

# Computer Aided Design (CAD)



HEARTLAND  
COMMUNITY COLLEGE

## Associate in Applied Science 61–62 Semester Hours

### General Education Requirements

COMM 101	Intro to Oral Communication	3 hrs.
ENGL 101	Composition I	3
MATH 109	College Algebra for Math & Science	4
Or		
MATH 141	Introduction to Statistics	4
Or		
TMAT 103	Technical Mathematics I	4
MATH 128	Trigonometry	3
Or		
TMAT 105	Technical Mathematics II	4
	Physical Science	<u>4</u>
TOTAL		17-18

### Technical Requirements

CAD 101	Introduction to AutoCAD	3
CAD 110	CAD Software Applications	3
CSCI 101	Intro to Computer Information Science	4
MAIN 101	Industrial Electricity & Systems	3
TECH 114	Introduction to Technical Graphics	<u>3</u>
TOTAL		16

### Drafting Option

CAD 215	CAD Parametric Modeling & Design	3
CAD 233	Residential Architecture	4
CAD 234	Commercial Architecture	3
CAD 240	CAD Rendering and Animation	3
CNST 101	Construction Materials & Methods	3
CNST 113	Construction Documents and Quantity Takeoff	3
DMED 120	Computer Imaging & Design	3
MFTG 110	Manufacturing Processes	3
REEC 110	Green Building Technology	<u>3</u>
TOTAL		28

### Geospatial Technology Option

CNST 152	Surveying and Site Planning	3
CSCI 110	Introduction to Database Management Systems	3
DMED 120	Computer Imaging & Design	3
EASC 161	Physical Geology	4
GEOG 101	World Geography	3
GIS 101	Fundamentals of GIS	3
GIS 171	Remote Sensing	3
GIS 201	Applications of GIS	3
	Technical Electives	<u>3</u>
TOTAL		28

### Construction Management Option

CAD 233	Residential Architecture	4 hrs.
CNST 101	Construction Materials & Methods	3
CNST 103	Building Mechanical & Electrical Systems	3
CNST 113	Construction Documents and Quantity Takeoff	3
CNST 152	Surveying & Site Planning	3
CNST 224	Construction Estimating & Scheduling	3
GIS 101	Fundamentals of GIS	3
REEC 110	Green Building Technology	3
	Technical Electives	<u>3</u>
TOTAL		28

### Program Description

The Computer-Aided Design curriculum introduces students to a broad realm of technical and architectural modeling and imaging, visualization techniques, projection principles, and concepts that typify engineering and architectural drawings, as well as Geographic Information Systems (GIS) and Construction. The program also develops the ability to use CAD systems to create drawings and models that reflect a thorough understanding of the standard practices used in the field. Students are guided through problem-solving activities and design projects that promote team effort and foster creativity. The program requires the student to select an area of specialty from either Geospatial (GIS), Construction, or Drafting. Upon completion of the program, students will be able to seek entry-level employment as CAD technicians, CAD operators, engineering-architectural assistants, site and survey layout technicians, and construction project manager's assistants.

