DRAF 228 3D Architectural Drafting
Credit Hours: 3
Scheduled hours per week
Lecture: 3
Lab: 0
Other: 0

Catalog Course Description: Students will learn the fundamentals of creating 3D models in an architectural environment. Architectural drafting and design will be studied using 3D modeling that can be applied to many areas of engineering and construction.

Pre-requisites: DRAF 116

Co-requisites: None

Course Learning Outcomes:
To assure anyone wishing to create structural drawings using steel, concrete or timber, the means of and the knowledge of the language of visual communication and the skills to produce them.

- To understand the language and terminology used in architectural design.
- To be able to design framed beams, seated beams, columns and hoists.
- To be able to calculate sizes, strengths etc., using steel charts from the American Institute of Steel Construction.
- To be able to identify the different fasteners used in steel construction.
- To be able to draw orthographic views on the system.
- To be able to draw multi-color views using AutoCAD software.
- Use accuracy and neatness, and speed in producing all required drawings.

Topics to be studied:

- Architectural styles
- Basic home designs
- Primary residential design considerations
- Living area
- Sleeping Area
- Service Area
- Designing for health and safety
- Designing for sustainability
- Remodeling and Renovation
- Floor plans
- Foundation plans
- Plot plans
- Roof designs
- Footings, foundations, and concrete

Relationship of Course to Program Learning Outcomes:	
Create two and three-dimensional drawings using AuotCAD, Microstation, Inventor, Revit, and 3D Studio Max.	X
Create three-dimensional animations and walkthroughs using AutoCAD, