BIO-212	Anatomy & Physiology II	4	**Prerequisite:** BIO-211
HIS-101	World Civilization I	3	
MTH-111	Introduction to Statistics	4	
FNS-105	Introduction to Nutrition	3	
HPE-170	First Aid Safety & Prevention of Injury	3	
SECOND YEAR/SECOND SEMESTER			
HPE-178	Motor Development and Motor Learning	3	
SPE-102	Public Speaking	3	
HPE-106	Stress Management	3	
HPE-127	Exercise Techniques & Prescription	1	
ELECTIVE	Humanities Elective	3	
HPE-161	Weight Training	1	
	TOTAL CREDITS	**60**	

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 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.

CERTIFICATION

Camden County College and the Health and Exercise Science Department are recognized as Educational Partners with the American Council on Exercise (A.C.E.) www.acefitness.org

1. HPE 211 course prepares students to pass the A.C.E. National Certification exam in personal training.
2. A degree PLUS a personal training certification are now the standard for employment in the fitness industry.

CONTACT PERSON

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

Health & Exercise

CIP Code 31.0501

CERTIFICATE OF ACHIEVEMENT

Personal Trainer

PT.CA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
HPE...	HPE Elective	3	
FNS-105	Introduction to Nutrition		
or HPE-129	Sports Nutrition	3 or 2	
HPE-100	Personal Fitness	1	
HPE-161	Weight Training	1	
HPE-127	Exercise Techniques and Prescription	1	
HPE-211	Theories & Applications of Physical Training I	4	
HPE-170	First Aid, Safety, and Prevention of Injuries	3	
FIRST YEAR/SECOND SEMESTER			
HPE-210	Internship: Personal Trainer Certificate	3	**Prerequisite:** FNS-105 or HPE-129, HPE-180, HPE-114, HPE-127, HPE-161, HPE-211, CIS-101 or CIS-105
	TOTAL CREDITS	**19 OR 18**	

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.

CERTIFICATION

Camden County College and the Health and Exercise Science Department are recognized as Educational Partners with the American Council on Exercise (A.C.E.) www.acefitness.org

- HPE 211 course prepares students to pass the A.C.E. National Certification exam in personal training.
- A degree PLUS a personal training certification are now the standard for employment in the fitness industry.

Students can earn this certification while obtaining an A.S. in Health and Exercise Science. All of the certification courses are part of the HPE.AS degree.

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.

NOTICE

Clinical placement 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.

CONTACT PERSON

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

Health Careers

CIP Code 51.0000

ASSOCIATE IN APPLIED SCIENCE

Health Science: Certified Medical Assistant Option

CMA.AAS

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
HIT.120	Medical Terminology	3	
PSY-101	Basic Psychology	3	
ELECTIVE	Laboratory Science General Education Elective	4	
ELECTIVE	Computer Information Systems Elective	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
SOC-101	Introductory to Sociology	3	
ELECTIVE	Laboratory Science General Education Elective	4	
MTH....	Mathematics General Education Elective	3	
SECOND YEAR/FIRST SEMESTER			
PHL-232	Biomedical Ethics	3	
HPE-102	Health & Wellness	3	
ELECTIVE	Diversity-Humanities General Education Elective	3	
ELECTIVE	Post-Secondary Work	22	Students will receive 22 credits for their post-secondary work after completing the 38 credits at Camden County College
	TOTAL CREDITS	**60**	

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 38 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 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 healthcare professional.

CONTACT PERSON

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

Health Careers

ASSOCIATE IN APPLIED SCIENCE

Health Science

CIP Code 51.0000

HSC.AAS

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
BIO-117	Basic Anatomy & Physiology I	4	
HIT-120	Medical Terminology	3	
PSY-101	Basic Psychology	3	
ELECTIVE	Diversity: Humanities Education Elective	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
BIO-118	Basic Anatomy & Physiology II	4	**Prerequisite:** BIO-117
PHL-232	Biomedical Ethics	3	
SOC-101	Introduction to Sociology	3	
MTH 101	Mathematics General Education		
or MTH 111	Mathematics General Education Elective	3	Must test into College level Math or take all appropriate prerequisites
SEMESTER			
ELECTIVE	Portfolio Assessment	28	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.
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

- Allied health paraprofessionals who have earned a certificate or license may be eligible to receive college credits 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 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 credits for their previous experience.
- Conference with the allied health coordinator.
- Must complete all basic skills requirements prior to beginning the program.

CONTACT PERSON

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

Health Careers

CIP Code 51.0899

CERTIFICATE OF ACHIEVEMENT

Multi-Skilled Technician

MST.CA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ALH-105	Electrocardiography	1	
ALH-115	Basic Phlebotomy Techniques	1	
ALH-121	Basic Skills for Allied Health Professionals	3	
ALH-122	Certified Nurse Aide	4	
ALH-135	Homemaker Home Health Aide	1	
HIT-120	Medical Terminology	3	
HPE-181	Basic Life Support "C" - AHA	1	
	TOTAL CREDITS	**14**	

PROGRAM DESCRIPTION

The Multi-Skilled Technician Certificate of Achievement program offers to expand the knowledge and skills of 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 or two semesters. The entire certificate may be completed in one semester if the student is NJCNA certified.

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.

CONTACT PERSON

Professor Robynn Anwar, Coordinator
(856) 227-7200 ext. 4452
Email: ranwar@camdencc.edu

THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

Health Information Technology

ASSOCIATE IN APPLIED SCIENCE

Health Information Technology

CIP Code 51.0706

HIT.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
BIO-117	Basic Anatomy and Physiology I	4	
CIS-105	Computer Literacy	3	
HIT-101	Introduction to Health Information	3	
HIT-120	Medical Terminology	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisites:** ENG-101
BIO-118	Basic Anatomy and Physiology II	4	**Prerequisites:** BIO-117
HIT-132	Basic Pharmacology	3	**Prerequisites:** HIT-120 and BIO-103 or BIO-117 or BIO-211
HIT-205	Legal and Ethical Issues in HIT	2	**Prerequisites:** HIT-101
MTH-111	Introduction to Statistics I	3	
ELECTIVE	Diversity – Social Science General Education Elective		
or ELECTIVE	Diversity – Humanities General Education Elective	3	
SECOND YEAR/FIRST SEMESTER			
HIT-110	Health Informatics	4	**Prerequisites:** ENG-101, HIT-101, and CIS-101 or CSC-101 or CIS-105; or NOL-110 and NOL-120
HIT-130	Introduction to Ambulatory Coding	3	**Prerequisites:** HIT-101, HIT-120, and BIO-103, or BIO-117 and BIO-118 or BIO-211 and BIO-212
HIT-115	Healthcare Reimbursement	3	**Prerequisites:** HIT-101, HIT-120, and BIO-103, or BIO-117 or BIO-211
HIT-134	Basic Pathophysiology	3	**Prerequisites:** HIT-120, BIO-103 or BIO-117 or BIO-211
HIT-140	Diagnostic and Procedural Coding I	3	**Prerequisites:** HIT-101, HIT-120, and BIO-103, or BIO-117 and BIO-118 or BIO-211 and BIO-212
HIT-150	Technical Practice	1	**Prerequisites:** BIO-118 or BIO-212; ENG-102; HIT-115; HIT-205; and CIS-101 or CSC-10 or CIS-105. Permission of Program Director required to register for this course.
SECOND YEAR/SECOND SEMESTER			
HIT-202	Statistical Methods for Health Information	3	**Prerequisites:** HIT- 110 and MTH-111. This course is only offered in the Spring semester
HIT-215	Advanced Ambulatory Coding	3	**Prerequisites:** HIT-130, HIT-132 and HIT-134
HIT-235	Organizational Resources, QI and PI	4	**Prerequisites:** HIT-110 and HIT-115. This course is only offered in the Spring semester
HIT-240	Diagnostic and Procedural Coding II	4	**Prerequisites:** HIT-132, HIT-134, and HIT-140
HIT-220	Professional Practice Experience	2	**Prerequisites:** HIT-132, HIT-150, HIT-110, HIT-130, HIT-134 and HIT-140. Permission of Program Director required prior to registering for this course.
	TOTAL CREDITS	**67**	

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 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).

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)

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 INFORMATION

This program can be completed online.

CONTACT PERSON

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

Health Information Technology

ACADEMIC CERTIFICATE

Medical Coding

CIP Code 51.0707

MDC.CT

Course #	Course Name	Credits	Notes
FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
BIO-103	Human Biology	3	
CIS-105	Computer Literacy	3	
HIT-101	Introduction to Health Information	3	
HIT-120	Medical Terminology	3	
SECOND SEMESTER			
HIT-115	Healthcare Reimbursement	3	**Prerequisites:** HIT-101, HIT-120, BIO-103 or BIO-117 or BIO-211
HIT-130	Introduction to Ambulatory Coding	3	**Prerequisites:** HIT-101, HIT-120, and BIO-103 or BIO-117 and BIO-118 or BIO-211 and BIO-212
HIT-134	Basic Pathophysiology	3	**Prerequisites:** HIT-120, BIO-103 or BIO-117 or BIO-211
HIT-140	Diagnostic and Procedural Coding I	3	**Prerequisites:** HIT-101, HIT-120, and BIO-103 or BIO-117 and BIO-118 or BIO-211 and BIO-212
THIRD SEMESTER			
HIT-132	Basic Pharmacology	3	**Prerequisites:** HIT-120 and BIO-103 or BIO-117 or BIO-211
HIT-135	Medical Coding Internship	2	**Prerequisites:** HIT-115, HIT-130, HIT-134 and HIT-140 Permission of Program Director required prior to registering for this course.
HIT-215	Advanced Ambulatory Coding	3	**Prerequisite:** HIT-130, HIT-132 and HIT-134
HIT-240	Diagnostic and Procedural Coding II	4	**Prerequisites:** HIT-132, HIT-134, and HIT-140
	TOTAL CREDITS	**39**	

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 STUDENT LEARNING OUTCOMES

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

1. Assign, analyze and validate coding and coding data for accuracy and compliance with federal coding guidelines.

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 INFORMATION

The Medical Coding certificate program can be completed online.

CONTACT PERSON

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

Massage

ASSOCIATE IN APPLIED SCIENCE

Massage Therapy

CIP Code 51.3501

MAS.AAS

Course #	Course Name	Credits	Notes
FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
MAS-200	Therapeutic Massage	6	
MAS-205	Environmental Management	1	
BIO-117	Basic Anatomy & Physiology I	4	
MTH....	Mathematics General Education Elective	3	Must test into College level Math or take all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
FNS-105	Introduction to Nutrition	3	
MAS-209	Structures & Functions for the Bodyworker I	4	**Co-requisite:** MAS-211
MAS-211	Structures & Functions for the Bodyworker II	2	**Prerequisite:** MAS-209
MAS-240	Specialized Massage Techniques	3	**Prerequisite:** MAS-200; **Co-requisite:** MAS-209 and MAS-260
MAS-260	Palpation and Kinesiology for Massage Therapy	3	**Prerequisite:** MAS-200
SUMMER SEMESTER			
MAS-201	Student Massage Clinic	1	**Prerequisite:** MAS-200
SECOND YEAR/FIRST SEMESTER			
PSY-101	Basic Psychology	3	
MAS-261	Pathology for Massage Therapy	4	**Prerequisite:** MAS-200 and MAS-209
HPE-106	Stress Management	3	
HPE-170	First Aid, Safety & Prevention of Injuries	3	
HPE...	Health and Exercise Science Elective	1	
SECOND YEAR/SECOND SEMESTER			
MAS-241	Business Management for Massage Professionals	2	
MAS-243	Integrated Myofascial Structural Techniques	2	**Prerequisite:** MAS-209 and MAS-240
MAS-255	Massage Therapy Integration/Application	3	**Prerequisite:** MAS-211, MAS-260, MAS-261 **Co-requisite:** MAS-243
SPE-102	Public Speaking	3	
HPE-145	Wellspring Fitness Lab I	1	
ELECTIVE	Diversity – Humanities General Education Elective	3	
****CHOICE OF COURSES TO EQUAL 2 CREDIT HOURS FROM BELOW****			
MAS-215	Therapeutic Sensory Applications I	1	
MAS-220	Eastern Therapeutic Concepts	1	
MAS-225	Therapeutic Sensory Applications II	2	
MAS-230	Therapeutic Herbal Applications	2	
	TOTAL CREDITS	**66**	

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 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 of 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

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.

CONTACT PERSONS

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

Lourdes Institute of Wholistic Health contact
Dr. Frank Pilleggi, Program Director
(856) 580-6444
email: pileggif@lourdesnet.org

Massage

CIP Code 51.3501

CERTIFICATE OF ACHIEVEMENT

Massage Therapy

MAS.CA

FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
MAS-200	Therapeutic Massage	6	
MAS-205	Environmental Management	1	
MAS-209	Structures & Functions I	4	**Co-requisite:** MAS-211
MAS-211	Structures & Functions II	2	**Co-requisite:** MAS-209
HPE-170	First Aid, Safety, Prevention of Injuries	3	
SUMMER SESSION			
MAS-201	Student Massage Clinic	1	**Prerequisite:** MAS 200
SECOND SEMESTER			
MAS-240	Specialized Massage Techniques	3	**Prerequisite:** MAS 200; Co-requisite: MAS 209 and MAS 260
MAS-241	Business Management for the Message Professional	2	
MAS-255	Massage Therapy Integration & Application	3	**Prerequisite:** MAS 211, MAS 260, MAS 261 **Co-requisite:** MAS 243
MAS-260	Palpation and Kinesiology for Massage Therapy	3	**Prerequisite:** MAS 200
MAS-261	Pathology for Massage Therapy	4	**Prerequisite:** MAS 200 and MAS 209
HPE-106	Stress Management	3	
	TOTAL CREDITS	**35**	

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 type 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 message therapist.

SPECIAL PROGRAM REQUIREMENTS

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

SPECIAL ADMISSION REQUIREMENT

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

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.

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.

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

CONTACT PERSONS

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

Lourdes Institute for Wholistic Studies contact:
Dr. F. Pilleggi, Director
(856) 580-6444
email: pileggif@lourdesnet.org

THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

Nursing

CIP Code 51.3801

ASSOCIATE IN SCIENCE, DIPLOMA IN NURSING

Nursing: Our Lady of Lourdes Cooperative Nursing Program

NOL.AS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
BIO-211	Anatomy & Physiology I		**BIO 211 Prerequisite:** BIO-111
or BIO-117	Basic Anatomy & Physiology I	4	
CHM-101	General, Organic & Biological Chemistry I	4	
PSY-101	Basic Psychology	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
BIO-212	Anatomy & Physiology II		**BIO 212 Prerequisite:** BIO-211
or BIO-118	Basic Anatomy & Physiology II	4	**BIO 118 Prerequisite:** BIO 117
BIO-221	Microbiology I		
or BIO-121	Basic Microbiology	4	**BIO 221 Prerequisite:** BIO-111
HIS-101	World Civilization I	3	
MTH-111	Introduction to Statistics	3	
THIRD SEMESTER (FALL OR SPRING)			
NOL-110	Health Assessment	2	**Prerequisite:** CHM-101, ENG-102, HIS-101, MTH-111, PSY-101, BIO-118 OR BIO-212 AND BIO-121 OR BIO-221; **Co-requisites:** PSY-109 AND NOL-120
NOL-120	Caring for Patients Across the Lifespan I	9	**Prerequisite:** CHM-101, ENG-102, HIS-101, MTH-111, PSY-101, BIO-118 OR BIO-212 AND BIO-121 OR BIO-221; **Co-requisites:** PSY-109 AND NOL-110
PSY-109	Developmental Psychology	3	**Prerequisite:** PSY 101
FOURTH OR FIFTH SEMESTER (FALL OR SPRING)			
HIT-110	Health Informatics	4	**Prerequisite:** ENG-101, HIT-101, and CIS-101 or CSC-101; or NOL-110 and NOL-120
NOL-130	Caring for Patients Across the Lifespan II	9	**Prerequisite:** NOL-110, NOL-120 and PSY-109; **Co-requisite:** HIT-110
FOURTH OR FIFTH SEMESTER (SUMMER)			
NOL-215	Caring for Patients Across the Lifespan III	6	**Prerequisite:** NOL-110, NOL-120 and PSY-109; Co-requisites: SOC-101, PHL-232
PHL-232	Biomedical Ethics	3	
SOC-101	Introduction to Sociology	3	
SIXTH SEMESTER (FALL OR SPRING)			
NOL-225	Caring for Patients Across the Lifespan IV	9	**Prerequisite:** NOL-130, NOL-215, HIT-110, PHL-232, SOC-101; **Co-requisite:** NOL-235
NOL-235	Transition to Practice	3	**Prerequisite:** NOL-130, NOL-215, HIT-110, PHL-232, SOC-101; **Co-requisite:** NOL-225
	TOTAL CREDITS	**82**	

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.

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).

PROGRAM STUDENT LEARNING OUTCOMES

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

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 inter-professional 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
- A criminal background check, drug screen and health clearance are required of all students before entering Caring for Patients across the Lifespan I. Clinical affiliates may deny a student's access to their facility in the event significant findings are discovered on the Criminal Background Check.
- A minimum GPA of 2.8 is required

CONTACT PERSONS

Susan Hansen
(856) 227-7200 ext. 4359
Email: shansen@camdencc.edu

Nursing School Contact
Mary Beth Sauter, BS
Phone: (856) 757-3726
Email: msauter@virtua.org

Nursing

ASSOCIATE IN SCIENCE

CIP Code 51.0803

Occupational Therapy Assistant

OTA.AS

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
BIO-117	Basic Anatomy & Physiology I	4	
PSY-101	Basic Psychology	3	
SOC-101	Introduction to Sociology	3	
ELECTIVE	Diversity Humanities General Education Elective	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG 101
BIO-118	Basic Anatomy & Physiology II	4	
MTH-111	Introduction to Statistics	3	Must test into College level Math or take all appropriate prerequisites
PHL-232	Biomedical Ethics	3	
PSY-109	Developmental Psychology	3	**Prerequisite:** PSY 101
	TOTAL CCC CREDITS	**32**	
	TOTAL CREDITS	**74**	

The qualified credits earned from the occupational therapy assistant program at Rutgers-School of Health Professions (SHP) will be transferred as a block to Camden County College to complete the Associate in Science Degree. Total provided by SHP 42.

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 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 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 complete 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 Piscataway Campus.

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

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), located at 4720 Montgomery Lane, Suite 200 Bethesda, MD 20814-3449. ACOTE's telephone number c/o AOTA is (301) 65222---AOTA. www.acoteonline.org

CONTACT PERSONS

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

Rutgers Contact:
Deb McKernan-Ace, Program Director
Rutgers School of Health Professions
email: dam440@shp.rutgers.edu
908-889-2474
shp.rutgers.edu/psychiatric-rehabilitation/occupational-therapy-assistant-associate-in-science-degree/

THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

Nursing

CIP Code 24.0101

ASSOCIATE IN SCIENCE

Liberal Arts and Sciences: Nursing: Pre-Nursing Option

PRN.AS

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
BIO-111	Biology I Science	4	
CHM-101	General, Organic & Biological Chemistry I	4	
CIS-105	Computer Literacy	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
CHM-102	General, Organic & Biological Chemistry II	4	**Prerequisites**: CHM-101 or CHM-111
MTH-111	Elements of Statistics	3	
HIS-101	World Civilization I		
or ENG-271	World Literature I	3	**ENG 271 Prerequisite:** ENG-101; **Co-requisite:** ENG-102
BIO-211	Anatomy & Physiology I		
or BIO-117	Basic Anatomy & Physiology	4	**BIO 211 Prerequisite:** BIO-111
SECOND YEAR/FIRST SEMESTER			
BIO-212	Anatomy & Physiology II		**BIO-212 Prerequisite:** BIO-211
or BIO-118	Basic Anatomy & Physiology II	4	**BIO-118 Prerequisite:** BIO-117
PSY-101	Basic Psychology	3	
PHL-232	Biomedical Ethics	3	
ELECTIVE	Free Elective	3	
SECOND YEAR/SECOND SEMESTER			
BIO-221	Microbiology I		
or BIO-121	Basic Microbiology	4	**BIO-221 Prerequisite:** BIO-111
FNS-105	Introduction to Nutrition		
or FNS-107	Nutrition for Health Care Professionals	3	
PSY-109	Developmental Psychology	3	**Prerequisite:** PSY-101
SOC-101	Introduction to Sociology	3	
ELECTIVE	Free Elective	3	
	TOTAL CREDITS	**60**	

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 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 PERSON

Susan Hansen
(856) 227-7200 ext. 4359
Email: shansen@camdencc.edu

For general questions email:
Nursing@camdencc.edu

Nursing

CIP Code 51.3901

ACADEMIC CERTIFICATE
Practical Nursing

NUR.CT

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
BIO-103	Human Biology	3	
ALH-122	Certified Nurse Aide	4	Students holding current and verifiable, State-issued Certified Nurse Aide (CAN) 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.
NUR-102	Introduction to Practical Nursing	3	**Co-requisite:** ALH-122 and BIO-103
HIT-120	Medical Terminology	3	
FIRST YEAR/SECOND SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
HIT-132	Basic Pharmacology	3	**Prerequisites:** HIT-120, BIO-103, BIO-117 or BIO-211
NUR-106	Practical Nursing: Adult Health I	5	**Prerequisites:** ALH-122, BIO-103, HIT-120 and NUR 102; **Co-requisite**: ENG101, HIT-132 and PSY 101
PSY-101	Basic Psychology	3	
SECOND YEAR/FIRST SEMESTER			
FNS-105	Introduction to Nutrition	3	
NUR-110	Maternal/Child Practical Nursing	4	**Prerequisite:** ENG-101, HIT-132, NUR-106 and PSY-101. **Co-requisite:** FNS-105, NUR-116 and BIO-121.
NUR-116	Practical Nursing: Mental Health	3	**Prerequisite:** ENG-101, HIT-132, NUR-106, and PSY-101; **Co-requisite:** BIO-121, FNS-105 and NUR-110.
BIO-121	Basic Microbiology	4	
SECOND YEAR/SECOND SEMESTER			
NUR-206	Practical Nursing: Adult Health II	7	**Prerequisites:** NUR- 110 and NUR -116; **Co-requisite:** NUR-210
NUR-210	Trends, Issues and Preparation for Licensure	3	**Prerequisites:** NUR-110 and NUR-116.; **Co-requisite:** NUR-206
	TOTAL CREDITS	**51**	

PROGRAM DESCRIPTION

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 includes 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 a license practical nurse (LPN) as one who performs tasks and responsibilities within the framework of case finding; 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.

The Camden County College Practical Nursing Certificate Program is approved by:
The New Jersey Board of Nursing
PO Box 45010 Newark, NJ 07101

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

- 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 G. Alwan at 856-227-7200 ext. 4121
- 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 50.0% 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 (75%) 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 Practical Nursing courses require significant clinical practice hours in health-care facilities with which the College hold current contracts.

