Engineering

CIP Code 15.1301

Certificate of Achievement

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.

CONTACT PERSON

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THIS PROGRAM IS NOT APPROVED FOR FINANCIAL AID