CONTACT PERSON

Susan Hansen
(856) 227-7200 ext. 4359
Email: shansen@camdencc.edu

Gamal Alwan
(856) 227-7200 ext. 4121
Gamal.Alwan@casl.camdencc.edu

Surgical Technology

ASSOCIATE IN APPLIED SCIENCE

CIP Code 51.0000

Health Science

Surgical Technology Option SRG.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
BIO-117	Basic Anatomy & Physiology I	4	
HIT-120	Medical Terminology	3	
HPE-181	Basic Life Support C-AHA	1	
SPE-102	Public Speaking	3	
MTH...	Mathematics General Education Elective	3	
FIRST YEAR/SECOND SEMESTER			
BIO-118	Basic Anatomy and Physiology II	4	**Prerequisite:** BIO-117
BIO-121	Basic Microbiology	4	
HIT-132	Basic Pharmacology	3	**Prerequisite:** HIT-120, and BIO-103, BIO-117 or BIO-211
SRG-102	Fundamentals of Surgical Technology	5	**Prerequisites:** ENG-101, HIT-120, BIO-117
SECOND YEAR/FIRST SEMESTER			
HIT-134	Basic Pathophysiology	3	**Prerequisites:** HIT-120
SRG-112	Surgical Procedures I	4	**Prerequisite:** SRG-102 **Co-requisite:** SRG-118
SRG-118	Clinical Rotation I	6	**Prerequisite:** BIO-117, BIO-118, BIO-121, HIT-120, HIT-132, SRG-102
SECOND YEAR/SECOND SEMESTER			
SRG-212	Surgical Procedures II	3	**Prerequisite:** SRG-112; **Co-requisite:** SRG-218
SRG-218	Clinical Rotation II	6	**Prerequisite:** SRG-118
SRG-220	Surgical Technology Capstone	2	**Prerequisite:** SRG-102, SRG-112, SRG-118; **Co-requisites:** SRG-212, SRG-218
ELECTIVE	Diversity – Humanities General Education Elective	3	
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

This selective associate degree program will prepare students for a career in Surgical Technology. Surgical Technologists are an integral part of the operating room team. They prepare sterile instruments and supplies needed for procedures. The Surgical Technologist remains throughout the surgery passing the necessary items needed

PROGRAM STUDENT LEARNING OUTCOMES

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

1. Demonstrate expertise in the theory and application of sterile and aseptic technique.
2. Integrate knowledge of human anatomy, pharmacology, microbiology, surgical procedures and implementation tools and technologies to facilitate successful performance of invasive and diagnostic procedures.
3. Effectively participate in various surgical procedures through suitable selection of instrumentation and supplies promoting effective patient care.
4. Successfully prepare for the certification examination and employment in the surgical technology field.

SPECIAL ADMISSION REQUIREMENTS

1. Apply to Camden County College.
2. Apply to the Surgical Technology Program.
3. Attend a minimum of one (1) information session. Dates will be available from program representative and on the website.
4. Must have a cumulative GPA of 2.5.
5. Applicants that meet all requirements and follow directions of the process completely will have an interview.

PROGRAM INFORMATION

1. Students must achieve a grade of "C" or better in all required courses and maintain an overall minimum GPA of 2.5.
2. Clinical rotations are conducted during the daytime. The Director assigns students to specific locations. Students must obtain a minimum of 600 hours and a specific number of surgical procedures to satisfy program completion and eligibility for the national certification examination.

CONTACT PERSONS

April Anderson, Director
(856) 227-7200 ext. 4638
Email: aanderson@camdencc.edu

Latasha Dyer, Secretary
(856) 227-7200 ext. 4247
Email: LDyer@camdencc.edu

Veterinary Technology

CIP Code 01.8301

ASSOCIATE IN APPLIED SCIENCE
Veterinary Technology

ASC.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
BIO-111	Biology I – Science	4	
MTH-100	Algebraic Concepts	4	Must test into College level Math or take all appropriate prerequisitesPage
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
ELECTIVE	Diversity: Humanities General Education Elective		
or ELECTIVE	Diversity: Social Science General Education Elective	3	
ASC-106	Veterinary Office Practices	2	**Prerequisite:** ENG-101, BIO-111, MTH-100; **Corequisite:** ENG-102
ASC-107	Calculations for Veterinary Technicians	2	**Prerequisite:** ASC-106, ENG-102, BIO-111, MTH-100; **Corequisite:** ENG-102, ASC-106
ASC-108	Animal Anatomy and Physiology I	3	**Prerequisite:** ENG-101, BIO-111, MTH-100; **Corequisite:** ENG-102, ASC-106, ASC-107
ASC-109	Fundamentals of Small Animal Nursing	2	**Prerequisite:** ENG-101, BIO-111, MTH-100; **Corequisite:** ENG-102, ASC-106, ASC-107, ASC-108
FIRST YEAR/THIRD SEMESTER (SUMMER SESSION I)			
ASC-110	Veterinary Clinical Rotation I	2	**Prerequisite:** ENG-102, ASC-106, ASC-107, ASC-108; **Corequisite:** BIO-221
BIO-221	Microbiology I	4	**Prerequisite:** BIO-221
SECOND YEAR/FIRST SEMESTER			
ASC-200	Veterinary Dental Techniques I	2	**Prerequisite:** ASC-110 and BIO-221; **Corequisite:** ASC-201
ASC-201	Animal Anatomy and Physiology II	3	**Prerequisite:** ASC-110; **Corequisite:** ASC-202
ASC-202	Advanced Small Animal Nursing Techniques	3	**Prerequisite:** ASC-110; **Corequisite:** ASC-201
ASC-236	Radiology for Veterinary Technicians	2	**Prerequisite:** ASC-110 ; **Corequisite:** ASC-201 and ASC-202
ASC-240	Parasitology	3	**Prerequisite:** ASC-110 and BIO-221; **Corequisite:** ASC-201
ASC-261	Pathology for Veterinary Technicians	2	**Prerequisite:** ASC-110 and BIO-221; **Corequisite:** ASC-201 and ASC-202
ASC-270	Veterinary Pharmacology	2	**Prerequisite:** ASC-110 and BIO-221; **Corequisite:** ASC-201 and ASC-202
SECOND YEAR/SECOND SEMESTER			
ASC-213	Laboratory Animal Science	3	**Prerequisite:** ASC-110, BIO-221, ASC-201 and ASC-202
ASC-220	Hematology for Veterinary Technicians	3	**Prerequisite:** ASC-110, BIO-221, ASC-201 and ASC-202
ASC-215	Farm Animal Nursing Techniques	2	**Prerequisite:** ASC-110, ASC-201 and ASC-202, ASC-236
ASC-235	Clinical Laboratory for Veterinary Techs	2	**Prerequisite:** ASC-110, BIO-221, ASC-201 and ASC-202, ASC-236, MTH-100
ASC-214	Veterinary Surgical Nursing	3	**Prerequisite:** ASC-110, BIO-221, ASC-201 and ASC-202, ASC-261, ASC-270
ASC-244	Veterinary Dental Techniques II	2	**Prerequisite:** ASC-20, ASC-236
SECOND YEAR/THIRD SEMESTER (SUMMER SESSION II)			
ASC-266	Veterinary Clinical Rotation II	4	**Prerequisite:** ASC-213, ASC-214, ASC-215, ASC-220, ASC-235, ASC-236, ASC-240. ASC-244, ASC-261, ASC- 270; **Corequisite:** ASC-267
ASC-267	Veterinary Profession Seminar	1	**Prerequisite:** ASC-213, ASC-214, ASC-215, ASC-220, ASC-235, ASC-236, ASC-240, ASC-244, ASC-261, ASC-270; **Corequisite:** ASC-266
	TOTAL CREDITS	**69**	

PROGRAM DESCRIPTION

Veterinary technicians work under the supervision of a veterinarian, performing clinical laboratory, diagnostic, and nursing procedures for animals..

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 ADMISSION REQUIREMENTS

After completion of the 3 prerequisite courses with a "C" or higher, applicants must submit an online application and select Veterinary Technology as the program of choice; then a separate program application will be sent from the Vet Tech department with vaccine and document requirements. All official transcripts must be submitted to the office of Records and Registration. Applications are accepted 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; unless seats become available. Applications not approved for fall are encouraged to re-apply after September 1; one class will be accepted per semester. All prerequisite courses and all documentation, including placement test scores and/or college transcripts must be completed prior to the deadline. After applying the following will then occur:

1. Review of applications by the Veterinary Technology Program Director in March and September.
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 May 2019, will be required to re-apply for the program through the application process and be placed into the new curriculum. Vet tech courses from colleges other than CCC will not be accepted.

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.

ACCREDITATION

The Veterinary Technology program is accredited by:
The Committee on Veterinary Technician Education and Activities of the American Veterinary Medical Association

CONTACT PERSON

Peggy Dorsey, Director
(856) 227-7200, ext. 4205
email: pdorsey@camdencc.edu

Dru Jones-Edwards
(856) 227-7200 ext. 4037
Email: djonesedwards@camdencc.edu

Vision

ASSOCIATE IN APPLIED SCIENCE

CIP Code 51.1801

Ophthalmic Science Technology

OPH.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CIS 105	Computer Literacy		
or CIS-101	Personal Computer		
or CSC-102	Applications or Information Literacy in a Digital Era	3	
MMTH-101	Concepts of Mathematics		
orMTH-107	Mathematics for Liberal Arts		
orMTH-111	Introduction to Statistics I	3	Must test into College level Math or take all appropriate prerequisites
OPH-104	Ophthalmic Lab I	3	**Co-requisite:** OPH 111
OPH-111	Ophthalmic Materials Lecture I	3	**Co-requisite:** OPH 104
OPH-130	Anatomy of the Eye	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG 101
OPH-105	Ophthalmic Lab II	3	**Prerequisite:** OPH 104; **Co-requisite:** OPH 112
OPH-112	Ophthalmic Materials Lecture II	3	**Prerequisite:** OPH 111; **Co-requisite:** OPH 105
OPH-131	Introduction to Contact Lenses	3	**Prerequisite:** OPH 130
ELECTIVE	Laboratory Science General Education Elective	4	
SECOND YEAR/FIRST SEMESTER			
OPH-203	Ophthalmic Materials Laboratory III	2	**Prerequisite:** OPH 105
OPH-220	Optic Principles	3	**Prerequisite:** OPH 105 and OPH 112
OPH-232	Contact Lens Fitting I	3	**Prerequisite:** OPH 131
OPH-240	Ophthalmic Dispensing I	4	**Prerequisite:** OPH 105 and OPH 112
OPH-250	Ophthalmic Clinic I	1	**Prerequisite:** OPH 105, OPH 112 and OPH 131; **Co-requisite:** OPH 260
OPH-260	Co-op I: Ophthalmic Science	1	**Prerequisite:** OPH 105, OPH 112 and OPH 131; **Co-requisite:** OPH 250
ELECTIVE	General Education Elective	3	
SECOND YEAR/SECOND SEMESTER			
OPH-204	Ophthalmic Materials Laboratory IV	2	**Prerequisite:** OPH 203
OPH-233	Contact Lens Fitting II	3	**Prerequisite:** OPH 232
OPH-241	Ophthalmic Dispensing II	4	**Prerequisite:** OPH 240
OPH-251	Ophthalmic Clinic II	1	**Prerequisite:** OPH 250, and OPH 260; **Co-requisite:** OPH 261
OPH-270	Ophthalmic Dispensing Office Procedures	3	**Prerequisite:** OPH 112
ELECTIVE	Diversity: Social Science General Education Elective		
or ELECTIVE	Diversity: Humanities General Education Elective	3	
	TOTAL CREDITS	**66**	

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 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

- All candidates must take the College Placement Test and complete the required courses prior to beginning course work.
- 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 perspective students must schedule an interview with the ophthalmic science program director.
- Due to the sequential nature of the optical courses, admission is usually limited to the fall semester. General Education courses can be taken all year.
- Students must earn a grade of "C" or better in all ophthalmic courses in order to be eligible for the New Jersey Ophthalmic Dispensers Exam.
- Students must have an approved apprenticeship for 4 months after program completion to be eligible for the New Jersey Ophthalmic Dispensers Exam.

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.

ACCREDITATION

The Ophthalmic Science program is accredited by the Commission on Opticianry Accreditation
P.O. Box 592
Canton, NY 13617
(703) 468-0566

CONTACT PERSON

Daniel G. Banks, Coordinator
(856) 227-7200 ext. 5058
Email: dbanks@camdencc.edu

Vision

CERTIFICATE OF ACHIEVEMENT

CIP Code 51.1801

Ophthalmic Science Apprentice

OPH.CA

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
OPH-104	Ophthalmic Lab I	3	**Co-requisite:** OPH-111; Must be taken within the first 12 months of apprenticeship.
OPH-111	Ophthalmic Materials Lecture I	3	**Co-requisite:** OPH-104; Must be taken within the first 12 months of apprenticeship.
FIRST YEAR/SECOND SEMESTER			
OPH-105	Ophthalmic Lab II	3	**Prerequisite** OPH-104; **Co-requisite:** OPH-112; Must be taken within the first 12 months of apprenticeship.
OPH-112	Ophthalmic Materials Lecture II	3	**Prerequisite:** OPH-111; **Co-requisite:** OPH-105; Must be taken within the first 12 months of apprenticeship.
SECOND YEAR/FIRST SEMESTER			
OPH-130	Anatomy of the Eye	3	
OPH-220	Optic Principles	3	**Prerequisite:** OPH-105 and OPH-112
SECOND YEAR/SECOND SEMESTER			
OPH-131	Introduction to Contact Lenses	3	**Prerequisite:** OPH-130
OPH-203	Ophthalmic Materials Laboratory III	2	**Prerequisite:** OPH-105
THIRD YEAR/FIRST SEMESTER			
OPH-240	Ophthalmic Dispensing I	4	**Prerequisite:** OPH-105 and OPH-112
THIRD YEAR/SECOND SEMESTER			
OPH-241	Ophthalmic Dispensing II	4	**Prerequisite:** OPH-240
	TOTAL CREDITS	**31**	

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 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. Dispense a complete pair of eyeglasses and contact lenses from a doctor's prescription.
4. Demonstrate knowledge of spectacle hens and contact lens design through mathematical calculations.

SPECIAL PROGRAM REQUIREMENTS

- All candidates must take the College Placement Test and complete the required courses prior to beginning course work.
- 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 perspective students must schedule an interview with the ophthalmic science program director.
- Due to the sequential nature of the optical courses, admission is usually limited to the fall semester. General Education courses can be taken all year.
- Students must earn a grade of "C" or better in all ophthalmic courses in order to be eligible for the New Jersey Ophthalmic Dispensers Exam.
- Students must have an approved apprenticeship for 36 months prior to program completion to be eligible for the New Jersey Ophthalmic Dispensers Exam.

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.

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

- Ophthalmology offices
- Eye clinics
- Hospital ophthalmic clinics/offices
- Universities
- Contact lens practices

CONTACT PERSON

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Email: dbanks@camdencc.edu
(856) 374-5058

Vision

CERTIFICATE OF ACHIEVEMENT
Ophthalmic Medical Technician

CIP Code 51.1803

OMT.CA

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
BIO-103	Human Biology	3	
OMT-101	Medical History Taking	1	
OMT-103	Ophthalmic Optics/Medical Tech	4	
OMT-104	Clinical Procedures I	3	**Prerequisite:** BIO-103
OPH-130	Anatomy of the Eye	3	
WINTER INTERSESSION			
HPE-181	Basic Life Support "C" – AHA or		
or HPE-180	Community CPR/ARC	1	
SECOND SEMESTER			
OMT-201	Ocular Pharmacology	1	**Prerequisite:** OPH-130, OMT-101. OMT-103, OMT-104; Co-requisite: OPH-131, OMT-203, OMT-204
OMT-203	Clinical Rotation I	3	**Prerequisite:** OPH-130, OMT-101. OMT-103, OMT-104, HPE-181; Co-requisite: OPH-131, OMT-201, OMT-204, PSY-101,
OMT-204	Clinical Procedures II	3	**Prerequisite:** OMT-104
OPH-131	Introduction to Contact Lenses	3	**Prerequisite:** OPH-130
PSY-101	Basic Psychology	3	
THIRD SEMESTER			
OMT-213	Clinical Rotation II	4	**Prerequisite:** OMT-203
	TOTAL CREDITS	**32**	

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; 750 hours total are required to complete the program and to become eligible for the COT Certification Exam.

PROGRAM STUDENT LEARNING OUTCOMES

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

1. Relate eye disorders to relevant ocular anatomy and physiology.
2. Demonstrate proficiency in medical history taken.
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 the fall semester. General Education courses can be taken all year.
- A maximum of 18 students per year are admitted into the Ophthalmic Medical Technician program.

ACCREDITATION

The OMT program is nationally accredited by the International Council of Accreditation for Allied Ophthalmic Education Programs. (ICA)

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.

CONTACT PERSONS

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Career & Technical Institute of Camden County College

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.

856-874-6004
tradetraining@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 Certified/Registered Medical Assistant program
offers an accelerated curriculum to provide all of the competencies necessary to pass the RMA exam. This program is designed to train students as multi-skilled professionals who will assist the physician in patient-care management and education. This course includes classroom and lab instruction, as well as an externship component. Students will learn to perform a variety of clinical and administrative duties. Venipuncture, vital signs, urinalysis procedures, EKG,
infection control techniques, sterilization techniques, hematology, tray setups, and patient preparation are examples of the clinical duties that the Medical Assisting student will be trained to perform. Students will also learn diagnostic procedures, medical terminology and anatomy and physiology.
The graduates of the Medical Assistant Program at the Career & Technical Institute of Camden County College are eligible to take the RMA certification examination upon graduation. The RMA (Registered Medical Assistant) exam is administered by American Medical Technologists (AMT). Although some credentials use "certified" and some use "registered," all AMT members are considered "certified." Students may be required to pass a background check and/or drug test before being admitted to externship.

Location: Camden County College, Camden Campus

CE.TRD-030 *Hours: 720* *CEUs: 72.0*

DIALYSIS TECHNICIAN

Are you looking for a great entry-level opportunity to enter the Healthcare field with little to no experience? Most Dialysis Technician programs are designed for individuals working within the healthcare field, this program is designed to bring you from no knowledge or experience to employable within 5 months! This program offers a five-month curriculum designed to prepare the student for an entry-level position as a Hemodialysis Technician. The program will allow the student to progress through a standard dialysis facility orientation program at an accelerated rate by providing an extensive theoretical knowledge base and clinical 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. 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 RN. Students who complete 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 CCC's Dialysis graduates. In addition, students are eligible to take the CCHT (Certified Clinical Hemodialysis Technician) exam, through the Nephrology Nursing Certification Commission (NNCC) upon completion of an externship or six months of work experience.

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.
- Additional requirements may apply. Contact the Office of Continuing Education at 856-374-4955 to request the full registration packet.

CE.TRD-070 *Hours: 600* *CEUs: 60.0*

PATIENT CARE TECHNICIAN (FORMERLY MST)

The Patient Care Technician Program is designed to prepare students to train for one of the fastest growing professions in the health care industry today. The program focuses on building a complete and solid foundation for students in both classroom theory and hands-on clinical components. Students will build skills in basic and complex key concepts of anatomy and physiology; cardiac function; performing EKG; growth and development; phlebotomy; nursing care; nutrition; therapeutic communication; psychology; 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 other healthcare providers.

Please note: students wishing to participate in a clinical experience must secure a clinical facility. Clinical experience is not a requirement for program completion. Includes NHA CPCT/A exam voucher and CPR training Admission requirements (complete prior to registration):

- Students must be high school graduate or possess a GED
- Students must be 18 years of age
- Special program admission requirements. This information is provided in the registration packet

CE.ALH 056 *Hours: 187* *CEUs: 18.7*

Please note: Students wishing to participate in a clinical experience must secure a clinical facility. Clinical experience is not a requirement for program completion.

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, 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 7 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 from Camden College Hall Suite 228. 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 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* *CEUs: 9.0*

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*

CAREER & TECHNICAL INSTITUTE OF CAMDEN COUNTY COLLEGE
856-374-4955
tradetraining@camdencc.edu
www.camdencc.edu/ce

ASSOCIATE IN SCIENCE

CIP Code 44.0701

Human Services: Development Disabilities Option DEV.AS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
HSR-101	Introduction to Human Services	3	
PSY-101	Basic Psychology	3	
SOC-101	Introduction to Sociology	3	
MTH-107	Math for Liberal Arts	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite**: ENG-101
HSR-151	Survey in Developmental Disability	3	
MTH-111	Intro to Statistics	3	Must test into College level Math or take all appropriate prerequisites
HIS-101	World Civilization I		
or HIS-102	World Civilization II		
or ART-101	Art Appreciation		
or MUS-101	Music Appreciation	3	
CHM-140	Chemistry & Society		
or BIO-106	Living in the Environment		
or BIO-140	The Microbial World	4	
SECOND YEAR/FIRST SEMESTER			
HSR-102	Social Work Processes	3	**Prerequisite:** HSR-101
HSR-103	Introduction to Counseling	3	
CIS-106	Intro Computing Google Apps (G Suite)	2	
HSR-152	Health Issues Across The Life Span	3	**Prerequisite**: HSR-151
SOC-205	Social Diversity		
or SOC-201	Sociology of the Family		
or ENG-271	World Literature I		3
SECOND YEAR/SECOND SEMESTER			
HSR-105	Group Dynamics	3	
HSR-107	Field Work	3	**Prerequisite:** HSR-101 and HSR-103 or ADD-101
PHL-131	Introduction to Ethics		
or PHL-232	Biomedical Ethics	3	
HSR-153	Developmental Disabilities Program Planning	3	**Prerequisite:** HSR-151
HSR-154	Critical Issues in Developmental Disabilities	3	**Prerequisite:** HSR-151
	TOTAL CREDITS	**60**	

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 provides and prepares 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 Spectrum Disorder, Attention-Deficit/Hyperactivity Disorder, 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 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 professional and ethical manner.

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.

CONTACT PERSON

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HUMAN SERVICES & BEHAVIORAL SCIENCE

ASSOCIATE IN SCIENCE

CIP Code 44.0701

Human Services

HSR.AS

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
HSR-101	Introduction to Human Services	3	
PSY-101	Basic Psychology	3	
SOC-101	Introduction to Sociology	3	
MTH-107	Math for Liberal Arts	3	Must test into College level Math or take all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
HSR-104	Contemporary Issues in Social Welfare	3	**Prerequisite:** HSR-101
MTH-111	Intro to Statistics	3	Must test into College level Math or take all appropriate prerequisites
ELECTIVE	Language General Education Elective	3	
CHM-140	Chemistry & Society		
or BIO-106	Living in the Environment		
or BIO-140	The Microbial World	4	
SECOND YEAR/FIRST SEMESTER			
HSR-102	Social Work Processes	3	**Prerequisite:** HSR-101
HSR-103	Introduction to Counseling	3	
CIS-106	Intro Computing Google Apps (G Suite)	2	
ELECTIVE	Second Language General Education Elective	3	
SOC-205	Social Diversity		
or SOC-201	Sociology of the Family		
or ENG-271	World Literature I	3	
SECOND YEAR/SECOND SEMESTER			
HSR-105	Group Dynamics	3	
HSR-107	Field Work	3	**Prerequisite:** HSR-101 and HSR-103 or ADD-101.
PHL-131	Intro to Ethics		
or PHY-232	Biomedical Ethics	3	
HIS-101	World Civilization I		
or HIS-102	World Civilization II	3	
BIO-103	Human Biology	3	
	TOTAL CREDITS	**60**	

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 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.

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.

CONTACT PERSON

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HUMAN SERVICES & BEHAVIORAL SCIENCE

ASSOCIATE IN ARTS

CIP Code 24.0101

Liberal Arts and Science: Psychology Option

PSY.AA

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
HIS-101	World Civilization I	3	
MTH-107	Mathematics for Liberal Arts		
or MTH-114	College Algebra for Business & Social Science	3	
PSY-101	Basic Psychology	3	
ELECTIVE	Language General Education Elective	3	Students must take six credits of one language.
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	
HIS-102	World Civilization II	3	
PSY-109	Developmental Psychology	3	
ELECTIVE	Language General Education Elective	3	Students must take six credits of one language.
SOC-101	Introduction to Political Sociology		
or POL-101	Introduction to Political Science		
or POL-103	American Federal Government	3	
SECOND YEAR/FIRST SEMESTER			
PSY-102	Psychology of Personality and Adjustment		**PSY-102 and PSY 108 Prerequisite:** PSY-101
or PSY-108	Psychology of Dying and Death	3	
ART-101	Art Appreciation		
or MUS-101	Music Appreciation		
or PHL-101	Introduction to Philosophy		
or PHL-131	Introduction to Ethics	3	
BIO-106	Living in the Environment		
or BIO-111	Biology I – Science		
or BIO-117	Basic Anatomy and Physiology I		
or CHM-140	Chemistry in Society	4	
PSY-105	Child Psychology		**PSY-105 and PSY 106 Prerequisite:** PSY-101
or PSY-106	Psychology of Adolescents	3	
PSY-112	Psychology of Women		**PSY-112 Prerequisite:** PSY 101
or ENG-271	World Literature		**ENG-271 Prerequisite** ENG-101; **Corequisite:** ENG-102
or SOC-201	Sociology of the Family		
or SOC-205	Social Diversity		
or HIS-131	African American History I	3	
SECOND YEAR/SECOND SEMESTER			
SPE-102	Public Speaking	3	
MTH-111	Introduction to Statistics		
or MTH-171	Statistics I	3	**MTH-171 Prerequisite:** MTH-114 or MTH-123 or MTH-125
PSY-103	Educational Psychology		**PSY-103 and PSY 110 Prerequisite:** PSY-101
or PSY-110	Social Psychology	3	
PSY-104	Abnormal Psychology	3	**PSY-104 and PSY 111 Prerequisite:** PSY-101
CIS-106	Introductory Computing using Google Apps	2	
	TOTAL CREDITS	**60**	

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 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.

CONTACT PERSONS

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HUMAN SERVICES & BEHAVIORAL SCIENCE

ASSOCIATE IN APPLIED SCIENCE

CIP Code 51.1501

Addictions Counseling

ADD.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
ADD-101	Introduction to Addictions	3	
HSR-101	Introduction to Human Services	3	
PSY-101	Basic Psychology	3	
SOC-101	Introduction to Sociology	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
ADD-102	Professional Development in Addictions Counseling	3	
HSR-103	Introduction to Counseling	3	
CHM-140	Chemistry & Society	4	
SPE-102	Public Speaking	3	
SECOND YEAR/FIRST SEMESTER			
ADD-111	Psycho-Social Aspects of Alcoholism & Drug Addiction	3	**Prerequisite:** ADD-101
HSR-102	Social Work Processes	3	**Prerequisite:** HSR-101
HSR-105	Group Dynamics	3	
PSY-104	Abnormal Psychology	3	**Prerequisite:** PSY-101
CIS-106	Intro Computing Google Apps (G Suite)	2	
SECOND YEAR/SECOND SEMESTER			
ADD-112	Assessment & Treatment of Alcoholism & Drug Addiction	3	
HSR-107	Field Work	3	**Prerequisite:** HSR-101 and HSR-103 or ADD-101
SOC-205	Social Diversity	3	
HSR-104	Contemporary Issues	3	
ADD-103	Certified Peer Recovery Specialist (CARES)		
or ADD-104	Certified Peer Recovery Specialist (CCART)	3	
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

Addictions 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 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 Professional Certification Board of NJ, INC.

SPECIAL PROGRAM INFORMATION

- ADD-101. ADD-102, ADD-111, ADD-112, HSR-101, HSR-102, HSR-103, HSR-105 Meets educational requirements for NJ State Certifications and Licensing in Alcohol and Drug Counseling.
- Additional clinical hours required for certification.

CONTACT PERSON

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HUMAN SERVICES & BEHAVIORAL SCIENCE

CERTIFICATE OF ACHIEVEMENT

CIP Code 51.1501

Addictions Counseling

ADD.CA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ADD-101	Introduction to Addictions	3	
HSR-101	Introduction to Human Services	3	
HSR-103	Introduction to Counseling	3	
HSR-105	Group Dynamics	3	
FIRST YEAR/SECOND SEMESTER			
ADD-102	Professional Development in Addictions Counseling	3	
ADD-111	Psycho-Social Aspects of Alcoholism & Drug Addiction	3	**Prerequisite:** ADD-101
ADD-112	Assessment & Treatment of Alcoholism & Drug Addiction	3	**Prerequisite:** ADD-101
HSR-102	Social Work Processes	3	**Prerequisite:** HSR-101
	TOTAL CREDITS	**24**	

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.

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

SPECIAL PROGRAM INFORMATION

- ADD-101, ADD-102, ADD-111, ADD-112, HSR- 101, HSR-102, HSR-103, HSR-105 meets educational requirements for NJ State Certifications and Licensing in Alcohol and Drug Counseling.
- Additional clinical hours required for certification.

CONTACT PERSON

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email: lstanford@camdencc.edu

HUMAN SERVICES & BEHAVIORAL SCIENCE

ACADEMIC CERTIFICATE

CIP Code 44.0701

Social Services

SSR.CT

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
HSR-101	Introduction to Human Resources	3	
PSY-101	Basic Psychology	3	
BHC-101	Brain Function, Injuries, and Treatment		
or HSR-151	Survey in Developmental Disability	3	
FIRST YEAR/SECOND SEMESTER			
HSR-105	Group Dynamics	3	
HSR-103	Introduction to Counseling	3	
BHC-103	Applied Behavioral Analysis	3	
HSR-102	Social Work Processes		**HSR-102 Prerequisite:** HSR-101
or BHC-102	Emotional and Behavioral Disorders		
or HSR-152	Health Issues Across the Life Span	3	**HSR-152 Prerequisite:** HSR-151
SOC-101	Introduction to Sociology		
or BHC-103	Applied Behavioral Analysis		
or HSR-153	Developmental Disabilities Program Planning	3	**HSR-153 Prerequisite:** HSR-151
SECOND YEAR/FIRST SEMESTER			
HSR-104	Contemporary Issues (3 credits)		
or BHC-104	Family, Community & the Law (1 credit)		
or HSR-154	Critical Issues in Developmental Disabilities (3 credits)	1/3	**HSR-154 Prerequisite:** HSR-151
HSR-107	Field Work	3	**Prerequisite:** HSR-101 and HSR-103 or ADD-101.
	TOTAL CREDITS	**31/33**	

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 STUDENT LEARNING OUTCOMES

At the end of the 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.

SPECIAL PROGRAM RECOMMENDATION

- Students who are focused on Behavioral Health Care will be required to take BHC-101, BHC-102, BHC-103 and BHC-104.
- 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.

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 Protectives Services should contact the coordinator of this program.

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.

CONTACT PERSON

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HUMAN SERVICES & BEHAVIORAL SCIENCES

CERTIFICATE OF ACHIEVEMENT

CIP Code 51.0701

Alzheimer's Journey Coordinator ALZ.CA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ALZ-101	Overview of Mild Cognitive Impairment (MCI), Alzheimer's Disease (AD), & Related Dementias (RD's)	2	
ALZ-102	Journey Coordinator: Purpose & Professionalism	2	**Prerequisite:** ALZ-101
FIRST YEAR/SECOND SEMESTER			
ALZ-103	Individualized Approaches to Engage, Care, and Support for Persons Living with AD/RD and Care Partners	3	**Prerequisite:** ALZ-102
ALZ-104	Principles of System Navigation	3	**Prerequisite:** ALZ-103
FIRST YEAR/SUMMER SEMESTER			
ALZ-105	Alzheimer's Journey Coordinator Field Work	3	**Prerequisite:** ALZ-101, ALZ-102, ALZ-103, ALZ-104
	TOTAL CREDITS	**13**	

PROGRAM DESCRIPTION

The purpose of the curriculum is to provide students with the educational and clinical skills necessary to assist caregivers in recognizing and understanding the symptoms/treatment/guidance of Alzheimer's disease (AD) and related dementias (RDs). The program will build a student's communication skills with respect to cultural sensitivity and person-centered plans. The program will provide skills to help differentiate between the multiple system and strategies to effectively navigate through various institutions including federal (to include the VA), state, county and local health and social agencies. This certificate curriculum will also assist students who are presently working for agencies that provide services to individuals with Alzheimer's disease and related dementias.

PROGRAM STUDENT LEARNING OUTCOMES

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

1. Compare and contrast Alzheimer's Diseases and related dementias as a public health crisis and the current barriers to care and services.
2. Demonstrate effective communication and relationship building skills that traverse dynamic networks of professionals, families, caregivers, and the person experiencing Alzheimer's disease and other related dementia.
3. Integrate information on the symptoms, treatment, and guidance of Alzheimer's disease and related dementias.

CONTACT PERSON

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THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

HUMANITIES & LANGUAGES

ASSOCIATE IN ARTS

CIP Code 24.0101

Liberal Arts and Science: English Option ENG.AA

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
HIS-101	World Civilization I	3	
MTH-105	Mathematical Systems I: Structures		
or MTH-107	Mathematics for Liberal Arts	3	Must test into College level Math or take all appropriate prerequisites
ELECTIVE	Language General Education Elective	3	Must take six credits of one language.
PSY-101	Basic Psychology	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
ENG-121	Introduction to Literature	3	**Co-requisite:** ENG-101
HIS-102	World Civilization II	3	
MTH-111	Technology General Education Elective		
or MTH-205	Math Syst. II: Structures II		**MTH 205 Pre-requisite:** MTH-105 (Must place into College Level Math or complete all appropriate prerequisites).
or BIO- 103	Human Biology	3	
ELECTIVE	Language General Education Elective	3	Must take six credits of one language.
SECOND YEAR/FIRST SEMESTER			
ENG-271	World Literature I		
or ENG-272	World Literature II	3	**Prerequisite:** ENG-101
ENG-281	American Literature I		
or ENG-282	American Literature II	3	**Prerequisite:** ENG-101
CIS-106	Computing Google Apps (G Suite)	2	
BIO-106	Living in the Environment		
or BIO-130	Plants & Society		
or BIO-140	The Microbial World		
or CHM-140	Chemistry in Society		
or PHY-103	Physics I	4	
GEO-101	Cultural Geography		
or SOC-101	Introduction to Sociology	3	
SECOND YEAR/SECOND SEMESTER			
ENG-131	Shakespeare	3	**Prerequisite:** ENG-101
ENG-261	English Literature I		
or ENG-262	English Literature II	3	**Prerequisite:** ENG-101
SPE-102	Public Speaking	3	
ART-111	Art History I		
or ART-112	Art History II		
or MUS-106	World Music Cultures	3	
ENG-191	Myths of the World		**ENG-191 Prerequisite:** ENG-101; **Corequisite:** ENG-102
or MUS-101	Music Appreciation		
or PHL-101	Introduction to Philosophy	3	
	TOTAL CREDITS	**60**	

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 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).

CONTACT PERSONS

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Professor Jacqueline Beamen, Chair
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HUMANITIES & LANGUAGES

ASSOCIATE IN ARTS

CIP Code 24.0101

Liberal Arts and Science: History Option HST.AA

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
HIS-101	World Civilization I	3	
MTH-107	Mathematics for Liberal Arts	3	
ELECTIVE	Language General Education Elective	3	Must take six credits of one language.
CIS-106	Intro to Computing Using Google Apps (G Suite)	2	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
HIS-102	World Civilization II	3	
MTH-111	Introduction to Statistics		
or BIO-103	Human Biology	3	
ELECTIVE	Language General Education Elective	3	Must take six credits of one language.
POL-108	Introduction to International Relations	3	
SECOND YEAR/FIRST SEMESTER			
HIS-121	United States History I	3	
PHL-131	Introduction to Ethics		
or PHL-232	Biomedical Ethics		
or PSY-101	Basic Psychology	3	
SPE-102	Public Speaking	3	
BIO-106	Living in the Environment		
or BIO-130	Plants & Society		
or BIO-140	The Microbial World		
or CHM-140	Chemistry & Society		
or PHY-103	Physics (for the Non-Science Major)	4	
GEO-101	Cultural Geography	3	
SECOND YEAR/SECOND SEMESTER			
HIS-122	United States History II	3	
HIS-150	Topics in History		
or ELECTIVE	History Elective	3	
ART-111	Art History I		
or ART-112	Art History II		
or MUS-101	Music Appreciation	3	
ENG-271	World Literature I		
or SOC-205	Social Diversity		
or SOC-201	Sociology of the Family	3	
ENG-282	American Literature II		
or ENG-281	American Literature I		
or SOC-101	Introduction to Sociology	3	
	TOTAL CREDITS	**60**	

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 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 a historical essay that presents a clear argument and uses detailed historical evidence.

CONTACT PERSON

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ASSOCIATE IN ARTS

CIP Code 24.0101

Liberal Arts and Science: Law, Government & Politics Option GOV.AA

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
HIS-101	World Civilization I	3	
POL-101	Introduction to Political Science	3	
MTH...	Mathematics General Education Elective	3	
ELECTIVE	Language General Education Elective	3	Must take six credits in one language.
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
HIS-102	World Civilization II	3	
POL-103	American Federal Government	3	
ELECTIVE	Language General Education Elective	3	Must take six credits in one language.
ELECTIVE	Humanities General Education Elective	3	Not a History or Language Course
SECOND YEAR/FIRST SEMESTER			
HIS-121	U.S. History I	3	
SPE-102	Public Speaking	3	
ELECTIVE	Laboratory Science General Education Elective.		
	BIO-106 **or** BIO-130 **or** BIO-140 **or** CHM-140 **or** PHY-103	4	
ELECTIVE	Technology General Education Elective	2	
ELECTIVE	Free Elective	3	
SECOND YEAR/SECOND SEMESTER			
HIS-122	U.S. History II	3	
POL-108	Introduction to International Relations		
or POL-121	Political Science Co-op	3	
MTH....	Mathematics General Education Elective		
or ELECTIVE	Science General Education Elective	3	
ELECTIVE	Diversity General Education Elective	3	
ELECTIVE	Free Elective	3	
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

The 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 STUDENT LEARNING OUTCOMES

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

1. The successful graduate will be able to display an understanding of the structure, function, history and operations of government institutions at the international, national, state and local levels.
2. The successful graduate will be able to compare and contrast the different motivations and constraints underlying political behavior.
3. The successful graduate will be able to explain the differences between developed and developing countries, compare and contrast the various challenges they face

CONTACT PERSON

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ASSOCIATE IN ARTS

CIP Code 24.0101

Liberal Arts and Science: Languages and International Studies Option INT.AA

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
HIS-101	World Civilization I	3	
MTH-107	Mathematics for Liberal Arts	3	Must test into College level Math or take all appropriate prerequisites
ELECTIVE	Language General Education Elective	3	Must take six credits of one language.
SOC-101	Introduction to Sociology	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
HIS-102	World Civilization II	3	
MTH-111	Introduction to Statistics		Must test into College level Math or take all appropriate prerequisites
or BIO-103	Human Biology	3	
ELECTIVE	Language General Education Elective	3	Must take six credits of one language.
ART-111	Art History I		
or ART-112	Art History II		
or MUS-101	Music Appreciation	3	
SECOND YEAR/FIRST SEMESTER			
BIO-106	Living in the Environment		
or BIO-130	Plants & Society		
or BIO-140	The Microbial World		
or CHM-140	Chemistry in Society		
or PHY-103	Physics I (for the Non-Science Major)	4	
GEO-101	Cultural Geography	3	
SPE-102	Public Speaking	3	
ELECTIVE	Language General Education Elective.	3	Intermediate Level I
CIS-106	Introductory Computing using Google Apps	2	
SECOND YEAR/SECOND SEMESTER			
COM-145	Intercultural Communications	3	
ELECTIVE	Language General Education Elective	3	Intermediate Level II
ELECTIVE	Language General Education Elective	3	
ENG-271	World Literature I		
or ENG-272	World Literature II	3	**Prerequisite:** ENG-101; **Co-requisite:** ENG-102
POL-108	Introduction to International Relations	3	
	TOTAL CREDITS	**60**	

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. Degrees in this program may lead to careers in international and cross-cultural settings, language translating, communications, and teaching.

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.

CONTACT PERSON

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ASSOCIATE IN ARTS

CIP Code 24.0101

Liberal Arts and Science: Deaf Studies / Pre-Interpreting Option SLS.AA

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisite
HIS-101	World Civilization I	3	
MTH-107	Mathematics for Liberal Arts	3	Must test into College level Math or take all appropriate prerequisites
ASL-101	American Sign Language I	3	
SLS-202	American Deaf Culture	3	**Co-requisite:** ASL-101
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
HIS-102	World Civilization II	3	
MTH-111	Introduction to Statistics		Must test into College level Math or take all appropriate prerequisites
or BIO-103	Human Biology	3	
ASL-102	American Sign Language II	3	**Prerequisite:** ASL-101
ASL-103	Fingerspelling	3	**Prerequisite:** ASL-101; **Corequisite:** ASL-102
SECOND YEAR/FIRST SEMESTER			
BIO-106	Living in the Environment		
or BIO-130	Plants & Society		
or BIO-140	The Microbial World		
or CHM-140	Chemistry in Society		
or PHY-103	Physics I (for the Non-Science Major)	4	
CIS-106	Introductory Computing using Google Apps	2	
SOC-101	Introduction to Sociology	3	
ASL-201	American Sign Language III	3	**Prerequisite:** ASL-102
ASL-200	ASL Essentials	3	**Prerequisite:** ASL-102; **Corequisite:** ASL-201
SECOND YEAR/SECOND SEMESTER			
SPE-102	Public Speaking	3	
PHL-131	Introduction to Ethics		
or THE-121	Theatre Appreciation	3	
PSY-101	Basic Psychology	3	
ASL-202	American Sign Language IV	3	**Prerequisite:** ASL-201
SLS-201	ASL Linguistics	3	**Prerequisite:** ASL-102
	TOTAL CREDITS	**60**	

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 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 member of the deaf community in the deaf culture.
3. Participate in deaf-related events and activities and with members of the deaf community.

CONTACT PERSONS

Professor Sally Ann H. Emilius
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ASL classes & ASL assessment

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Registration & Advisement
(856) 227-7200 ext. 4506

HUMANITIES & LANGUAGES

CERTIFICATE OF ACHIEVEMENT

CIP Code 16.1603

American Sign Language

SLS.CA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ASL-101	American Sign Language I	3	
SLS-202	American Deaf Culture	3	**Corequisite:** ASL-101
FIRST YEAR/SECOND SEMESTER			
ASL-102	American Sign Language II	3	**Prerequisite:** ASL-101
ASL-103	Fingerspelling	3	**Prerequisite:** ASL-101; **Corequisite:** ASL-102
SECOND YEAR/FIRST SEMESTER			
ASL-201	American Sign Language III	3	**Prerequisite:** ASL-102
ASL-200	ASL Essentials	3	**Prerequisite:** ASL-102; **Corequisite:** ASL-201
SECOND YEAR/SECOND SEMESTER			
ASL-202	American Sign Language IV	3	**Prerequisite:** ASL-201
SLS-201	ASL Linguistics	3	**Prerequisite:** ASL-102
	TOTAL 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.

SPECIAL PROGRAM REQUIREMENT

Student must obtain proof of an AA/AS degree, BA/BS degree or higher.

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.

CONTACT PERSONS

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ASL classes & ASL assessment

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Registration and Advisement
(856) 227-7200 ext. 4506

THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

HUMANITIES & LANGUAGES

CERTIFICATE OF ACHIEVEMENT

CIP Code 16.1603

ASL and English Interpreting

SLA.CA

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
IEP-201	ASL for Interpreters	3	**Prerequisite:** IEP Proficiency Test
IEP-209	Interpreting in Specialized Settings	3	**Prerequisite:** IEP Proficiency Test
SLS-203	Intro to the Interpreting Profession	3	**Prerequisite:** IEP Proficiency Test
FIRST YEAR/SECOND SEMESTER			
IEP-202	Consecutive Interpreting	3	**Prerequisite:** IEP-201 ("C" or better); **Co-requisite:** IEP-204
IEP-204	Interpreting Seminar	3	**Prerequisite:** IEP-201 ("C" or better)
SECOND YEAR/FIRST SEMESTER			
IEP-203	Simultaneous Interpreting	3	**Prerequisite:** IEP-202 ("C" or better) and IEP-204 ("C" or better)
IEP-205	Voicing	3	**Prerequisite:** IEP-202 ("C" or better) and IEP-204 ("C" or better); **Co-requisite:** IEP-203
SECOND YEAR/SECOND SEMESTER			
IEP-206	Interpreting Overview	3	**Prerequisite:** IEP-203 ("C" or better) and IEP-205 ("C" or better); **Co-requisite:** IEP-207
IEP-207	Interpreting Practicum	3	**Prerequisite:** IEP-203 ("C" or better) and IEP-205 ("C" or better); **Co-requisite:** IEP-206
	TOTAL CREDITS	**27**	

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.

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 pass the Proficiency Interview in the ASL/English Interpreting department to gain entrance into the program.

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).

CONTACT PERSONS

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THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

NUTRITION & HOSPITALITY

ASSOCIATE IN APPLIED SCIENCE

CIP Code 51.3103

Dietetic Technology

DTT.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
FNS-100	Dietetic Foundations	3	
FNS-106	Foundations of Nutritional Science	3	
FNS-110	Food Service Management	3	
MTH....	Mathematics General Education Elective	3	Must test into College level Math or take all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
CHM-101	General, organic & Biological Chemistry I	4	
FNS-130	Life Cycle Nutrition	3	**Prerequisite:** FNS-100 and FNS-106
HPE-102	Health and Wellness	3	
PSY-101	Basic Psychology	3	
SECOND YEAR/FIRST SEMESTER			
CHM-160	Fundamentals of Food Science	4	**Prerequisite:** FNS-130 and CHM-101 OR FNS-106 and CHM-111
FNS-200	Community Nutrition Rotation	3	**Prerequisite:** FNS-130
FNS-210	Food Service Operations	3	
FNS-211	Therapeutic Nutrition I	3	**Prerequisite:** FNS-130
ELECTIVE	Diversity: Humanities General Education Elective	3	
SECOND YEAR/SECOND SEMESTER			
FNS-212	Therapeutic Nutrition II	3	**Prerequisites:** FNS-211 and one 4 credit Lab Science
FNS-221	Quantity Food Production	4	**Prerequisites:** FNS-210 or HTS-115
FNS-240	Food Service Rotation	3	**Prerequisites:** FNS-210
ELECTIVE	Laboratory Science General Education Elective	4	
SUMMER SEMESTER			
FNS-250	Clinical Nutrition Rotation	3	**Prerequisites:** FNS-200, FNS-212 and FNS-240
	TOTAL CREDITS	**64**	

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.

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.
- The education program meets the Accreditation Council for Education in Nutrition and Dietetics (ACEND)-accredited and supervised practice sites meet ACEND'S requirements.
- Students are required to purchase lab-coats, 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 (CDR) Exam
- The exam requirements are set by CDR.
- The program outcomes data are available on request.

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 eh 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 and food safety, mathematics, fundamentals of nutrition and nutrition across the life span at the dietetic technician level of practice.

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

CONTACT PERSON

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NUTRITION & HOSPITALITY

ACADEMIC CERTIFICATE

CIP Code 51.3199

Nutrition Care Manager

NCM.CT

FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
FNS-100	Dietetic Foundations	3	
FNS-106	Foundations in Nutritional Science	3	
FNS-110	Food Service Management	3	
SECOND SEMESTER			
FNS-130	Life Cycle Nutrition	3	**Prerequisite:** FNS-100, FNS-106
FNS-210	Food Service Operations	3	
PSY-101	Basic Psychology	3	
MTH....	Mathematics General Education Elective	3 OR 4	Must test into College level Math or take all appropriate prerequisites
THIRD SEMESTER			
FNS-221	Quantity Food Production	4	**Prerequisites:** FNS-210 or HTS-115; Approval from Program Coordinator required.
FNS-211	Therapeutic Nutrition I	3	**Prerequisites:** FNS-130; Approval from Program Coordinator required.
FNS-245	Nutrition Manager Rotations	3	**Prerequisites:** FNS-130 AND FNS-210
	TOTAL CREDITS	**34/35**	

PROGRAM DESCRIPTION

This certificate in dietary management will prepare students for career advancement in the food service industry, specifically in long-term care.

CONTACT PERSON

Professor Marsha Patrick, MS, RD, Coordinator
(856) 227-7200 ext. 4665
Email: mpatrick@camdencc.edu

NUTRITION & HOSPITALITY

ASSOCIATE IN APPLIED SCIENCE

CIP Code 52.0901

Hospitality Technology

HTS.AAS

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
CIS-105	Computer Literacy	3	
FNS-105	Introduction to Nutrition	3	
HTS-101	Introduction to Hospitality	3	
MTH....	Mathematics General Education Elective	3	Must test into College level Math or take all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
ACC-104	Financial Accounting	3	
HPE-102	Health and Wellness		
or HPE-106	Stress Management	3	
MGT-102	Introduction to Management	3	
ELECTIVE	Program Elective	3	
SECOND YEAR/FIRST SEMESTER			
BIO-140	The Microbial World	4	
MKT-101	Principles of Marketing	3	
PSY-101	Basic Psychology	3	
SPE-102	Public Speaking	3	
HPE....	Health and Exercise Science Elective	1	
SECOND YEAR/SECOND SEMESTER			
HTS-115	Food Safety Training	1	
BUS-201	Business Co-op		
or FNS-230	Culinary Technology Rotation		
or ELECTIVE	Program Elective	3	
GEO-101	Cultural Geography	3	
LAW-104	Hospitality Law	3	
ELECTIVE	Humanities General Education Elective	3	
ELECTIVE	Social Science General Education Elective	3	
	TOTAL CREDITS	**60**	

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 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

CONTACT PERSON

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

NUTRITION & HOSPITALITY

CERTIFICATE OF ACHIEVEMENT

CIP Code 12.0503

Culinary Certificate

CUL.CA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
FNS-105	Introduction to Nutrition	3	
FNS-110	Food Service Management	3	
HTS-101	Introduction to Hospitality	3	
FIRST YEAR/SECOND SEMESTER			
FNS-210	Food Service Operations	3	
FNS-230	Culinary Technology Rotation	3	**Prerequisite:** FNS-110 and HTS-115; Co-requisite: HTS-205
HTS-205	Meeting & Special Event Planning	3	**Prerequisite:** HTS-101
ELECTIVE	Approved Culinary Credits	12	Students must receive prior approval from the Food and Nutrition Science advisor to transfer culinary credits. Students will receive 12 culinary credits after completing the 18 credits in this certificate.
	TOTAL CREDITS	**30**	

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 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.

CONTACT PERSON

Professor Marsha Patrick, MS, RD, FAND, Coordinator
(856) 227-7200 ext. 4665
Email: mpatrick@camdencc.edu

THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

Career & Technical Institute of Camden County College

Culinary Arts/Restaurant Operations CTI

CULINARY ARTS / RESTAURANT OPERATIONS

This program, is a hands-on instructional program designed to offer an introduction in to the world of food service. The program includes, but is not limited to food preparation, service, and strategies for maintaining a successful career in culinary arts. Participants will enjoy a variety of culinary learning experiences that will enhance their future in the culinary arts field. With a passing test score, will receive the industry recognized Serv-Safe Certification as a result of their training. Program levels are listed below.

Program topics include:

Safety and Sanitation, Basic Knife Skills, Measurements, MISE EN PLACE, Soups, Sauces, Understanding Vegetables, Cooking Vegetables, Potatoes, Legumes, Grains, Pasta and other starches, Meats, Poultry and Fish, Roasting, Baking, Deep Frying, Sautéing, Salads and Salad Dressings, Understanding Basic Cuts of Meat, Cooking and Handling Meats, Understanding and Cooking Fish and Shellfish, Food Presentation, Production, Service, Baking Basics, Menu Recipes and Cost Management.

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. With a passing test score, students will receive the industry Serv-Safe certification as a result of their training.

CE.TRD-051 *Hours: 272* *CEUs: 27.2*

CAREER & TECHNICAL INSTITUTE OF CAMDEN COUNTY COLLEGE
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tradetraining@camdencc.edu
www.camdencc.edu/ce

PUBLIC SAFETY EDUCATION & TRAINING

ASSOCIATE IN SCIENCE

CIP Code 43.0107

Criminal Justice

CRJ.AS

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG 101	English Composition I	3	Must place into ENG-101 or complete appropriate prerequisites
PSY-101	Introduction to Psychology	3	
CIS-106	Introductory Computing Using Google Apps (G Suite)	2	
CRJ-101	Administration of Justice	3	
CRJ-105	Criminal Law	3	
FIRST YEAR/SECOND SEMESTER			
ENG 102	English Composition II	3	**Prerequisite:** ENG-101
MTH-107	Mathematics for Liberal Arts		
or MTH-111	Introduction to Statistics	3	
POL-103	American Federal Government	3	
CRJ-104	Juvenile Delinquency	3	
CRJ-106	Contemporary Corrections	3	
SECOND YEAR/FIRST SEMESTER			
SOC-101	Introduction to Sociology	3	
SPE-102	Public Speaking	3	
PHL-131	Introduction to Ethics	3	
CRJ-103	Legal Systems	3	
CRJ-203	Principles of Investigation	3	
SECOND YEAR/SECOND SEMESTER			
SOC-205	Social Diversity	3	
ELECTIVE	Laboratory Science General Education Elective	4	
CRJ-108	Community Policing	3	
CRJ-107	Introduction to Probation & Parole	3	
CRJ-120	Introduction Homeland Security		
or CRJ-230	Victimology		
or CRJ-207	Terrorism	3	
	TOTAL CREDITS	**60**	

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 STUDENT LEARNING OUTCOMES

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

1. Discuss the concepts involving the Bill or 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 and their functions involved in the administration of justice, as measured by student performance on test questions.
3. Explain 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 specific criminal justice practitioner problems with current events such as profiling, use of force and civil rights, as measured by student performance on test questions.

CONTACT PERSON

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Email: apisano@camdencc.edu

PUBLIC SAFETY EDUCATION & TRAINING

ASSOCIATE IN SCIENCE

CIP Code 43.0202

Fire Science Administration FRA.AS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG 101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites.
FIR-101	Fundamentals of Fire Behavior/Protection	3	Certification as a Firefighter I by NJ Div. of Fire Safety is accepted an equivalent. National Board on Fire Service Professional Qualifications Firefighter I certification may be accepted as equivalent based upon an evaluation of course hours.
FIR-102	Fundamentals of Fire Prevention/Fire Inspection I	3	Certification as a Fire Inspector by the New Jersey Div. of Fire Safety is accepted as an equivalent. National Board on Fire Service professional Qualifications Fire Inspector I certification may be accepted as equivalent based upon an evaluation of hours.
ELECTIVE	Technology General Education Elective	2	
CHM-120	Chemistry for Fire Protection	4	
FIRST YEAR/SECOND SEMESTER			
ENG 102	English Composition II	3	**Prerequisite:** ENG 101
MTH...	Mathematics General Education Elective	3	Must test into College level Math or take all appropriate prerequisites
FIR-125	Firefighter Safety and Survival	3	
FIR-202	Fire Investigation	3	**Prerequisite:** FIR-201; The National Fire Academy (NFA), New Jersey Division of Criminal Justice (NJDCJ), or International Association of Arson Investigators (IAAI) Fire Investigation classes may be accepted based upon evaluation of hours.
FIR-222	Fire Inspector II	3	**Prerequisite:** FIR-102; Certification as a Fire Inspector by the NJ Div. of Fire Safety is accepted as an equivalent. National Board on Fire Service Professional Qualifications Fire Inspector II Certification may be accepted as equivalent based upon and evaluation of hours.
SECOND YEAR/FIRST SEMESTER			
FIR-201	Fire Protection Systems	3	**Prerequisite:** FIR-101
FIR-211	Building Construction for Fire Service	3	**Prerequisite:** FIR-101
FIR-225	Hydraulics	3	**Prerequisite:** FIR-101
SOC-101	Introduction to Sociology	3	
MTH-111	Introduction to Statistics	3	
SECOND YEAR/SECOND SEMESTER			
FIR-252	Arson Law and Court Procedures		**FIR-252 Prerequisite:** FIR-202
or FIR-212	Fire Official	3	**FIR-212 Prerequisite:** FIR-222; Certification as a Fire Official by NJ Div. of Fire Safety is accepted as an equivalent.
FIR-231	Organization and Management of Fire Depts.		**FIR-231 Prerequisite:** FIR-101 or FIR-102
or FIR-235	New Jersey Fire Officer I	3	**FIR-235 Prerequisite:** FIR-101; The National Board on Fire Service Professional Qualifications (NBFSPQ or Pro-Board) Fire Officer I certification may be accepted as equivalent based upon an evaluation of hours.
POL-103	American Federal Government	3	
PHL-131	Introduction to Ethics	3	
ELECTIVE	Humanities General Education Elective		
or ELECTIVE	Social Science General Education Elective	3	
	TOTAL CREDITS	**60**	

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 Dept. 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. 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 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 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.

CONTACT PERSON

Chief Peter J. Finley, Jr. (Ret.), Coordinator
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PUBLIC SAFETY EDUCATION & TRAINING

ASSOCIATE IN APPLIED SCIENCE

CIP Code 43.0201

Fire Science Technology

FIR.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
FIR-101	Fundamentals of Fire Behavior/Protection	3	Certification as a Firefighter I by the NJ Div. of Fire Safety is accepted as an equivalent. National Board on Fire Service Professional Qualifications Firefighter I certification may be accepted as an equivalent based on evaluation of hours.
FIR-102	Fundamentals of Fire Prevention/Fire Inspector I	3	Certification as a Fire Inspector by the NJ Div. of Fire Safety is accepted as an equivalent. National Board on Fire Service Professional Qualifications Fire Inspector I certification may be accepted as equivalent based upon an evaluation of hours.
CHM-120	Chemistry for Fire Protection	4	
PSY-101	Basic Psychology		
or SOC-101	Introduction to Sociology	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-102
EMT-101	Emergency Medical Technician	6	Certification as a Nationally Registered Emergency Medical Technician may be accepted as equivalent based upon course content and hours.
FIR-222	Fire Inspector II	3	**Prerequisite:** FIR-102 Certification as a Fire Inspector by the NJ Div. of Fire Safety is accepted as an equivalent. National Board on Fire Service Profession Qualifications Fire Inspector II certification may be accepted as equivalent based upon and evaluation of hours.
FIR-125	Firefighter Safety and Survival	3	
SECOND YEAR/FIRST SEMESTER			
FIR-202	Fire Investigation	3	**Prerequisite:** FIR-201 National Fire Academy (NFA), NJ Div. of Criminal Justice (NJDCJ), or International Association of Arson Investigators (IAAI) Fire Investigation classed may be accepted based upon evaluation of hours.
FIR-211	Building Construction for Fire Service	3	**Prerequisite:** FIR-101
FIR-225	Hydraulics	3	**Prerequisite:** FIR-101
FIR-251	Fire Service Instructional Techniques & Methods	3	Certification as a Fire Instructor Level I by the NJ Div. of Fire Safety is accepted as an equivalent. National Board on Fire Service Qualifications or Pro-board Fire Instructor I certification may be accepted as equivalent based upon evaluation of hours.
FIR-121	Firefighting Tactics and Strategy	3	**Prerequisite:** FIR-101
SECOND YEAR/SECOND SEMESTER			
FIR-201	Fire Protections Systems	3	**Prerequisite:** FIR-101
PHL-131	Introduction to Ethics	3	
FIR-231	Organization and Management of Fire Departments		**FIR 231 Prerequisite:** FIR 101 or FIR-102
or FIR-235	New Jersey Fire Officer I	3	**FIR-235 Prerequisite:** FIR 101 National Board on Fire Service Professional Qualifications Fire Officer I certification may be accepted as equivalent based upon an evaluation of course hours.
ELECTIVE	Diversity General Education Elective	3	
ELECTIVE	Technology General Education Elective	2	
	TOTAL CREDITS	**60**	

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 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.

CONTACT PERSON

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PUBLIC SAFETY EDUCATION & TRAINING

CERTIFICATE OF ACHIEVEMENT

CIP Code: 43.0102

Corrections

COR.CA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
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 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 STUDENT LEARNING OUTCOMES

At the end of the program, the graduate 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@camdencc.edu

Police Academy
(856) 374-4950

THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

PUBLIC SAFETY EDUCATION & TRAINING

CERTIFICATE OF ACHIEVEMENT

CIP Code 43.0107

Fundamentals of Policing

FOP.CA

FIRST YEAR/FIRST SEMESTER

Course #	Course Name	Credits	Notes
CRJ-101	Administration of Justice	3	
CRJ-105	Criminal Law	3	
HPE-109	Physical Conditioning/Police Recruits	3	
HPE-171	Emergency Response	6	
	TOTAL CREDITS	**15**	

PROGRAM DESCRIPTION

The Camden County Correctional 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 STUDENT LEARNING OUTCOMES

At the end of the program, the graduate 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 to read, write and speak the English language; and must have medical insurance. All cost is the responsibility of the candidate.

CONTACT PERSON

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(856) 227-7200 ext. 4874
Email: ocuevas@camdencc.edu

Police Academy
(856) 374-4950

THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID

SCIENCES & MATHEMATICS

ASSOCIATE IN SCIENCE

CIP Code 24.0101

Liberal Arts and Science: Biology Option BIO.AS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
BIO-111	Biology I – Science	4	
CHM-111	Chemistry I – Science	4	**Prerequisite:** CHM-010 and MTH-124 or MTH-125
MTH-140	Calculus I	4	Must test into MTH-140 or take all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
BIO-112	Biology II – Science	4	
CHM-112	Chemistry II - Science	4	**Prerequisite:** CHM-111
MTH-150	Calculus II		**Prerequisites MTH-150:** MTH-140;
or MTH-134	Biostatistics	4	**Prerequisites MTH-134:** MTH-140, BIO-111 and ENG-101
SECOND YEAR/FIRST SEMESTER			
PHY-101	Physics I		**Prerequisites PHY-101:** MTH-100; **Co-requisites PHY-101:** MTH-124 or MTH-125;
or PHY-201	Physics III	4	**Prerequisites for PHY-201:** MTH-140
BIO-2....	200 Level Biology Laboratory Science Course	4	Students who have taken PHY-101 or PHY-102 cannot use PHY-201 or PHY-202 to fulfill the 200 level laboratory Science General Education Electives.
2....	200 Level Laboratory Science General Education Elective	4	
ELECTIVE	Humanities General Education Elective	3	Students should choose electives based on requirements of the transfer institution.
SECOND YEAR/SECOND SEMESTER			
PHY-102	Physics II		Students who have taken PHY-101 or PHY-102 cannot use PHY-201 or PHY-202 to fulfill the 200 level laboratory
or PHY-202	Physics IV	4	Science General Education Electives.
BIO-255	Research Experience in Biology	4	**Prerequisite:** Minimum of 30 completed credits; 12 credits in BIO, 8 credits in MTH or SCI and a minimum GPA of 2.5
HIS-101	World Civilization I	3	
ELECTIVE	Social Science General Education Elective	3	
HPE....	Health & Exercise Science Elective	1	
	TOTAL CREDITS	**60**	

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 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 and analyze data.
5. Identify and differentiate cells and tissues using a microscope.
6. Utilize primary and secondary sources in the scientific literature to obtain biological information.

CONTACT PERSON

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SCIENCES & MATHEMATICS

ASSOCIATE IN SCIENCE

CIP Code 24.0101

Liberal Arts and Science: Chemistry Option CHM.AS

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG 101	English Composition I	3	Must test into ENG-101 or take all appropriate prerequisites
CHM-111	Chemistry I Science	4	**Prerequisite:** CHM-010, and MTH-124 or MTH-125
MTH-140	Calculus I	4	Must test into MTH-140 or take all appropriate prerequisites
ELECTIVE	Social Science General Education Elective	3	
FIRST YEAR/SECOND SEMESTER			
ENG 102	English Composition II	3	**Prerequisite:** ENG-101
CHM-112	Chemistry II Science	4	**Prerequisite:** CHM-111
MTH-150	Calculus II	4	**Prerequisites:** MTH-140
ELECTIVE	Mathematics General Education Elective		Must test into College level Math or take all appropriate prerequisites
or ELECTIVE	Laboratory Science General Education Elective	4	
SECOND YEAR/FIRST SEMESTER			
CHM-221	Organic Chemistry I	4	**Prerequisite:** CHM-112
PHY-201	Physics III	4	**Prerequisites:** MTH-140
MTH-210	Calculus III	4	
ELECTIVE	Humanities General Education Elective	3	
HPE...	Health & Exercise Science Elective	1	
SECOND YEAR/SECOND SEMESTER			
CHM-222	Organic Chemistry II	4	**Prerequisite:** CHM-221
PHY-202	Physics IV	4	**Prerequisite:** PHY-201
ELECTIVE	Mathematics General Education Elective		
or ELECTIVE	Laboratory Science General Education Elective	4	
ELECTIVE	Diversity Social Science General Education Elective		
or ELECTIVE	Diversity Humanities General Education Elective	3	
	TOTAL CREDITS	**60**	

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.

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.

CONTACT PERSON

William T. Lavell
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email: wlavell@camdencc.edu

ASSOCIATE IN SCIENCE

CIP Code 24.0101

Liberal Arts and Science: Environmental Science Option — ENV.AS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG 101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
BIO-111	Biology I – Science	4	
CHM-111	Chemistry I - Science	4	**Prerequisite:** CHM-010 and MTH-124 or MTH-125
MTH-140	Calculus I	4	Must test into MTH-140 or take all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG 102	English Composition II	3	**Prerequisite:** ENG-101
BIO-112	Biology II - Science	4	
CHM-112	Chemistry II – Science	4	**Prerequisite:** CHM-111
MTH-150	Calculus II or		**Prerequisites MTH-150:** MTH-140;
or MTH-134	Biostatistics	4	**Prerequisites MTH-134:** MTH-140, BIO-111 and ENG-101
SECOND YEAR/FIRST SEMESTER			
ANT-101	General Anthropology	3	
BIO-206	Environmental Science: Theory & Applications	4	**Prerequisite:** BIO-111
BIO-225	Introduction to Plant Biology	4	**Prerequisite:** BIO-111
PHY-101	Physics I		**PHY 101 Prerequisites:** MTH-100; **PHY 101 Co-requisites:** MTH-124 or MTH-125;
or PHY-201	Physics III	4	**PHY 201 Prerequisites**: MTH-140
SECOND YEAR/SECOND SEMESTER			
BIO-221	Microbiology I	4	**Prerequisite:** BIO-111
BIO-255	Research Experience in Biology	4	**Prerequisite:** Minimum of 30 completed credits; 12 credits in BIO, 8 credits in MTH or SCI and a minimum GPA of 2.5
GEO-101	Cultural Geography	3	
ELECTIVE	Humanities General Education Elective	3	
HPE....	Health and Exercise Science Elective	1	
	TOTAL CREDITS	**60**	

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 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 scientific principles of sustainability.
5. Summarize the root causes of major environmental problems.
6. Describe the major components of biodiversity and the importance of maintaining biodiversity.

CONTACT PERSON

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SCIENCES & MATHEMATICS

ASSOCIATE IN SCIENCE

CIP Code 24.0101

Liberal Arts and Science: Physics Option PHY.AS

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG-101	English Composition I	3	Must test into ENG-101 or take all appropriate prerequisites
HIS-101	World Civilization I	3	
CIS-105	Computer Literacy	3	
MTH-140	Calculus I	4	Must test into MTH-140 or take all appropriate prerequisites
ELECTIVE	Social Sciences General Education Elective	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
CIS-206	Advanced Computer Concepts/Applications	3	**Prerequisite:** CIS-101 OR CIS-105
MTH-150	Calculus II	4	**Prerequisite:** MTH-140
CHM-111	Chemistry I – Science		**CHM-111 Prerequisite:** CHM-010 and MTH-124 or MTH-125
or BIO-111	Biology I - Science	4	
SECOND YEAR/FIRST SEMESTER			
PHY-201	Physics III	4	**Prerequisites**: MTH-140
MTH-210	Calculus III	4	**Prerequisites**: MTH-150
LFO-101	Introduction to Photonics & Photonics Safety		**LFO-101 Co-requisite:** MTH-125;
or EET-101	Electrical & Electronic Principles	4	**EET-101 Prerequisite:** MTH-120, MTH-123 OR MTH-125
ELECTIVE	Social Science General Education Elective	3	
SECOND YEAR/SECOND SEMESTER			
PHY-202	Physics IV	4	**Prerequisite** PHY-201
MTH-220	Differential Equations	4	**Prerequisite:** MTH-150; **Co-requisite:** MTH-210
CHM-112	Chemistry II – Science or		**CHM-112 Prerequisite:** CHM-111
or BIO-112	Biology II – Science	4	
ELECTIVE	Humanities General Education Elective	3	
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

This program is designed for students with interest in engineering, physics, or photonics. The credits in this program are transferable to four-year colleges for majors in engineering, physics, and any other specialty where university physics is required.

PROGRAM STUDENT LEARNING OUTCOMES

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

1. Explain the fundamental concepts and applications of physics.
2. Design and conduct experiments demonstrating physics principles.
3. Apply mathematics to solve physics application problems.

CONTACT PERSON

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SCIENCES & MATHEMATICS

ASSOCIATE IN SCIENCE

CIP Code 24.0101

Liberal Arts and Science: Pre-Pharmacy Option

PPH.AS

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG 101	English Composition I	3	Must test into ENG-101 or take all appropriate prerequisites
CHM-111	Chemistry I Science	4	**Prerequisite:** CHM-010, MTH-124 or MTH-125
MTH-140	Calculus I	4	Must test into MTH-140 or take all appropriate prerequisites
ELECTIVE	Social Science General Education Elective	3	
FIRST YEAR/SECOND SEMESTER			
ENG 102	English Composition II	3	**Prerequisite:** ENG-101
CHM-112	Chemistry II Science	4	**Prerequisite:** CHM-111
BIO-111	Biology I Science	4	
ELECTIVE	Humanities General Education Elective	3	
SECOND YEAR/FIRST SEMESTER			
CHM-221	Organic Chemistry I	4	**Prerequisite:** CHM 112
PHY-101	Physics I		**PHY-101 Prerequisites:** MTH-100; **PHY-101 Corequisites:** MTH-124 or MTH-125
or PHY-201	Physics III		**PHY-201 Prerequisites:** MTH-140
BIO-112	Biology II Science	4	
BIO-211	Anatomy and Physiology I	4	**Prerequisite:** BIO-111
SECOND YEAR/SECOND SEMESTER			
CHM-222	Organic Chemistry II	4	**Prerequisite:** CHM-221
PHY-102	Physics II		**PHY 102 Prerequisite:** PHY-101;
or PHY-202	Physics IV	4	**PHY 202 Prerequisite:** PHY-201
BIO-212	Anatomy and Physiology II	4	**Prerequisite:** BIO-211
ELECTIVE	Diversity Social Science General Education Elective		
or ELECTIVE	Diversity Humanities General Education Elective	3	
HPE...	Health and Exercise Science Elective	1	
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

This course of study is designed to provide a strong foundation in science for students who intend to pursue a degree in pharmacy.

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 pharmacological agents affect human physiology.
4. Communicate scientific information in both written and oral formats.

CONTACT PERSON

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ASSOCIATE IN SCIENCE

CIP Code 24.0101

Liberal Arts and Science: Mathematics Option

MTH.AS

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG 101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
BIO-111	Biology I: Science		
or CHM-111	Chemistry I: Science	4	**CHM-111 Prerequisite:** CHM-010, MTH-124 or MTH-125
HIS-101	World Civilizations I	3	
MTH-140	Calculus I	4	Must test into MTH-140 or complete all appropriate prerequisites
HPE-	Health and Exercise Science Elective	1	
FIRST YEAR/SECOND SEMESTER			
ENG 102	English Composition II	3	**Prerequisite:** ENG-101
BIO-112	Biology II: Science		
or CHM-112	Chemistry II: Science	4	**CHM-112 Prerequisite:** CHM-111
MTH-129	Discrete Mathematics	4	**Prerequisite:** MTH-140
MTH-150	Calculus II	4	**Prerequisite:** MTH-140
SECOND YEAR/FIRST SEMESTER			
MTH-145	Linear Algebra	4	**Prerequisite:** MTH-140
MTH-210	Calculus III	4	**Prerequisite:** MTH-150
PHY-201	Physics III	4	**Prerequisite:** MTH-140
ELECTIVE	Social Science General Education Elective	3	
SECOND YEAR/SECOND SEMESTER			
CSC-121	Structured Programming ((++)	4	
MTH-220	Differential Equations	4	**Prerequisite:** MTH-150 **Corequisite:** MTH-210
PHY-202	Physics IV	4	**Prerequisite:** PHY 201
ELECTIVE	Humanities General Education Elective	3	
	TOTAL CREDITS	**60**	

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 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 calculator 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.

CONTACT PERSON

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Associate in Arts
Data Science

CIP Code 30.7001

DSC.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG 101	English Composition I	3	Must test into ENG-101 or take all appropriate prerequisites
DSC-101	Data Science I	3	
CSC-106	Data Security, Privacy and Ethics	3	
MTH-171	Statistics	3	
MTH-140	Calculus I	4	
FIRST YEAR/SECOND SEMESTER			
ENG 102	English Composition II	3	**Prerequisite:** ENG-101
CSC-171	Introductory Python Programming	3	
DSC-102	Data Science II	3	**Prerequisite:** DSC-101
MTH-150	Calculus II	4	**Prerequisite:** MTH-140
MTH-172	Statistics II	3	**Prerequisite:** MTH-171
SECOND YEAR/FIRST SEMESTER			
MTH-261	Introduction to Mathematical Modeling	3	**Prerequisite:** MTH-150
CSC-272	Data Science Programming Applications	3	**Prerequisite:** CSC-171 OR CSC-121
ECO-101	Macroeconomics	3	
DSC-203	Data Science III	3	**Prerequisite:** DSC-102, MTH-172
ELECTIVE	Diversity-Humanities General Education Elective	3	
SECOND YEAR/SECOND SEMESTER			
DSC-230	Statistical and Machine Learning	3	**Prerequisite:** CSC-272, DSC-203
DSC-250	Data Visualization and Presentation	3	**Prerequisite:** DSC-203
DSC-280	Data in Context-A Capstone Experience	3	**Prerequisite:** DSC-203; **Co-requisites:** DSC-230, DSC-250
MTH-262	Probabilistic Models	4	**Prerequisite:** MTH-261
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

This program prepares students for a career in Data Science or Data Analytics. Activities/topics studied include data acquisition in both structured and unstructured formats; cleaning, modeling, visualization, and analysis of data, ethical responsibility; data security; and effective communication of informed tactical and strategic objectives. Students learn to identify patterns and relationships in large data sets and to resolve questions/problems via data driven decisions.

PROGRAM STUDENT LEARNING OUTCOMES

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

1. Exhibit professionalism and adopt ethical decision-making principles for the analysis, management and presentation of data with an understanding of one's responsibilities within a professional setting.
2. Develop solid analytical reasoning, critical thinking and technical skills in order to extract, wrangle, analyze and present data for multiple disciplines to broad audiences that follow professional standards to enhance understanding and decision-making.
3. Demonstrate the ability to work independently and as a member of a team with modern technical tools to accomplish data life cycle project goals and meet deadlines.
4. Communicate technical knowledge effectively for a broad range of persons that include customers, managers, and peers.

CONTACT PERSONS

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SCIENCES & MATHEMATICS

ASSOCIATE IN APPLIED SCIENCE

CIP Code 41.0101

Biotechnology

BIT.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG-101 or take all appropriate prerequisites
BIO-111	Biology I Science	4	
BIT-102	Introduction to Biotechnology	1	
MTH-125	Accelerated Pre-calculus	4	Must test into MTH-125 or complete all prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
BIO-221	Microbiology	4	**Prerequisite:** BIO-111
CHM-111	Chemistry I – Science	4	**Prerequisite:** CHM-010 and MTH-124 or MTH-135
MTH-171	Statistics I	3	**Prerequisites:** MTH-114 or MTH-123, or MTH-125 or MTH-120
SUMMER SEMESTER			
CHM-112	Chemistry II – Science	4	**Prerequisites:** CHM-111
SECOND YEAR/FIRST SEMESTER			
BIO-240	Genetics	4	**Prerequisites:** BIO-111 and CHM-111
BIT-201	Applications in Biotechnology	4	**Prerequisites:** BIO-221, BIT-102 and CHM-112; **Co-requisites:** BIO-240
CHM-221	Organic Chemistry I	4	**Prerequisite:** CHM-112
HIS-101	World Civilization I		
or ENG-271	World Literature I	3	
SECOND YEAR/SECOND SEMESTER			
BIT-202	Instrumental Analysis	4	**Prerequisites:** BIT-102, CHM-112 and CHM-221
BIT-200	Fundamentals of Biochemistry	4	**Prerequisites:** BIO-111 and CHM-221; **Co-requisite** BIO-240
PHL-232	Biomedical Ethics	3	
HPE...	Health and Exercise Science Elective	1	
SUMMER SEMESTER			
BIT-205	Biotechnology Internship	3	**Prerequisites:** BIT-102, BIT-201 and BIT-202
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

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.

PROGRAM GOALS

- To prepare students for entry-level employment in a biotechnology area.
- 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.

CONTACT PERSON

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SCIENCES & MATHEMATICS

ASSOCIATE IN APPLIED SCIENCE

CIP Code 41.0101

Biotechnology: Forensic Science Option FSC.AAS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-101	English Composition I	3	Must test into ENG 101 or complete all appropriate prerequisites
BIO-111	Biology I Science	4	
BIT-102	Introduction to Biotechnology	1	
CHM-145	Introduction to Forensic Science	4	
MTH-125	Accelerated Pre-calculus	4	Must test into MTH-125 or take all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	**Prerequisite:** ENG-101
CHM-111	Chemistry I – Science	4	**Prerequisite:** CHM-010 and MTH-124 or MTH-125
FSC-110	Introduction to Forensic Osteology	4	**Prerequisite:** CHM-145
ELECTIVE	Diversity: Social Science General Education Elective	3	
SUMMER SEMESTER			
CHM-112	Chemistry II – Science	4	**Prerequisite:** CHM-111
SECOND YEAR/FIRST SEMESTER			
BIO-240	Genetics	4	**Prerequisites:** BIO-111 and CHM-111
BIT-201	Applications in Biotechnology	4	**Prerequisites:** BIO-221, BIT-102 and CHM-112; **Co-requisites:** BIO-240
CHM-221	Organic Chemistry I	4	**Prerequisite:** CHM-112
HPE...	Health and Exercise Science Elective	1	
SECOND YEAR/SECOND SEMESTER			
BIT-202	Instrumental Analysis	4	**Prerequisites:** BIT-102, CHM-112 and CHM-221
BIT-200	Fundamentals of Biochemistry	4	**Prerequisites:** BIO-111 and CHM-221; **Co-requisite:** BIO-240
FSC-120	Introduction to Forensic Toxicology	4	**Prerequisite:** CHM-145 and one 4 credit CHM course
HPE...	Health and Exercise Science Elective	1	
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

The forensic science option of the biotechnology program will prepare student for entry-level positions in forensics such as crime scene technician.

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.

CONTACT PERSON

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EXPLORATORY

ASSOCIATE IN ARTS

CIP Code 24.0101

Liberal Arts and Science

LAS.AA

FIRST YEAR/FIRST SEMESTER			
Course #	**Course Name**	**Credits**	**Notes**
ENG-101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
HIS-101	World Civilization I	3	
MTH....	Mathematics General Education Elective	3	Must test into College level Math or take all appropriate prerequisites
ELECTIVE	Language General Education Elective	3	Must take six credits in one language
ELECTIVE	Social Science General Education Elective	3	
FIRST YEAR/SECOND SEMESTER			
ENG-102	English Composition II	3	
HIS-102	World Civilization II	3	
ELECTIVE	Technology General Education Elective	2	
ELECTIVE	Language General Education Elective	3	Must take six credits in one language
ELECTIVE	Humanities General Education Elective	3	Not a History or Language Course
SECOND YEAR/FIRST SEMESTER			
SPE-102	Public Speaking	3	
ELECTIVE	Laboratory Science General Education Elective	4	
ELECTIVE	Social Science General Education Elective	3	
ELECTIVE	Diversity General Education Elective	3	
ELECTIVE	Liberal Arts Elective	3	
SECOND YEAR/SECOND SEMESTER			
MTH....	Mathematics General Education Elective		Must test into College level Math or take all appropriate prerequisites
or ELECTIVE	Science General Education Elective	3	
ELECTIVE	Liberal Arts Elective	3	
ELECTIVE	Liberal Arts Elective	3	
ELECTIVE	Free Elective	3	
ELECTIVE	Free Elective	3	
	TOTAL CREDITS	**60**	

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 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.

CONTACT PERSON

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EXPLORATORY

ASSOCIATE IN SCIENCE

CIP Code 24.0101

Liberal Arts and Science

LAS.AS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG 101	English Composition I	3	Must test into ENG-101 or complete all appropriate prerequisites
Choose two of the following Laboratory Sciences:			
BIO-111	Biology I – Science		
or CHM-111	Chemistry I - Science		**Prerequisite:** CHM-010 and MTH-124 or MTH-125
or PHY-101	Physics I		**PHY-101 Prerequisites:** MTH-100; **PHY-101 Corequisites:** MTH-124 or MTH-125
or PHY-201	Physics III	8	**Prerequisite:** MTH-140
MTH-125	Accelerated Precalculus		
or MTH-140	Calculus I	4	Must test into MTH-140 or take all appropriate prerequisites
FIRST YEAR/SECOND SEMESTER			
ENG 102	English Composition II	3	**Prerequisite:** ENG-101
Choose two of the following Laboratory Sciences:			
BIO-112	Biology II – Science		
or CHM-112	Chemistry II - Science		**Prerequisite:** CHM-111
or PHY-102	Physics II		**Prerequisites:** PHY-101
or PHY-202	Physics IV	8	
MTH-140	Calculus I		Must test into MTH-140 or take all appropriate prerequisites
or MTH-150	Calculus II	4	**Prerequisites:** MTH-140
SECOND YEAR/FIRST SEMESTER			
ELECTIVE	Mathematics General Education Elective		
or ELECTIVE	Lab Science General Education Elective	4	
ELECTIVE	Mathematics General Education Elective		
or ELECTIVE	Lab Science General Education Elective	4	
ELECTIVE	Diversity-Humanities General Education Elective	3	
HIS....	History General Education Elective	3	
HPE....	Health and Exercise Science Elective	1	
SECOND YEAR/SECOND SEMESTER			
ELECTIVE	Mathematics General Education Elective		
or ELECTIVE	Lab Science General Education Elective	4	
ELECTIVE	Mathematics General Education Elective		
or ELECTIVE	Lab Science General Education Elective	4	
ELECTIVE	Social Science General Education Elective	3	
ELECTIVE	Free Elective	3	
HPE....	Health and Exercise Science Elective	1	
	TOTAL CREDITS	**60**	

PROGRAM DESCRIPTION

This transfer program is for students with a high interest in 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 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.

CONTACT PERSON

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EXPLORATORY

CERTIFICATE OF VOCATIONAL STUDIES

CIP Code 30.9999

Vocational Studies

VOC.CPS

Course #	Course Name	Credits	Notes
FIRST YEAR/FIRST SEMESTER			
ENG-005	Pathways to Reading & Writing		
or ENG-012	Reading Sills II		
or ENG-022	Writing Skills	3	**Prerequisite:** Placement Test
MTH-005	Consumer Math		
or MTH-011	Pre-algebra Traditional	3	
HSR-010	Life Skills I	3	
HSR-015	Academic Development	2	**Co-requisite:** HSR-005
FIRST YEAR/SECOND SEMESTER			
HSR-020	Life Skills II	3	**Prerequisite:** HSR-010
HSR-022	Employment Basics I	3	
HSR-023	Introduction to Social Interaction	3	
HPE-141	Hatha Yoga	1	
HSR-025	Employment Development	2	**Prerequisite:** HSR-022
SECOND YEAR/FIRST SEMESTER			
HSR-030	Career Exploration	3	**Co-requisite:** HSR-035
HSR-033	Advanced Social Interaction I	3	
CIS-005	Computer Fundamentals	3	
HPE-142	Intermediate Hatha Yoga	1	
HSR-035	Career Development	2	**Co-requisite:** HSR-030
SECOND YEAR/SECOND SEMESTER			
HSR-040	Introduction to Careers	3	**Prerequisite:** HSR-030
HSR-001	Self-Advocacy	3	
HSR-045	Advocacy Development	2	**Co-requisite:** HSR-040
HSR-050	Vocational Practicum	1	
	TOTAL CREDITS	**44**	

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.

SPECIAL PROGRAM REQUIREMENTS

All students are required to complete 240 hours of vocational/ technical work and/or internship hours over the course of the years.

PROGRAM STUDENT LEARNING OUTCOMES

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

1. Manage daily activities through the application of life skills.
2. Self-determination both personal and career goals.
3. Navigate services and supports available in their communities.
4. Perform employable skills.
5. Self-advocate.

CONTACT PERSON

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Course Descriptions

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 additive 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-103 Peer Addiction Recovery-CARES (3.00 cr.)

This course will promote competence and skill development in addiction crisis intervention, recovery treatment services and in non-clinical settings such as peer run recovery centers. It focuses on the following areas of health care provider development: ethics and legal standards related to direct service interventions, multiple recovery pathways and harm reduction methods, and wellness-focused outcome goals. Students who successfully complete this course will fulfill the curricular requirements for state certification as a Certified Peer Recovery Specialist.
Lecture (45.00)

ADD-104 Peer Addiction Recovery C-CART (3.00 cr.)

This course will promote competence and skill development in addiction crisis intervention, recovery treatment services in non-clinical and clinical settings such as peer run recovery centers. It focuses on the following areas of health care provider development: ethics and legal standards related to direct service interventions, multiple recovery pathways and harm reduction methods, and wellness-focused outcome goals. Students who successfully complete this course will fulfill the curricular requirements for national certification as a Certified Peer Recovery Specialist.
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-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-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 TOEFLE 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-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-171 Health & Safety: Part I (4.00 cr.)

The primary focus of Health and Safety Part 1 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

ALZHEIMER'S

ALZ-101 Overview of MCI AD & RDS (2.00 cr.)

This course provides students with an overview of the basic concepts of brain structure and function, introduction to cognitive health, Alzheimer's disease and related dementias which arise from neurocognitive disorders. This course enables students to recognize symptoms of Alzheimer's disease/dementia and understand the statistics and resources available for Alzheimer's disease/dementia, including those for diagnosis, care planning, treatment (medical/alternative), and other environmental/home/personal safety concerns in caring for these patients/families.
Lecture (30.00)
Prerequisites: (ENG-013 and ENG-023) or ENG-046

ALZ-102 Journey Coord: Purpose & Professionalism (2.00 cr.)

This course provides students with an overview of the roles and responsibilities of the Alzheimer's Journey Coordinator. Students will learn about ethical standards and professionalism including HIPPA (Health Insurance Portability and Accountability Act) regarding patients' rights in different treatment settings. This course will teach students how to help clients with strategies and resources to support comfort and safety. Students will learn to navigate support systems for patients with Alzheimer's disease and their care givers to prevent further emotional and mental health difficulties.
Lecture (30.00)
Prerequisites: ALZ-101

ALZ-103 Indiv Approach to Engage Care & Support (3.00 cr.)

This course will provide students with more in-depth understanding of some of the neurocognitive disorders in the Diagnostic and Statistical Manual of Mental Health Disorders, Fifth Edition (DSM-5th). Students will learn to understand and recognize the symptoms of mild, moderate, and severe levels of Alzheimer's disease and related neurocognitive disorders. Students will develop skills and learn to access resources necessary to provide care at the various stages of Alzheimer's disease and related dementias.
Lecture (45.00)
Prerequisites: ALZ-102

ALZ-104 Principles of System Navigation (3.00 cr.)

This course provides a guide to navigating the local, state, national, Medicaid/ Medicare networks, and VA healthcare system. This includes an overview of care settings and transitions to care for clients with Alzheimer's disease and related dementia. Students will learn effective strategies for the provision and coordination of care with Primary Care Physician (PCP), and client care within the individual family system. This course will provide students a knowledge of disabilities resulting from Alzheimer's disease and related dementia. Students will have an understanding of how to identify and manage clients living expenses, the role of the Living Will, and quality of existing living situations.
Lecture (45.00)
Prerequisites: ALZ-103

ALZ-105 Alzheimer's Journey Coord Field Work (3.00 cr.)

Field Work experience is traditional in educational programs for Behavioral Health Care and Neurocognitive Disorders. It is the "learning by doing" under educational guidance. It usually involves giving direct service. This field work course offers the student the opportunity to observe and work directly with staff, clients with Alzheimer's Disease, and their families. Lecture time will reinforce the practicum experience. Background checks will be required for fieldwork in health care treatment facilities. A total of 90 hours fieldwork is required during the semester.
Lecture (15.00)
Field Work (90.00)
Prerequisites: ALZ-101, ALZ-102, ALZ-103 and ALZ-104

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

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-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-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-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 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-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-201 Visual Arts Seminar (3.00 cr.)

This course is designed to serve as a capstone for all visual arts majors. Students will learn about professional standards for presenting and promoting one's work. This will include portfolio development, documenting work in various formats, guidelines for presenting one's work through artist websites and social media, and standards for supporting documents such as an artist statement, CV/resume, artist biography, and application cover letter.
Lecture (45.00)
Prerequisites: ENG-102

VETERINARY SCIENCE

ASC-106 Veterinary Office Practices (2.00 cr.)

This course is an introductory level course that will guide the students to communicate effectively with the veterinary client, to obtain pertinent information concerning the patient in order to facilitate the veterinarian-client/patient relationship, safety, facility operations, and to ensure optimal patient care and according to the AVMA CVTEA accreditation guidelines.
Lecture (30.00)
Prerequisites: BIO-111, ENG-101 and MTH-100
Corequisites: ENG-102

ASC-107 Calculations for Veterinary Technicians (2.00 cr.)

This course will provide the experience in algebraic skills, dosage calculations, concentrations, fluid therapy, flow rates, measurements, solutions, rate infusions, dilutions and parental medications according to the AVMA CVTEA accreditation guidelines.
Lecture (30.00)
Prerequisites: BIO-111, ENG-101 and MTH-100
Corequisites: ENG-102 and ASC-106

ASC-108 Animal Anatomy and Physiology I (3.00 cr.)

This course is designed to familiarize the student with the basics of anatomy and physiology of animals. Various species differences are covered in this course according to the AVMA CVTEA accreditation guidelines. Selected laboratory skills illustrate the necessary principles and develop familiarity with laboratory techniques.
Lecture (30.00)
Laboratory (30.00)
Prerequisites: ENG-101, BIO-111 and MTH-100
Corequisites: ASC-106, ASC-107 and ENG-102

ASC-109 Fundamentals of Small Animal Nursing (2.00 cr.)

Introductory small animal and exotics nursing course will provide the students with a foundation of basic veterinary care and prepare them for general entry into the field of veterinary medicine. The laboratory sessions will provide students with hands-on experience according to the requirements of the AVMA CVTEA accreditation guidelines. Selected laboratory skills illustrate the necessary principles and develop familiarity with laboratory techniques.
Lecture (15.00)
Laboratory (30.00)
Prerequisites: ENG-101, BIO-111 and MTH-100
Corequisites: ASC-106, ASC-107, ASC-108 and ENG-102

ASC-110 Veterinary Clinical Rotation I (2.00 cr.)

This course is the first supervised cooperative clinical course. The course awards academic credit for work- related learning experience at local shelters and animal hospitals. Tasks are validated by a program staff member as a requirement of the AVMA CVTEA accreditation. Selected laboratory skills illustrate the necessary principles and develop familiarity with laboratory techniques.
Clinical (90.00)
Prerequisites: ASC-106, ASC-107, ASC-108, ASC-109 and ENG-102
Corequisites: BIO-221

ASC-111 Animal Biology (4.00 cr.)

This laboratory based course is designed to familiarize the veterinary technician student with the basics of anatomy and physiology of animals. Various species differences are covered in this course according to the AVMA CVTEA guidelines. Selected laboratory skills illustrate the necessary principles and develop familiarity with laboratory techniques.
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 Veterinary Dental Techniques I (2.00 cr.)

This course is an introductory level course that will focus on clinical instrumentation for the canine and feline dental prophylaxis. Students will effectively demonstrate dental techniques according to the AVMA CVTEA accreditation guidelines. Selected laboratory skills illustrate the necessary principles and develop familiarity with laboratory techniques.
Lecture (15.00)
Laboratory (30.00)
Prerequisites: ASC-110 and BIO-221
Corequisites: ASC-201

ASC-201 Animal Anatomy and Physiology II (3.00 cr.)

This laboratory based course is designed to familiarize the veterinary technician student with advanced and specific information concerning the anatomy and physiology of animals. This class contains an added emphasis on physiology and function of anatomical structures. Various species differences are covered in this course according to the AVMA CVTEA accreditation guidelines. Information on the implications these differences pose to the practice of veterinary technology is presented to the class. Selected laboratory skills illustrate the necessary principles and develop familiarity with advanced laboratory techniques.
Lecture (30.00)
Laboratory (30.00)
Prerequisites: ASC-110
Corequisites: ASC-202

ASC-202 Advanced Small Animal Nursing Techniques (3.00 cr.)

Advanced level animal nursing course will prepare students for future clinical courses and real-world proficiency. The laboratory sessions will offer students the opportunity to experience hands-on nursing encounters according to the

requirements of the AVMA CVTEA accreditation guidelines. Selected laboratory skills illustrate the necessary principles and develop familiarity with laboratory techniques.
Lecture (30.00)
Laboratory (30.00)
Prerequisites: ASC-110 and BIO-221
Corequisites: ASC-201

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 is an introduction to the husbandry, restraint, and medical care of common laboratory animals. Course work is based upon the laws that regulate the use of animals in research to ensure they are treated humanely according to the Federal Animal Welfare Act of the USDA protocols as referenced by the AVMA CVTEA accreditation guidelines. Selected laboratory skills illustrate the necessary principles and develop familiarity with laboratory techniques.
Lecture (30.00)
Laboratory (30.00)
Prerequisites: ASC-110, BIO-221, ASC-201 and ASC-202

ASC-214 Veterinary Surgical Nursing (3.00 cr.)

This course is an intermediate level course that will prepare students for the administration of anesthesia and assisting with surgery under the direct supervision of a licensed veterinarian and will provide students with the opportunity to induce anesthesia and assist with surgery according to the AVMA CVTEA accreditation guidelines. Selected laboratory skills illustrate the necessary principles and develop familiarity with laboratory techniques.
Lecture (15.00)
Laboratory (60.00)
Prerequisites: ASC-110, BIO-221, ASC-201, ASC-202, ASC-261 and ASC-270

ASC-215 Farm Animal Nursing (2.00 cr.)

This course is designed to provide students with hands-on experience and lecture on farm animals and will include visits to off-campus farms according to the AVMA CVTEA accreditation guidelines. Selected laboratory skills illustrate the necessary principles and develop familiarity with laboratory techniques.
Lecture (15.00)
Laboratory (30.00)
Prerequisites: ASC-110, ASC-201, ASC-202 and ASC-236

ASC-220 Hematology for Veterinary Technicians (3.00 cr.)

This course provides 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 according to the AVMA CVTEA accreditation guidelines. Selected laboratory skills illustrate the necessary principles and develop familiarity with laboratory techniques.
Lecture (15.00)
Laboratory (60.00)
Prerequisites: ASC-110, ASC-201, ASC-202, BIO-221 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 provides the principles and procedures for laboratory techniques involved in the analysis of urine and blood components. Emphasis is placed on techniques, manual skill development, instrumentation, and quality control as required by the AVMA CVTEA accreditation guidelines. Selected laboratory skills illustrate the necessary principles and develop familiarity with laboratory techniques.
Lecture (15.00)
Laboratory (30.00)
Prerequisites: ASC-110, ASC-201, ASC-202, BIO-221 and MTH-100

ASC-236 Radiology for Veterinary Technicians (2.00 cr.)

This course will prepare students for an understanding of radiology producing radiographic images of the veterinary patient, safety, critiquing, and development as required by the AVMA CVTEA accreditation guidelines. Selected laboratory skills illustrate the necessary principles and develop familiarity with laboratory techniques.
Lecture (15.00)
Laboratory (30.00)
Prerequisites: ASC-110
Corequisites: ASC-201 and ASC-202

ASC-240 Parasitolog (3.00 cr.)

This course is designed to prepare the veterinary technician to perform basic parasitological laboratory techniques and identify common parasites of domestic animals in this geographical area. The student will study life cycles with emphasis on control and prevention of infestations of parasites in common domestic and laboratory animals. The course will teach basic treatments for parasite infestations and public health concerns according to the AVMV CVTEA accreditation guidelines. Selected laboratory skills illustrate the necessary principles and develop familiarity with laboratory techniques.
Lecture (30.00)
Laboratory (30.00)
Prerequisites: ASC-110 and BIO-221
Corequisites: ASC-201

ASC-244 Veterinary Dental Techniques II (2.00 cr.)

This advanced level course will focus on clinical application of canine and feline dental prophylaxis. Students will effectively demonstrate dental techniques according to the AVMA CVTEA accreditation guidelines. Selected laboratory skills illustrate the necessary principles and develop familiarity with laboratory techniques.
Laboratory (60.00)
Prerequisites: ASC-200 and ASC-236

ASC-261 Pathology for Veterinary Technicians (2.00 cr.)

This lecture course describes basic pathological concepts and ends with specific diseases of organs and systems of domestic animals as required by the AVMA CVTEA accreditation requirements.
Lecture (30.00)
Prerequisites: ASC-110 and BIO-221
Corequisites: ASC-201 and ASC-202

ASC-266 Veterinary Clinical Rotation II (4.00 cr.)

This course is the accumulation of all courses in the program. The clinical rotation awards academic credit for off-campus work-related learning experience in a full-service veterinary clinic validated by the course instructor and the veterinary site supervisor as required by the AVMA CVTEA accreditation guidelines. Selected laboratory skills illustrate the necessary principles and develop familiarity with laboratory techniques.
Clinical (180.00)
Prerequisites: ASC-213, ASC-214, ASC-215, ASC-220, ASC-235, ASC-236, ASC-240, ASC-244, ASC-261 and ASC-270
Corequisites: ASC-267

ASC-267 Veterinary Professional Seminar (1.00 cr.)

This capstone course utilizes all the information students learned throughout the program. Students will synthesize their knowledge of office practices, animal science, and veterinary technology to address issues relative to veterinary practice. The course includes specific didactic tasks in the lab to show mastery of the subject matter. Students will be focusing on outcomes required by the AVMA CVTEA accreditation standards.
Laboratory (30.00)
Prerequisites: ASC-213, ASC-214, ASC-215, ASC-220, ASC-235, ASC-236, ASC-240, ASC-244, ASC-261 and ASC-270
Corequisites: ASC-266

ASC-270 Veterinary Pharmacology (2.00 cr.)

This course introduces the student to frequently prescribed medications, their uses, actions and common side effects. The students will become familiar with veterinary pharmacology and pharmacy practices according to the AVMA CVTEA accreditation requirements.
Lecture (30.00)
Prerequisites: ASC-110 and BIO-221
Corequisites: ASC-201 and ASC-202

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

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 Principles (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. The lab portion of this course provides 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 students' 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 education 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)
Corequisites: 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 (4.00 cr.)

This course is a capstone course in which the students will review and expand their knowledge of basic biological principles, research methodology and professional practice in biological science. The student teams 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 students will work with a faculty advisor to guide the project.
Lecture (30.00)
Laboratory (60.00)
Prerequisites: Matriculated into a degree program offering BIO-255 as a credit option; minimum GPA of 2.5; completed 12 credits in Biology and an additional 8 credits in Mathematics or Science; Minimum of 30 credits completed at Camden County College or in transfer; Permission of Instructor.

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-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 architec-

tural, 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

CAD-208 Autocad Civil 3D Level I (3.00 cr.)

This is an introductory Civil 3D course for students, draftspersons, designers, architects, engineers, contractors and others seeking professional advancement and job transition through acquiring AutoCAD Civil 3D skills. Students become familiar with the basic AutoCAD Civil 3D environment, commands and menu systems beginning with topographical survey information and culminating with design profiles and alignments. Students will explore how to organize project data, work with points, create and analyze surfaces, and generate properly formatted output. This course is intended for students who have completed CAD-101 or for those industry professionals who can demonstrate prior equivalent on-the-job experience with AutoCAD.
Lecture (30.00)
Laboratory (30.00)
Prerequisites: CAD-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 designers 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-111H Honors Chemistry I - Science (4.00 cr.)

This course is appropriate for students majoring in a science such as 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: MTH-124 or MTH-125 and Acceptance into the Honors Program

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-112H Honors Chemistry II - Science (4.00 cr.)

This course is a continuation of Honors Chemistry I Science (CHM-111H). 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-111H or CHM-111 with a grade of A or B Acceptance into the Honors Program

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-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-120 Electric & Ctrl Sys Apprentice (4.00 cr.)

This course is designed to be the Related Technical Instruction needed to work as an Industrial Maintenance Mechanic. Topics include: electrical power generation, distribution, calculations, and related theory for AC and DC circuits; industrial control system design, implementation, control, maintenance, and repair theories; related motor and other peripheral controls such as safety interlock, push buttons, light curtains will be explained.
Lecture (45.00)

CIM-125 Hydraulics & Pneumatics Apprenticeship (4.00 cr.)

This course is designed to be the related technical instruction needed to work as an Industrial Maintenance Mechanic. Topics include the ability to read and interpret piping schematics. Identify and select proper materials for installation and replacement. Prepare material for installation or repair of piping systems. Describe assembly and disassembly methods of piping systems. Understand adjustment of actuator speed, determine and adjust system-operating pressures. Understand the proper maintenance of filters and water separators. Troubleshoot common system malfunctions.
Lecture (45.00)

CIM-130 Mech Sys Maint & Op Apprentice (4.00 cr.)

Course is designed to be the Related Technical Instruction needed to work as an Industrial Maintenance Mechanic. Topics include power transmission components and variables, springs, bearing, gears, belts, clutches, and brake applications. Hand tool types, assembly methods, and fastener designs are taught as needed maintenance component of operations.
Lecture (45.00)

CIM-135 Welding & Soldering Theory Apprentice (3.00 cr.)

This course provides related technical instruction needed to work as an Industrial Maintenance Mechanic. Topics include welding safety rules, basic welding techniques and applications of an acetylene torch, part preparation, SMAW principles, GMAW principles, basic weld Inspection techniques, and plasma cutter applications.
Lecture (45.00)

CIM-140 Workplace Essentials Apprenticeship (3.00 cr.)

Course is designed to provide the essential background knowledge for workforce personnel entering the industrial manufacturing sector. The course will provide career readiness in the topics of safety, quality operations/control, inspection, rigging, and computation.
Lecture (45.00)

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 subroutines 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 and CIM-221

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 (2.00 cr.)

This capstone course for the CIM.AAS degree is the culmination of the CIM curriculum. It serves as a pseudo "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 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. This is a project based lab class.
Laboratory (60.00)
Prerequisites: CIM-101, CIM-211, and CIM-221
Corequisites: CIM-231

CIM-255 Precision Machining Project (2.00 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.
Laboratory (60.00)
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: CIS-101 or CIS-105

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: CIS-101 or CIS-105

CIS-105 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)

CIS-106 Intro Computing Google Apps (G Suite) (2.00 cr.)

This course provides the student with the ability to responsibly, appropriately and effectively use technology tools to access, manage, integrate, evaluate, create and communicate information independently or with others. In this course, students will learn the essential fundamentals of how to navigate the interfaces of Google Apps (G Suite), a Web-based collaborative Software as a Service (SaaS) solution that provides an integrated suite of secure, cloud-native collaboration and productivity applications. Students will use the G Suite tools of the Google Drive (cloud storage), Gmail, Calendar, Docs (Word Processor), Sheets (Spreadsheet), and Slides (Presentation Software) to store and display information. Knowledge of the keyboard is recommended for success in this course. 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 (30.00)

CIS-111 Research Process Using Computer Resource (1.00 cr.)

This course is designed to assist students to find accurate information for a specific need using computer-based technologies. The Camden County College Library uses the Information Search Process (ISP) Model (http://wp.comminfo.rutgers.edu/ckuhlthau/informat ion-search-process/) to teach information literacy to the students. This model incorporates the Information Literacy Competency Standards for Higher Education as well as the defining aspects of information literacy into an easy to use process for students. According to the American Library Association's Information Literacy Competency Standards, information literacy is "a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information." The Standards also state "information literacy is also increasingly important in the contemporary environment of rapid technological change and proliferating information resources." The ISP Model is a six step guide used to teach students how to best approach a research assignment for any class using databases, browsers, search engines, and other electronic or online resources (documents and spreadsheets) available through the Camden County College Library. Information literacy forms the basis for lifelong learning and is common to all disciplines, all learning environments and all levels of education.
Lecture (15.00)

CIS-112 The Technology of the Smartphone (1.00 cr.)

Smartphones have become an integral part of life. This course will provide the students with an appreciation of the complexity of smartphone, the history, and the technology. It will build the student's knowledge of the smartphone to enhance the use of it and bring them to an awareness of the great impact smartphones make to business and ecommerce.
Lecture (15.00)

CIS-115 Cyberspace Ethics and Security (2.00 cr.)

This two-credit course provides an up-to-date investigation of the internet's influence on our society and our lives. As the internet use expands and new information technologies are developed worldwide, unprecedented social and moral issues continue to emerge. Students will address problems of censorship, intellectual property, information privacy, and cybersecurity, and discuss potential resolutions that may be reached through technology, law, or a combination of the two. Case studies addressing major corporate data breaches, fair use and the Crypto Wars, and the political impact of regulation and "fake news," among other recent controversies, establishes the global context. As recommended by the Association of Computing Machinery (ACM), this course serves to guide computing professionals' ethical conduct and includes anyone using computing technology "in an impactful way".
Lecture (30.00)

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. It does not assume any prior knowledge of Linux and is geared toward those interested in systems administration as well as those who will use or develop programs for Linux systems. The course provides comprehensive coverage of topics related to Linux certification, including Linux distributions, installation, administration, X-Windows, networking, and security. 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. 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 opportunity 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 CIS-105

CIS-210 Management of Information Systems (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-111; and CIS-101, CIS-105 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: CIS-101, CIS-105 or CIS-206

CIS-231 System Analysis & Design (3.00 cr.)

This course will provide students with the conceptual, technical and managerial foundations needed for effective systems analysis, design and implementation. Students will learn both traditional (structured) and object oriented approaches to analysis and design, including data modeling techniques such as data flow, entity relationship, use case, class, sequence, activity and state diagrams using tools such as Microsoft Visio. Students will also learn basic project management skills as it relates to adaptive and predictive projects typical in systems development. 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 or CSC-171

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: CIS-101, CIS-105 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

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: CIS-101, CIS-105 or CIS-206

CIS-238 Database Security and Protection (3.00 cr.)

In the database environment, there are two realms of protection concerns (1) database (storage unit) and (2) the server (where the storage unit sits. This course emphasis is that students have an effective understanding to the importance of the business investments to protect its data. The course will cover hardware, software and human innovations to protect database environments. 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-101, CIS-103, CIS-105, CIS-181 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-237

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 Administration of the Linux/UNIX operating system in a security context. This includes the TCP/IP protocol, configurations and use of network access and data and system protection in the Linux and UNIX system. The student will learn to create Ethernet configurations in Linux and UNIX systems from a data security perspective and to configure network start ups, and services such as Telnet, FTP, and NFS as well as to use access control to develop effective firewalls and deny malicious agents in 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, CST-102 and CSC-171

CIS-288 Linux System Administration (3.00 cr.)

Common Linux administration topics will be covered in this course. Students will become familiar with administration tasks, and the tools used to accomplish those tasks. In addition, students will learn the various industry standards and established best practices for the efficient operation of Linux infrastructure. Students will be expected to have familiarity with the Linux command line (shell) and the VI text editor, which will be used throughout this 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 opportunity 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, CST-102 and CSC-171

CIS-289 Linux System and Services (3.00 cr.)

In this course, students who have learned basic Linux administration and networking will learn how to install, configure and manage Linux services. Students will use a virtual lab to learn how Linux can support a network with services such as the dynamic host configuration protocol, domain name system, lightweight directory access protocol (user authentication), and network time services. In addition, students will learn the LAMP stack (Linux, Apache, MySQL, PHP/Perl/Python) which is a common use of Linux servers. Students will learn how to install, configure, test and manage these services, and will learn basic syntax in protocols supported by these services (such as the hypertext markup language, structured query language, and Python). This course is the final in a series of courses that will be preparing the student for success when taking the CompTIA Linux+/LPIC-1 Exam, an industry recognized certification which demonstrates strong competence in Linux system administration. 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, CST-102 and CSC-171

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-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.)

Public relations is the values driven management of relationships with groups of people that can influence an organization's success. The course examines how organizations can ethically and systematically build productive, mutually beneficial relationships with such groups.
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: Digital Marketing (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-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-106 Data Security Privacy and Ethics (3.00 cr.)

This course is designed to fulfill the suggested guidelines for instruction by the Association of Computing Machinery (ACM) in terms of the social and professional issues relating to computing professionals. Topics covered include the history and social context of computing, professional and ethical responsibilities of workers in computing environments, risks and reliabilities of digital systems, intellectual property, computer crime, privacy, and securing information and systems, as well as economic and cultural issues created by technological advances.
Lecture (45.00)

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, subprograms, 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 extendibility 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 extendibility 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: CIS-105 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

CSC-272 Data Science Applications Programming (3.00 cr.)

This intermediate-level programming course assumes the student has a foundation in statistical methods and has successfully completed a college-level procedural programming course as prerequisite. This course is presented using the Python 3 language with a focus on developing foundational object-oriented programming skills and event-driven applications development for computing and data science majors. Topics include, secure coding techniques, testing and debugging code that uses dictionaries, tuples, strings, lists and files and performing natural language processing (NLP) tasks. Applications in big data, data mining, will be examined and practiced. Machine learning and deep learning will be explored as time permits. Students will practice the skills and concepts covered in lecture during structured, supervised laboratory time.
Lecture (30.00)
Laboratory (30.00)
Prerequisites: CSC-171 or CSC-121 and MTH-111

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 microcomputer 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

CST-210 Digital Forensics and Investigations (3.00 cr.)

This course provides students with an understanding of cybersecurity, professional intrusion, detection methods, information security tools, and preventative measures to information security risks. Students will learn how to respond to cyber breaches, which include recovery, preservation, analysis of digital crime scene evidence, and proper incident response to cybercriminals using relevant federal statutes.
Lecture (30.00)
Laboratory (30.00)
Prerequisites: CST-102

CST-212 Advanced Routing and Switching (3.00 cr.)

The Advanced Routing and Switching course will provide the student with the knowledge and skills needed to install, configure, operate, and troubleshoot a small enterprise network. It will cover the following skills: Quality of Service (QoS) elements and understanding their applicability, how virtualized and cloud services interact and impact enterprise networks and, an overview of network programmability and the related controller types and tools that are available to support software defined network architectures. This course includes a laboratory component to further increase the students' skill and understanding. This course covers the 2nd portion of the Cisco CCNA certification.
Lecture (30.00)
Laboratory (30.00)
Prerequisites: CST-201

CST-220 Ethical Hacking & Penetration Testing (4.00 cr.)

This course is an introduction to the world of computer hacking. The primary goal is to give students an understanding of how vulnerable systems can be and

how they might be better defended. The class takes a systems engineering view of hacking and emphasizes practical exposure via hands-on assignments.
Lecture (45.00)
Laboratory (30.00)
Prerequisites: CST-210

DENTAL ASSISTING

DAS-111 Fundamentals of Chair-Side Assisting (7.00 cr.)

The course consists of lectures and preclinical dental assisting procedures that are evaluated on an individual basis. Students will perform those Expanded Functions delegated by the New Jersey State Board of Dentistry to registered dental assistant in the state of New Jersey.
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 after passing both lecture and laboratory portions. 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 and the Radiology Health and Safety (RHS) exam passed, 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 the Dental Asst (1.00 cr.)

This online 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.
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.)

This course introduces the student to the newest dental technology and how to apply pre-clinical procedures with satisfactory results as an entry level employee in the dental assisting field. Supervised Clinical Dental Assisting is a one hour lecture course, 300 clinical hours at offsite dental clinic and private practice experience required by the Commission on Dental Accreditation (CODA). The student is required to perform various procedures related to dental radiography as required by the New Jersey Department of Environmental Protection (DEP), Bureau of X-Ray Compliance. The student will obtain experience in general dentistry and specialty offices.
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 dental hygiene/assisting student. The course is designed to provide the student with knowledge and understanding of:
1. The nomenclature used in dentistry
2. The relationship of the supporting tissues of the teeth
3. The anatomy and physiology of the primary and permanent dentition
4. The relationship of the teeth within each arch
5. The occlusion of the maxillary and mandibular teeth
6. The relationship of anatomical structures to instrumentation.

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 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, treatment planning, implementation and evaluation 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 (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 by man to diagnose, prevent and treat disease. The student will study mechanisms of action, indications for use, dosage, drug interactions and drug classifications. Emphasis will be placed on the drugs used most commonly in the dental office. In addition precautions that need to be taken with patients that are taking medications will be discussed. The students will also learn about local anesthetics and their administration in dentistry.
Lecture (30.00)
Prerequisites: DHY-122 and DHY-152

DATA SCIENCE

DSC-101 Data Science I (3.00 cr.)

This introductory course will provide an overview of the practices and terminology of data science as a unified discipline encompassing mathematics, statistics, and computer science. The course will cover the spectrum of the data science workflow from initial investigation and data acquisition to the communication of results. Students will examine and collect a variety of media that include images, sound, video, numeric and text data and their storage formats such as csv, spreadsheets, JSON, xml, databases, and NoSQL. Through individual and team assigned case studies and projects the students will practice problem formulation, data extraction, simple wrangling, and elementary analysis using modern tools. No prior programming experience required.
Lecture (30.00)
Laboratory (30.00)
Prerequisites: (ENG-013 and ENG-023), or ENG-046 and MTH-124 or MTH-125

DSC-102 Data Science II (3.00 cr.)

This course is the second course in a three-course sequence that examines the core activities that a professional data scientist performs throughout the data science workflow. Building on the knowledge attained in DSC-101, this course will focus on the data preparation phase by applying standard data wrangling practices to collections of raw data gathered from a variety of sources and mapping it into a coherent form for analysis. Topics include 'dirty' raw data issues of inconsistent naming, and formatting, missing data and outliers, as well as reshaping and pivoting data as appropriate. The student will examine real-world case studies and use modern data preparation tools and programming techniques to complete data wrangling. Topics in this course are well-aligned with those of CSC-171.
Lecture (30.00)
Laboratory (30.00)
Prerequisites: DSC-101 and CSC-106
Corequisites: CSC-171

DSC-203 Data Science III (3.00 cr.)

This course is the third course in a three-course sequence that examines the core activities that a professional data scientist performs throughout the data science workflow. Building on the knowledge attained in DSC-102, this course will focus on the data analysis phase activities of quantifying and modeling data. Topics covered include linear, logistics, and polynomial regressions, clustering and pipe-

lines. Students will practice modeling and analysis with real-world datasets using modern software tools.
Lecture (30.00)
Laboratory (30.00)
Prerequisites: DSC-102 and MTH-172

DSC-230 Statistical and Machine Learning (3.00 cr.)

This course blends the algorithmic perspective of machine learning in computer science and the predictive perspective of statistical thinking. The focus is on common machine learning methods and their application to problems in various disciplines. An understanding of the theoretical foundations of statistical learning is coupled with the practical skills necessary for successful application to new problems in science and industry.
Lecture (30.00)
Laboratory (30.00)
Prerequisites: CSC-272 and DSC-203

DSC-250 Data Visualization and Presentation (3.00 cr.)

Using modern data visualization software tools the student will practice design principles and techniques for presenting large, complex data sets from a variety of sources into meaningful stories and visualizations. Topics include: creating and structuring stories to match the audience, choosing appropriate visuals including graphs, charts and color schemes, dashboards. Students will review, critique, and provide feedback to case studies and presented student work.
Lecture (30.00)
Laboratory (30.00)
Prerequisites: DSC-203

DSC-280 Data in Context a Capstone Experience (3.00 cr.)

This capstone course will provide the student with the opportunity to apply their acquired knowledge and skills in mathematics, statistics, and computer science to the practice of data science to build a portfolio project. The course will cover the spectrum of the data science workflow from initial investigation and data acquisition to the communication of results. Completing individual and team assigned case studies and projects the students will practice problem formulation, data extraction, wrangling, analysis and visual and written presentations using professional tools and techniques.
Lecture (30.00)
Laboratory (30.00)
Prerequisites: DSC-203
Corequisites: DSC-230 and DSC-250

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 (2.00 cr.)

This education course focuses on the use of educational technology in support of student learning, and integration of technology into the P-12 curriculum in a computer lab setting. This course is designed to develop students' awareness and

understanding of the many sources and uses of educational technology available to educators. Strategies to incorporate technology and the World Wide Web into the school's curriculum will be explored. Each student will participate actively in this course, practicing skills and working with others. The students will discuss and explore digital responsibility and digital citizenship.
Lecture (15.00)
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-112 Inclusive Class: Pedagogy & ECE 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. In addition, this course serves as a vehicle for domain-specific application of principles and pedagogies. Through case study scenarios, videos, virtual, and live field experiences, students will have multiple opportunities to reflect on and apply new learning to enhance their understanding of proactive behavior strategies and supports.
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 childs 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-105 Intro to Electricity and Electronics (3.00 cr.)

This course covers the fundamental concepts of electricity and electronics with particular focus on Computer Systems. Emphasis is on understanding basic DC and AC circuits and their importance in the operation of electronic circuits. Semiconductors and their importance in digital circuits will be examined. Fundamental principles of the National Electric Code will be reviewed, with a particular emphasis on safety principles. Laboratory test equipment will be utilized to introduce students to industrial testing and measuring equipment and to verify the results of academic concepts. The course consists of two (2) lecture hours and two (2) laboratory hours.
Lecture (30.00)
Laboratory (30.00)
Prerequisites: MTH-100

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-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: Accuplacer Placement or Teacher Recommendation

ENG-003 Writing Skills II Express (1.00 cr.)

This accelerated course is intended for students to improve their essay writing skills sufficiently for placement in ENG-023 (Writing Skills III). Students will compose multi-paragraph essays on general topics and in response to timed essay prompts. They will also review and practice formal English grammar and usage.
Lecture (15.00)
Prerequisites: Teacher recommendation

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 student's 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

ENG-055 ALP English (3.00 cr.)

This course provides extended instruction to students enrolled in a designated ENG-101, English Composition I course. Students will be critically reading works and writing essays in a program that has been carefully synchronized with their ENG-101 class. This course is structured to enhance the corresponding ENG-101 instruction with the goal of improving college-level reading and writing skills. Analysis of information and research may be integrated into the course via computer lab assignments. In addition, non-cognitive factors will be emphasized - post secondary strategies, skills, attitudes and motivation - that are crucial to the students' academic persistence and performance in college-level academic work. This accelerated learning environment will enable students to simultaneously complete ENG-101, enroll in college-level courses during the semester, and subsequently register as returning students.

Lecture (45.00)

Prerequisites: Placement Reading Score of 77-82 & Essay Score of 5

Corequisites: ENG-101 Specialized ALP section.

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

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-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

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

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

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

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

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

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

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

ENG-282H Honors 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. ONLY STUDENTS WHO ARE ACCEPTED INTO THE HONORS PROGRAM ARE ELIGIBLE TO TAKE HONORS COURSES.
Lecture (45.00)
Prerequisites: ENG-101

ENGLISH AS A SECOND LANGUAGE

ESL-060 Introduction to ESL Writing and Grammar (4.00 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 (60.00)
Prerequisites: Placed into Intro to ESL Writing/Grammar

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-070 Intro to ESL Reading & Vocabulary (4.00 cr.)
This course focuses on the ability of non-native English speakers to understand written English and to expand their English vocabulary. It is designed for non-native English speaking students whose placement scores indicate limited or no ability to comprehend written English. Reading comprehension and vocabulary development skills are taught and practiced in class through reading, listening, and speaking activities.
Lecture (60.00)
Prerequisites: Placed into Intro to ESL Reading & Vocabulary

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-080 Intro to ESL Listening & Speaking (4.00 cr.)
This course focuses on developing and improving the ability of non-native English speakers 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 or produce spoken English. Listening and speaking skills are taught and practiced in class through listening, and speaking activities.
Lecture (60.00)
Prerequisites: Placed into Intro to ESL Listening & Speaking

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 students 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 incendiarism, arson laws and types of 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 basic elements from 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. After completion of FIR-102 and FIR-222, the student is eligible to sit for the certification exam.
Lecture (45.00)
Prerequisites: FIR-102

FIR-225 Hydraulic (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-110 Filmmaking I (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. Students will develop scripts, design, shoot and edit short film projects.
Lecture (30.00)
Laboratory (30.00)

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 Film 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 appreciation 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 Film Animation I (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-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: MTH-011, ENG-012 and ENG-022

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: MTH-011, ENG-012 and ENG-022

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: MTH-011, ENG-012 and ENG-022

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: MTH-011, ENG-012 and ENG-022

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: MTH-011, ENG-012 and ENG-022

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 francophone 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, (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

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

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 healthcare 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. Practical application of these and other topics will be augmented by hands-on activities.

Lecture (45.00)
Laboratory (30.00)
Prerequisites: ENG-101, HIT-101 and CIS-101 or CIS-105; 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. Classroom instruction is augmented by hands-on lab activities related to medical records, medical billing and medical insurance.

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 such as filing, abstraction, data collection, data verification, professionalism, legal issues, HIPAA, release of information, documentation guidelines, Electronic Health Record (EHR), record storage and imaging, Master Patient Index (MPI), and query of databases.

Clinical (45.00)
Prerequisites: BIO-118 or BIO-212, ENG-102, HIT-115, HIT-205 and CIS-101 or CIS-105

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 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. Practical application of these and other topics will be augmented by hands on lab activities.

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). During lecture and lab, 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 will be demonstrated and the students will be allowed time to use 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 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 learning coding skills.
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: MTH-011, ENG-012 and ENG-022

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: MTH-011, ENG-012 and ENG-022

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: MTH-011, ENG-012 and ENG-022

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: CIS-105, 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, and CIS-101 or CIS-105, 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 arears 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 serious 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: HSR-101, ENG-012 and ENG-022

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-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 students 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 Overview (3.00 cr.)

This course provides students with the opportunity to enhance interpreting/transliterating skills. Students will review and apply knowledge learned in previous interpreting courses to their experiences in Practicum. This knowledge will enhance strengths and minimize weaknesses that become evident during the practicum.
Lecture (45.00)
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 student's 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

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-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-210 Introduction to Geometric Optics (3.00 cr.)

This course covers the fundamentals of geometric and physical optics, including Huygen's principle, wave motion, properties of waves, and optical instruments. Student activities include extensive laboratory experiments using light ray tracing, lenses, low-powered lasers and other optical assemblies.
Lecture (30.00)
Laboratory (30.00)
Corequisites: LFO-101

LFO-211 Geometric Optics (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 (30.00)
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, C02, 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-212, LFO-211 and LFO-201

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)
Corequisites: LFO-211

LFO-235 Photonics Applications (3.00 cr.)

This course covers laser power and energy measurements, characteristics of flashlamps, discharge circuits, solid state lasers, Continuous Wave (CW) arc lamps and power supplies for CW lasers, Pulsed lasers, and the safe operation and measurements of these laser systems. In addition Nd: YAG, dye and semiconductor lasers, laser Q-switching and mode-locking using solid state laser systems will be studied. The course will examine the use of photodetectors, calorimeters, photographic instrumentation, including oscilloscope, SLR, streak cameras and special purpose imaging devices. Laser modulation will be investigated, including electro-optic, acousto-optic and bleachable dye methods, use of laser collimators and autocollimators.
Lecture (30.00)
Laboratory (30.00)
Prerequisites: EET-101, LFO-101 and PHY-101

LFO-241 Principles of 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-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

LFO-295 Photonics Project (3.00 cr.)

This is a capstone course designed provide students with the challenge of synthesizing knowledge learned in Photonics courses. Students will operate in small teams and each team will be assigned a Photonic project to develop by using innovative circuitry to construct or modify a working laser system. This course will help prepare students for the rigor of working in industry and insure that learning objectives of the program are met.
Lecture (15.00)
Laboratory (60.00)
Prerequisites: LFO-231

MASSAGE THERAPY

MAS-200 Therapeutic Massage (6.00 cr.)

This 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, business and marketing, recordkeeping, and basic theory. The laboratory component of the course provides hands-on techniques, observation and palpation. 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)
Corequisites: 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 lecture and laboratory. Students will be presented with structural theory and begin to look at the body while standing and in simple motion. The laboratory portion of this course introduces the deep tissue segment 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. The foot reflexology component teaches students the ancient system 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-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-260 and MAS-261
Corequisites: MAS-243

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, innervation of muscles, roles of muscles, and types of muscular contraction. It is also designed to introduce the three-dimensional quality of muscle, bone, tendons, ligaments, and other tissues of the body. Unlike the traditional academic approach to anatomy and physiology, the laboratory portion of this course provides a palpation section which provides a 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 CIS-105

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)

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: Accuplacer Placement or Teacher Recommendation

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)
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 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 techniques 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: Accuplacer Placement or Teacher Recommendation

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

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

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

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-123 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

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-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 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

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 or MTH-125

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 or MTH-125

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

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-205 Mathematical Systems III: Structures II **(3.00 cr.)**

This course is designed primarily for elementary and early childhood education majors. The course will require students to investigate problems in order to deepen their conceptual and procedural understanding in the areas of algebra, data analysis, probability, geometry, measurement, and systematic listing and counting. Students in the course will use physical materials and models to explore topics in algebra, geometry, probability, and statistics. They will use mathematics to describe real-world relationships and develop conjectures and intuitive proofs. A TI-108 (or any basic four function calculator) is required.
Lecture (45.00)
Prerequisites: MTH-105

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

MTH-261 Intro to Mathematical Modeling **(3.00 cr.)**

This course introduces concepts from linear modeling and optimization, providing mathematical foundations as they are needed and motivated by applications. The focus is neither on proof nor excessive hand computations; instead it is on employing and relating the mathematics to real-world ideas. Concepts are made concrete through numerical computation. Topics covered include vectors, dot product, distance, projection, matrix algebra, techniques of solving linear algebra systems, the derivative and its applications, and matrix factorization.
Lecture (45.00)
Prerequisites: MTH-150

MTH-262 Probabilistic Models **(4.00 cr.)**

This course introduces probability theory and data-generating processes that lead to building probability distributions from empirical data, and density functions from histograms. Topics of integration are motivated by probabilistic ideas and the transition from discrete data to continuous functions. Topics covered include single and multivariable integration techniques, random variables, sample spaces and events, sets, counting, Venn diagrams, simulation, conditional probability and independence, binomial, geometric, normal, and other distributions, sampling distributions, the Central Limit Theorem, joint probability and marginal distributions.
Lecture (60.00)
Prerequisites: MTH-261

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.)**

Music Appreciation I is a course designed to assist students in more effectively analyzing, interpreting, and evaluating music. This course explores music from a diverse range of popular, folk and art traditions in an effort to help students better appreciate the role that music serves in their own lives as well as the lives of humans across the nation and around the world. While this class has been designed as a general education humanities elective with the non-music major in mind, it is more than appropriate for audio and music majors to enroll in this course as well.
Lecture (45.00)

MUS-101H Honors Music Appreciation **(3.00 cr.)**

Music Appreciation I is a course designed to assist students in more effectively analyzing, interpreting, and evaluating music. This course explores music from a diverse range of popular, folk and art traditions in an effort to help students better appreciate the role that music serves in their own lives as well as the lives of humans across the nation and around the world. While this class has been designed as a general education humanities elective with the non-music major in mind, it is more than appropriate for audio and music majors to enroll in this course as well. 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-107 Digital Music Composition (1.00 cr.)

Digital Music Composition is a course designed to assist students in composing music using digital programs such as Logic, ProTools and MuseScore. Students will learn basic theory concepts and discuss the aesthetic components of a wide variety of music. This course is primarily a hands-on course in music technology with required lab hours.
Laboratory (30.00)

MUS-110 African-American Music (3.00 cr.)

This course will examine the various roles and values of African-American music from a variety of diverse perspectives. Drawing on historical and critical readings and a plethora of sound and visual media, students will explore concepts such as authenticity, representation, recognition, cultural ownership, and appropriation. Also, students will examine the various social, political and aesthetic contexts in which African-American music has been composed (produced), performed (re-produced) and heard (consumed). This course can be used to satisfy a humanities general education elective or a humanities-diversity general education elective.
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 (224.00)
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 (224.00)
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 clinical sites including: medical-surgical, perioperative and selected outpatient settings.
Lecture (45.00)
Clinical (135.00)
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 (224.00)
Prerequisites: NOL-130, NOL-215, HIT-110, 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, NOL-215, HIT-110, 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 and receives primary focus in the classroom setting and is augmented by hands-on skills in the laboratory setting.
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-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 & BIO-118, or BIO-211 & 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 human biology, basic psychological, and basic adult health 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. The classroom instruction is augmented by hands-on lab and clinical settings.
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-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 classroom setting and will be augmented by hands-on in the 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-105 Clinical Observation (1.00 cr.)

Students are placed in Ophthalmology offices where they will observe practical work experiences. During the rotation students will observe experienced technicians and physicians. Weekly hours are assigned for a total of 100 during the semester.
Clinical (100.00)
Corequisites: OMT-104

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 300 hours during the semester.
Clinical (300.00)
Prerequisites: OMT-101, OMT-103, OMT-104, and OPH-130
Corequisites: OPH-131, OMT-201 and OMT-204

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 clinical procedures used in Ophthalmology practices. Lab skills for this course include advanced slit lamp techniques, applanation tonometry, retinoscopy, and refractometry.
Lecture (30.00)
Laboratory (30.00)
Prerequisites: OMT-104

OMT-213 Clinical Rotation II (3.00 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 350 hours during the semester.
Clinical (350.00)
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 patters; 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-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.)

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. Lab skills for this course include lensometry, use of the radiuscope, keratometry, corneal topography, and basic slit-lamp techniques.
Lecture (30.00)
Laboratory (30.00)
Prerequisites: OPH-131

OPH-233 Contact Lens Fitting II (3.00 cr.)

Special ocular problems and the special contact lens designs and fitting techniques needed to correct these problems are studied. Additional use of instrumentation and practice management techniques raises lab skills to an intermediate level of proficiency for lensometry, keratometry, corneal topography, and slit-lamp applications.
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. Lab skills the student will also learn include 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, anisometropic prescriptions, and spectacle magnification are also discussed. Lab skills the students will also learn include dispensing procedures relating to bifocals and complex prescriptions, techniques of fitting and adjusting plastic, metal and rimless spectacles and occupational eyewear.
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 New Jersey licensed optician in a controlled environment. Students are expected to display advances skills in all aspects of the retail optical environment including but not limited to troubleshooting visual acuity issues, customer service, sales, measurements, adjustments, ordering products, fabrication, and record keeping.
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. Experience in retail eyeglass sales, business practices, eyeglass fabrication and spectacle adjustments will also be covered. Students will engage with patients under the direct supervision of a licensed optician or licensed Optometrist. Students will be required to submit weekly evaluation forms as completed by their mentor, and will submit a minimum of one journal entry per week throughout the semester.
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 continue to be exposed to practical work experiences. Students continue to apply knowledge and skills learned in previous ophthalmic courses to display a high level of proficiency with retail eyeglass sales, business practices, eyeglass fabrication and spectacle adjustments. Student will continue to be evaluated weekly by a licensed optician at their co-op location and by their assigned instructor.
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: CIS-105 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 of 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. 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 field of medicine. 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 field of medicine. 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 ELLIGIBLE TO TAKE HONOR 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 to realize their personal vision (experimentation is encouraged) and begin to develop a cohesive body of work for their 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 Photo Illustration **(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)

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, translational, 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 is the introductory Physics course for Liberal Arts majors. It examines basic Physics concepts qualitatively, with limited mathematics and introduces students to laboratory experimentation. The physical principles taught in the course are illustrated with realistic life examples and laboratory experiments. The topics include the place of Physics among other sciences and why knowledge of Physics is necessary to understand technological achievements and real-life phenomena. Areas covered are different states of matter, physics of motion, light and optics, energy as a physical concept, and different sources of energy. Students also learn how to measure different physical quantities, analyze experimental results, and draw scientific conclusions.
Lecture (30.00)
Laboratory (60.00)

PHY-201 Physics III (4.00 cr.)

This is a course 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 laws as they are applied to mechanical systems. The course covers mechanical motion involving non-uniform acceleration in both rectilinear and curvilinear cases, elastic and non-elastic collisions and conservation of linear and angular momentum; mechanical waves, fluid dynamics and thermodynamics including the heat and heat transfer. Related experiments are performed.
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 RL and LC-circuits, electromagnetic waves, 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 effect 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. The laboratory component of this course provides hands-on use of necessary medical equipment. 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, laws that effect EMS, well-being, injury and illness prevention, ethics and stress management. The laboratory portion of this course provides hands-on training in patient assessment and EMS communication and systems.
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. During the laboratory component, drug 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. The laboratory component of the course includes, but is 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.)

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. The laboratory component covers, but is 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. The laboratory component includes the evaluation of the mechanism of injury to assess the underlying potential for serious injury and comprehensive trauma assessment.
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 psychology 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, intellectually disabled 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 descriptive and interpretive summary of the theories and scientific research on abnormal behavior. Tension-induced body disorders, sexual problems, loneliness, depression, irrational fears, repetitive ideas and actions, dissociative identity disorder 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 preventive 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-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 throughout the life span - from conception through death. It reviews current theories and scientific research related to psychological development and covers topics including maturation, intellect, the role of genetics, social and emotional adjustment, and learning factors in the development of motivation.
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-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

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 D/d community.
Lecture (45.00)
Corequisites: ASL-101

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-201, ASL-202, ASL-203 or successful completion of the ASL Proficiency Exam

SOCIOLOGY

SOC-101 Introduction to Sociology (3.00 cr.)

Sociology is the scientific study of human societies and social interaction. This course provides an overview of the discipline of sociology, including sociological concepts, methods, perspectives, and areas of substantive inquiry. Particular emphasis will be placed on the contributions sociology makes to understanding everyday life and current events.
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-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-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-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: SPA-102 or SPA-201 or SPA-202 and (ENG-013 and ENG-023) or ENG-046

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: SPA-102 or SPA-201 or SPA-202 and (ENG-013 and ENG-023) or ENG-046

SPEECH

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)

SURGICAL TECHNOLOGY

SRG-102 Fundamentals of Surgical Technology (5.00 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 laboratory component provides hands-on instruction in areas such as operating room preparation, sterilization methods, and the application of the safety principles of preoperative, intraoperative and postoperative patient care. The successful student will consistently articulate and demonstrate care precepts that meet or exceed specialty specific standards of patient care.
Lecture (45.00)
Laboratory (60.00)
Prerequisites: ENG-101, HIT-120 and BIO-117

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 laboratory component 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-102

SRG-118 Clinical Rotation I **(6.00 cr.)**

This course will provide an introductory 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 foundational practice in general surgical cases. This practicum requires a minimum of 300 clinical hours throughout a 15-week semester.
Clinical (300.00)
Prerequisites: BIO-117, BIO-118, BIO-121, HIT-120, HIT-132 and SRG-102
Corequisites: HIT-134 and SRG-112

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 II **(6.00 cr.)**

This course is a continuation of SRG-118. It will continue to 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 advanced surgical cases, thus promoting attainment of an "entry-level" technical skill set by semester end. This practicum requires a minimum of 300 clinical hours throughout a 15-week semester.
Clinical (300.00)
Prerequisites: SRG-118

SRG-220 Surgical Technology Capstone **(2.00 cr.)**

This course will synthesize previously learned skills in the program. Through projects, presentations, and research students will prove mastery of surgical technology objectives and goals and readiness for the field.
Lecture (30.00)
Prerequisites: SRG-102, SRG-112 and SRG-118
Corequisites: SRG-212 and SRG-218

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	4					**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
				5				**Social Science** (Society & Human Behavior)	6	3	3	3	
					6			**Humanities** (Humanistic Perspective)	9	3			
						7		**History** (Historical Perspective)	6				
							8	**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 *(Course Category)*	**NJCC GEN. ED. LEARNING GOALS** *Critical thinking is embedded*	**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 *(Communication)*	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 *(Mathematics)*	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 *(Science)*	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 *(Technology)*	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 *(Social Science)*	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 *(Humanities)*	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 *(History)*	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 *(Diversity courses)*	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-101H ..... Honors English Composition I
ENG-102 ..... English Composition II
ENG-102H ..... Honors English Composition II
ENG-241 ..... Technical Writing
SPE-102 ..... Public Speaking
SPE-102H ..... Honors Public Speaking

MATHEMATICS GENERAL EDUCATION ELECTIVES: Quantitative Knowledge and Skills

MTH-100 ..... Algebraic Concepts
MTH-101 ..... Concepts of Mathematics
MTH-105 ..... Mathematical Systems I: Structures
MTH-106 ..... Mathematical Systems II: Geometry
MTH-107 ..... Mathematics for Liberal Arts
MTH-111 ..... Introduction to Statistics
MTH-112 ..... Elements of Statistics II
MTH-114 ..... College Algebra / Business & Soc Science
MTH-117 ..... Explorations in Mathematical Thoughts
MTH-117H ..... Honors Exploration/Mathematical Thoughts
MTH-122 ..... Applied Calculus
MTH-123 ..... Pre-Calculus Mathematics I
MTH-124 ..... Pre-Calculus Mathematics II
MTH-125 ..... Accelerated Precalculus
MTH-129 ..... Discrete Mathematics
MTH-132 ..... Statistics for Technology
MTH-134 ..... Biostatistics
MTH-140 ..... Calculus I
MTH-140H ..... Honors Calculus I
MTH-145 ..... Linear Algebra
MTH-150 ..... Calculus II
MTH-171 ..... Statistics I
MTH-172 ..... Statistics II
MTH-205 ..... Mathematical Systems III: Structures II
MTH-210 ..... Calculus III
MTH-220 ..... Differential Equations

SCIENCE GENERAL EDUCATION ELECTIVES: Scientific Knowledge and Reasoning

Lab Science General Education Electives

BIO-106 ..... Living in the Environment
BIO-111 ..... Biology I-Science
BIO-112 ..... Biology II-Science
BIO-117 ..... Basic Anatomy & Physiology I
BIO-118 ..... Basic Anatomy & Physiology II
BIO-121 ..... Basic Microbiology
BIO-130 ..... Plants & Society
BIO-140 ..... The Microbial World
BIO-140H ..... Honors - The Microbial World
BIO-206 ..... Environmental Sci: Theory & Applications
BIO-210 ..... Human Anatomy & Physiology
BIO-211 ..... Anatomy & Physiology I
BIO-212 ..... Anatomy & Physiology II
BIO-220 ..... Elements of Microbiology
BIO-221 ..... Microbiology I
BIO-222 ..... Microbiology II
BIO-225 ..... Introduction to Plant Biology
BIO-235 ..... Cell Biology
BIO-240 ..... Genetics
CHM-101 ..... General Organic & Biological Chem I
CHM-101H ..... Honors Gen Organic & Biological Chem I
CHM-102 ..... General Organic & Biological Chem II
CHM-111 ..... Chemistry I - Science
CHM-111H ..... Honors Chemistry I - Science
CHM-112 ..... Chemistry II - Science
CHM-112H ..... Honors Chemistry II - Science
CHM-120 ..... Chemistry for Fire Protection
CHM-130 ..... General/Organic/Biochemistry Dental Hyg
CHM-140 ..... Chemistry & Society
CHM-140H ..... Honors Chemistry & Society
CHM-145 ..... Introduction to Forensic Science
CHM-150 ..... Chemistry of Art Materials
CHM-160 ..... Fundamentals of Food Science
CHM-221 ..... Organic Chemistry I
CHM-222 ..... Organic Chemistry II
PHY-101 ..... Physics I
PHY-102 ..... Physics II
PHY-103 ..... Physics I (for the Non-Science Major)
PHY-201 ..... Physics III
PHY-202 ..... Physics IV

Non-Lab Science General Education Electives

BIO-103 ..... Human Biology

TECHNOLOGY GENERAL EDUCATION ELECTIVES: Technological Competency

CIS-101 ..... Personal Computer Applications
CIS-105 ..... Computer Literacy
CIS-106 ..... Intro Computing Google Apps (G Suite)
CIS-191 ..... Internet: Tools and Techniques
CIS-206 ..... Advanced Computer Concepts/Applications
COM-105 ..... Media Literacy
CSC-102 ..... Information Literacy in a Digital Era
CSC-102H ..... Honors Info Literacy in a Digital Era
CSC-105 ..... Fundamentals of Programming
CSC-111 ..... Introduction to Programming
CSC-226 ..... Programming Languages

SOCIAL SCIENCE GENERAL EDUCATION ELECTIVES: Society and Human Behavior

ANT-101 ..... General Anthropology
ANT-101H ..... Honors General Anthropology
ECO-101 ..... Macroeconomics
ECO-102 ..... Microeconomics
GEO-101 ..... Cultural Geography
POL-101 ..... Introduction to Political Science
POL-101H ..... Honors Introduction to Political Science
POL-103 ..... American Federal Government
POL-108 ..... Introduction to International Relations
PSY-101 ..... Basic Psychology
PSY-101H ..... Honors Basic Psychology
PSY-105 ..... Child Psychology
PSY-106 ..... Psychology of Adolescence
PSY-109 ..... Developmental Psychology
SOC-101 ..... Introduction to Sociology
SOC-101H ..... Honors Introduction to Sociology

HUMANITIES GENERAL EDUCATION ELECTIVES: Humanistic Perspective

ARA-101 ..... Elementary Arabic I
ARA-102 ..... Elementary Arabic II
ART-101 ..... Art Appreciation
ART-103 ..... Visual Culture
ART-103H ..... Honors Visual Culture
ART-104 ..... Introduction to Visual Arts
ART-111 ..... Art History I
ART-112 ..... Art History II
ASL-101 ..... American Sign Language I
ASL-102 ..... American Sign Language II
ASL-201 ..... American Sign Language III
ASL-202 ..... American Sign Language IV
CHI-101 ..... Elementary Chinese I
CHI-102 ..... Elementary Chinese II
ENG-121 ..... Introduction to Literature
ENG-131 ..... Shakespeare
ENG-141 ..... The Short Story
ENG-181 ..... Women's Literature
ENG-191 ..... The Myths of the World
ENG-261 ..... English Literature I
ENG-262 ..... English Literature II
ENG-271 ..... World Literature I
ENG-271H ..... Honors World Literature I
ENG-272 ..... World Literature II
ENG-272H ..... Honors World Literature II
ENG-281 ..... American Literature I
ENG-281H ..... Honors American Literature I
ENG-282 ..... American Literature II
ENG-282H ..... Honors American Literature II
FLM-101 ..... Television Appreciation
FLM-201 ..... Film Appreciation
FLM-201H ..... Honors Film Appreciation
FRE-101 ..... Elementary French I
FRE-102 ..... Elementary French II
FRE-201 ..... Intermediate French I
FRE-202 ..... Intermediate French II
FRE-203 ..... Introduction to French Culture
GER-101 ..... Elementary German I
GER-102 ..... Elementary German II
GER-201 ..... Intermediate German I
HIS-101 ..... World Civilization I
HIS-101H ..... Honors World Civilization I
HIS-102 ..... World Civilization II
HIS-102H ..... Honors World Civilization II
HIS-111 ..... Western Civilization I
HIS-112 ..... Western Civilization II
HIS-121 ..... United States History I
HIS-122 ..... United States History II
HIS-131 ..... African-American History I
HIS-132 ..... African-American History II
HIS-142 ..... The History of American Women
ITA-101 ..... Elementary Italian I
ITA-102 ..... Elementary Italian II
ITA-201 ..... Intermediate Italian I
LAT-101 ..... Elementary Latin I
LAT-102 ..... Elementary Latin II
LAT-201 ..... Intermediate Latin I
MUS-101 ..... Music Appreciation I
MUS-101H ..... Honors Music Appreciation
MUS-106 ..... World Music Cultures
MUS-110 ..... African-American Music
MUS-111 ..... Music History I
MUS-112 ..... Music History II
MUS-113 ..... Jazz History
PHL-101 ..... Introduction to Philosophy
PHL-111 ..... Modern Philosophy
PHL-121 ..... Logic & Reasoning
PHL-131 ..... Introduction to Ethics
PHL-131H ..... Honors Introduction to Ethics
PHO-111 ..... History of Photography
SPA-101 ..... Elementary Spanish I
SPA-102 ..... Elementary Spanish II
SPA-201 ..... Intermediate Spanish I
SPA-202 ..... Intermediate Spanish II
SPA-203 ..... Introduction to the Hispanic Culture
SPA-204 ..... Conversational Spanish
THE-121 ..... Theatre Appreciation

HUMANITIES—Language General Education Electives

ARA-101 ..... Elementary Arabic I
ARA-102 ..... Elementary Arabic II
ASL-101 ..... American Sign Language I
ASL-102 ..... American Sign Language II
ASL-201 ..... American Sign Language III
ASL-202 ..... American Sign Language IV
CHI-101 ..... Elementary Chinese I
CHI-102 ..... Elementary Chinese II
FRE-101 ..... Elementary French I
FRE-102 ..... Elementary French II
FRE-201 ..... Intermediate French I
FRE-202 ..... Intermediate French II
FRE-203 ..... Introduction to French Culture
GER-101 ..... Elementary German I
GER-102 ..... Elementary German II
GER-201 ..... Intermediate German I
ITA-101 ..... Elementary Italian I
ITA-102 ..... Elementary Italian II
ITA-201 ..... Intermediate Italian I
LAT-101 ..... Elementary Latin I
LAT-102 ..... Elementary Latin II
LAT-201 ..... Intermediate Latin I
SPA-101 ..... Elementary Spanish I
SPA-102 ..... Elementary Spanish II
SPA-201 ..... Intermediate Spanish I
SPA-202 ..... Intermediate Spanish II
SPA-203 ..... Introduction to the Hispanic Culture
SPA-204 ..... Conversational Spanish

HUMANITIES—Arts General Education Electives

ART-101 ..... Art Appreciation
ART-103 ..... Visual Culture
ART-103H ..... Honors Visual Culture
ART-104 ..... Introduction to Visual Arts
ART-111 ..... Art History I
ART-112 ..... Art History II
FLM-201 ..... Film Appreciation
FLM-201H ..... Honors Film Appreciation
MUS-101 ..... Music Appreciation I
MUS-101H ..... Honors Music Appreciation
MUS-106 ..... World Music Cultures
MUS-110 ..... African-American Music
MUS-111 ..... Music History I
MUS-112 ..... Music History II
MUS-113 ..... Jazz History
PHO-111 ..... History of Photography
THE-121 ..... Theatre Appreciation

HUMANITIES—Literature General Education Electives

ENG-121 ..... Introduction to Literature
ENG-131 ..... Shakespeare
ENG-141 ..... The Short Story
ENG-181 ..... Women's Literature
ENG-191 ..... The Myths of the World
ENG-261 ..... English Literature I
ENG-262 ..... English Literature II
ENG-271 ..... World Literature I
ENG-271H ..... Honors World Literature I
ENG-272 ..... World Literature II
ENG-272H ..... Honors World Literature II
ENG-281 ..... American Literature I
ENG-281H ..... Honors American Literature I
ENG-282 ..... American Literature II
ENG-282H ..... Honors American Literature II

HISTORY GENERAL EDUCATION ELECTIVES: Historical Perspective

HIS-101 ..... World Civilization I
HIS-101H ..... Honors World Civilization I
HIS-102 ..... World Civilization II
HIS-102H ..... Honors World Civilization II
HIS-111 ..... Western Civilization I
HIS-112 ..... Western Civilization II
HIS-121 ..... United States History I
HIS-122 ..... United States History II
HIS-131 ..... African-American History I
HIS-132 ..... African-American History II
HIS-142 ..... The History of American Women

DIVERSITY GENERAL EDUCATION ELECTIVES: Cultural and Global Awareness

ANT-101 ..... General Anthropology
ANT-101H ..... Honors General Anthropology
ART-103 ..... Visual Culture
ART-103H ..... Honors Visual Culture
ART-104 ..... Introduction to Visual Arts
ART-111 ..... Art History I
ART-112 ..... Art History II
COM-145 ..... Intercultural Communication
ENG-181 ..... Women's Literature
ENG-191 ..... The Myths of the World
ENG-271 ..... World Literature I
ENG-271H ..... Honors World Literature I
ENG-272 ..... World Literature II
ENG-272H ..... Honors World Literature II
FRE-201 ..... Intermediate French I
FRE-202 ..... Intermediate French II
FRE-203 ..... Introduction to French Culture
GEO-101 ..... Cultural Geography
GER-201 ..... Intermediate German I
HIS-101 ..... World Civilization I
HIS-101H ..... Honors World Civilization I
HIS-102 ..... World Civilization II
HIS-102H ..... Honors World Civilization II
HIS-131 ..... African-American History I
HIS-132 ..... African-American History II
HIS-142 ..... The History of American Women
ITA-201 ..... Intermediate Italian I
LAT-201 ..... Intermediate Latin I
MUS-106 ..... World Music Cultures
MUS-110 ..... African-American Music
MUS-113 ..... Jazz History
PSY-112 ..... Psychology of Women
SLS-202 ..... American Deaf Culture
SOC-201 ..... Sociology of the Family
SOC-205 ..... Social Diversity
SPA-201 ..... Intermediate Spanish I
SPA-202 ..... Intermediate Spanish II
SPA-203 ..... Introduction to the Hispanic Culture

Diversity—Humanities General Education Electives

ART-103 ..... Visual Culture
ART-103H ..... Honors Visual Culture
ART-104 ..... Introduction to Visual Arts
ART-111 ..... Art History I
ART-112 ..... Art History II
ENG-181 ..... Women's Literature
ENG-191 ..... The Myths of the World
ENG-271 ..... World Literature I
ENG-271H ..... Honors World Literature I
ENG-272 ..... World Literature II
ENG-272H ..... Honors World Literature II
FRE-201 ..... Intermediate French I
FRE-202 ..... Intermediate French II
FRE-203 ..... Introduction to French Culture
GER-201 ..... Intermediate German I
HIS-101 ..... World Civilization I
HIS-101H ..... Honors World Civilization I
HIS-102 ..... World Civilization II
HIS-102H ..... Honors World Civilization II
HIS-131 ..... African-American History I
HIS-132 ..... African-American History II
HIS-142 ..... The History of American Women
ITA-201 ..... Intermediate Italian I
LAT-201 ..... Intermediate Latin I
MUS-106 ..... World Music Cultures
MUS-113 ..... Jazz History
SPA-201 ..... Intermediate Spanish I
SPA-202 ..... Intermediate Spanish II
SPA-203 ..... Introduction to the Hispanic Culture

Diversity—Social Science General Education Electives

ANT-101 ..... General Anthropology
ANT-101H ..... Honors General Anthropology
GEO-101 ..... Cultural Geography

INTEGRATED GENERAL EDUCATION ELECTIVES

Ethical Reasoning and Action

BIO-106 ..... Living in the Environment
BIO-140 ..... The Microbial World
CIS-105 ..... Computer Literacy
CIS-206 ..... Advanced Computer Concepts/Applications
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

Program Specific Electives

Business Electives

ACC-104 Financial Accounting
ACC-105 Managerial Accounting
ACC-213 Computerized Accounting
ACC-214 Intermediate Accounting I
ACC-216 Intermediate Accounting II
ACC-223 Income Tax Accounting I
ACC-224 Income Tax Accounting II
ACC-225 Auditing
BMT-101 Business Mathematics I
BMT-102 Business Mathematics II
ECO-101 Macroeconomics
ECO-102 Microeconomics
FIN-201 Investment Principles
LAW-101 Legal Environment/Business Law I
LAW-102 Business Law II
LAW-104 Hospitality Law
MGT-101 Introduction to Business
MGT-102 Introduction to Management
MGT-212 Human Resource Management
MGT-213 Operations Management
MGT-214 Office Management
MGT-215 Labor Relations
MGT-216 Human Relations in Business & Industry
MGT-221 Small Business Management I
MGT-222 Small Business Management II
MGT-223 Introduction to International Business
MKT-101 Principles of Marketing
MKT-102 Retail Management
MKT-123 Introduction to Promotion
MKT-124 Fundamentals of Selling
MKT-125 Principles of E-Commerce
MKT-212 Strategies in Marketing
OST-113 Keyboarding & Document Processing
OST-201 Virtual Entrepreneurship I
OST-202 Virtual Entrepreneurship II
OST-205 Digital Tools for a Virtual Business

Computer Information Systems Electives

CGR-104 Elements & Principles of Graphic Design
CGR-115 Digital Storytelling
CGR-125 Game Design and Development I
CGR-200 Game Design & Development II
CGR-243 Computer Animation III
CGR-244 Special Effects
CGR-255 Game Design & Development III
CGR-260 Comic Book Design
CGR-270 Computer Graphics Internship/Co-Op
CIS-101 Personal Computer Applications
CIS-102 Spreadsheets
CIS-103 Database Management
CIS-105 Computer Literacy
CIS-112 The Technology of the Smartphone
CIS-181 Linux/UNIX Essentials
CIS-187 Linux/Unix Administration I
CIS-191 Internet: Tools and Techniques
CIS-192 Practical Applications of Website Mgt
CIS-206 Advanced Computer Concepts/Applications
CIS-210 Management of Information Systems
CIS-225 Project Management Essentials
CIS-231 System Analysis & Design
CIS-235 SQL Fundamentals I
CIS-236 SQL Fundamentals II
CIS-237 Relational Database Concepts
CIS-238 Database Security and Protection
CIS-241 Relational Database Management I
CIS-242 Relational Database Management II
CIS-243 Relational Database Management III
CIS-245 Database Administration Using Oracle
CIS-246 Database Administration Using Oracle II
CIS-284 SHELL Programming Under Linux/UNIX
CIS-285 Linux/Unix Networking and Security
CIS-288 Linux System Administration
CIS-289 Linux System and Services
CSC-102 Information Literacy in a Digital Era
CSC-102H Honors Info Literacy in a Digital Era
CSC-105 Fundamentals of Programming
CSC-111 Introduction to Programming
CSC-121 Structured Programming (C++)
CSC-122 Computer Science I
CSC-151 HTML Programming
CSC-152 JavaScript for the Web
CSC-161 Introduction to Java
CSC-213 Visual Basic I
CSC-214 Visual Basic II
CSC-215 Visual Basic III
CSC-223 Computer Science II
CSC-224 Advanced C++
CSC-226 Programming Languages
CSC-240 Computer Organization
CSC-252 XML and Related Technologies I
CSC-262 Advanced Java
CST-103 Microcomputer Oper Systems I/Workstation
CST-106 Microcomputer Oper Systems II/Serv Sys
CST-109 Building Upgrading Repairing PCs
CST-204 Computer and Network Security

Computer Programming Electives

CIS-235 SQL Fundamentals I
CIS-236 SQL Fundamentals II
CIS-241 Relational Database Management I
CIS-242 Relational Database Management II
CIS-243 Relational Database Management III
CSC-105 Fundamentals of Programming
CSC-111 Introduction to Programming
CSC-121 Structured Programming (C++)
CSC-122 Computer Science I
CSC-151 HTML Programming
CSC-161 Introduction to Java
CSC-213 Visual Basic I
CSC-214 Visual Basic II
CSC-215 Visual Basic III
CSC-223 Computer Science II
CSC-224 Advanced C++
CSC-226 Programming Languages
CSC-252 XML and Related Technologies I
CSC-262 Advanced Java
CSC-263 Web Component Development in Java
CSC-272 Data Science Applications Programming

Criminal Justice Electives

CRJ-107 Introduction to Probation and Parole
CRJ-108 Community Policing
CRJ-120 Introduction to Homeland Security
CRJ-206 Organized Crime
CRJ-207 Terrorism
CRJ-230 Victimology

Ensemble Business Electives

MUS-115 ..... Jazz Band Ensemble I
MUS-116 ..... Jazz Band Ensemble II
MUS-141 ..... Ensemble I
MUS-142 ..... Ensemble II
MUS-161 ..... College Choir I
MUS-162 ..... College Choir II
MUS-181 ..... Concert Band I
MUS-182 ..... Concert Band II
MUS-195 ..... Orchestra I
MUS-196 ..... Orchestra II
MUS-217 ..... Jazz Band Ensemble III
MUS-218 ..... Jazz Band Ensemble IV
MUS-243 ..... Ensemble III
MUS-244 ..... Ensemble IV
MUS-263 ..... College Choir III
MUS-264 ..... College Choir IV
MUS-283 ..... Concert Band III
MUS-284 ..... Concert Band IV
MUS-297 ..... Orchestra III
MUS-298 ..... Orchestra IV

Health & Exercise Electives

HPE-100 ..... Personal Fitness
HPE-101 ..... Intro to Health and Exercise Science
HPE-102 ..... Health & Wellness
HPE-104 ..... Health & Personal Living
HPE-106 ..... Stress Management
HPE-107 ..... Badminton
HPE-108 ..... Aerobic Dance
HPE-109 ..... Physical Conditioning/Police Recruits
HPE-110 ..... Coed Aerobic Fitness Exercise
HPE-113 ..... Volleyball
HPE-114 ..... Personalized Fitness
HPE-119 ..... Cardio Kickboxing
HPE-120 ..... Fitness with Balls and Bands
HPE-121 ..... Beginning Golf
HPE-123 ..... Taekwondo I
HPE-124 ..... Tai Chi
HPE-125 ..... Self-Defense I
HPE-126 ..... Pilates Based Conditioning
HPE-127 ..... Exercise Techniques & Prescription
HPE-128 ..... Taekwondo II
HPE-130 ..... Consumer Health Decisions
HPE-141 ..... Hatha Yoga
HPE-142 ..... Intermediate Hatha Yoga
HPE-145 ..... Wellspring Fitness Lab I
HPE-146 ..... Wellspring Fitness Lab II
HPE-161 ..... Weight Training
HPE-170 ..... First Aid Safety & Prevention of Injury
HPE-171 ..... Emergency Response
HPE-175 ..... Foundations of Fitness
HPE-178 ..... Motor Development & Motor Learning
HPE-180 ..... Community CPR/American Red Cross
HPE-181 ..... "Basic Life Support (BLS)-""C"" Course-AHA"
HPE-195 ..... Concepts of Individual and Dual Sports
HPE-201 ..... Introduction to Sport Management
HPE-209 ..... Internship: Sports Management
HPE-210 ..... Internship: Personal Trainer Certificate
HPE-211 ..... Theory/Application Physical Training 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-123 ..... Basic Drawing I - AFA
ART-124 ..... Basic Drawing II - AFA
ART-134 ..... Life Drawing I
ART-143 ..... Sculpture I - AFA
ART-144 ..... Sculpture II - AFA
ART-145 ..... Painting I - AFA
ART-146 ..... Painting II - AFA
ART-153 ..... Ceramics & Pottery I - AFA
ART-154 ..... Ceramics & Pottery II - AFA
ART-165 ..... Color: Theory and Practice
ART-166 ..... Two Dimensional Design - AFA Majors
ART-167 ..... Three Dimensional Design - AFA Majors
CGR-123 ..... Interactive Interface Design
CGR-256 ..... Game Design & Development Final Project
FLM-110 ..... Filmmaking I
FLM-205 ..... Film Animation I
FLM-210 ..... Filmmaking II
MUS-100 ..... Beginner Music Lessons
MUS-103 ..... Intermediate Music Lessons
MUS-105 ..... Advanced Music Lessons I
MUS-115 ..... Jazz Band Ensemble I
MUS-116 ..... Jazz Band Ensemble II
MUS-125 ..... Class Piano I
MUS-127 ..... Fundamentals of Music/Sound Engineers
MUS-128 ..... Keyboarding Techniques/Sound Engineers
MUS-133 ..... Audio Recording Techniques I
MUS-134 ..... Audio Recording Techniques II
MUS-135 ..... MIDI/DAW I (Digital Audio Workstation)
MUS-136 ..... MIDI/DAW II (Digital Audio Workstation)
MUS-141 ..... Ensemble I
MUS-142 ..... Ensemble II
MUS-201 ..... Class Piano II
MUS-202 ..... Advanced Music Lessons II
MUS-203 ..... Music Major Recital
MUS-217 ..... Jazz Band Ensemble III
MUS-218 ..... Jazz Band Ensemble IV
MUS-227 ..... Live Sound Reinforcement
MUS-243 ..... Ensemble III
MUS-244 ..... Ensemble IV
PHO-101 ..... Photography I
PHO-102 ..... Photography II
PHO-106 ..... Beginning Digital Photography
PHO-221 ..... Studio Photography
PHO-226 ..... Photo Illustration

Technical Electives

CAD-101 ..... Computer Aided Engineering Graphics
CAD-102 ..... Advanced Computer Aided Eng Graphics
CAD-107 ..... Parametric Design: AutoDesk Inventor
CAD-205 ..... Architectural CADD Using Revit
CAD-206 ..... Solids Modeling: Solids Works
CGR-104 ..... Elements & Principles of Graphic Design
CGR-106 ..... Print Publishing
CGR-115 ..... Digital Storytelling
CGR-123 ..... Interactive Interface Design
CGR-125 ..... Game Design and Development I
CGR-200 ..... Game Design & Development II
CGR-239 ..... 2D Animation
CGR-243 ..... Computer Animation III
CGR-244 ..... Special Effects
CGR-255 ..... Game Design & Development III
CGR-256 ..... Game Design & Development Final Project
CGR-260 ..... Comic Book Design
CGR-270 ..... Computer Graphics Internship/Co-Op
CIM-101 ..... Machine Shop Practices
CIM-115 ..... Microcontroller Applications
CIM-202 ..... Conventional Machinist
CIM-219 ..... CNC Machinist
CIM-221 ..... CNC Programming & CAM
CIM-231 ..... Motors Controllers and Sensors
CIM-255 ..... Precision Machining Project
CIS-105 ..... Computer Literacy
CIS-112 ..... The Technology of the Smartphone
CIS-187 ..... Linux/Unix Administration I
CIS-192 ..... Practical Applications of Website Mgt
CIS-210 ..... Management of Information Systems
CIS-225 ..... Project Management Essentials
CIS-235 ..... SQL Fundamentals I
CIS-236 ..... SQL Fundamentals II
CIS-237 ..... Relational Database Concepts
CIS-238 ..... Database Security and Protection
CIS-241 ..... Relational Database Management I
CIS-242 ..... Relational Database Management II
CIS-243 ..... Relational Database Management III
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CIS-246 ..... Database Administration Using Oracle II
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CIS-288 ..... Linux System Administration
CIS-289 ..... Linux System and Services
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CSC-223 ..... Computer Science II
CSC-224 ..... Advanced C++
CSC-252 ..... XML and Related Technologies I
CSC-262 ..... Advanced Java
CSC-263 ..... Web Component Development in Java
CST-102 ..... Introduction to Networking
CST-103 ..... Microcomputer Oper Systems I/Workstation
CST-106 ..... Microcomputer Oper Systems II/Serv Sys
CST-109 ..... Building Upgrading Repairing PCs
CST-201 ..... Advanced Networking
CST-204 ..... Computer and Network Security
CST-210 ..... Digital Forensics and Investigations
CST-220 ..... Ethical Hacking & Penetration Testing
EET-101 ..... Electrical & Electronic Principles
EET-201 ..... Electrical Circuits
EET-211 ..... Electronics I
EET-212 ..... Electronics II
EET-213 ..... Electronic Communications
EET-221 ..... Digital Circuits
EET-241 ..... Robotics
EET-251 ..... Electronic Projects
EGR-103 ..... Technical Drawing
EGR-201 ..... Statics
EGR-202 ..... Dynamics
FIR-106 ..... NJ Firefighter II
LFO-101 ..... Intro to Photonics & Photonic Safety
LFO-211 ..... Geometric Optics
LFO-212 ..... Pulsed & CW Lasers
LFO-241 ..... Principles of Fiber-Optics
MET-221 ..... Quality Control
MET-231 ..... Strength of Materials
MET-232 ..... Manufacturing Processes
MET-233 ..... Project Design
MET-241 ..... Machine Design
MTH-140 ..... Calculus I
MTH-140H ..... Honors Calculus I
MTH-145 ..... Linear Algebra
MTH-150 ..... Calculus II
MTH-210 ..... Calculus III
MTH-220 ..... Differential Equations
MTH-261 ..... Intro to Mathematical Modeling
MTH-262 ..... Probabilistic Models
PHY-101 ..... Physics I
PHY-102 ..... Physics II
PHY-103 ..... Physics I (for the Non-Science Major)
PHY-201 ..... Physics III
PHY-202 ..... Physics IV

Free Electives

Any college level course listed in the catalogue; providing the prerequisites have been met and the course(s) satisfy the credit requirement.

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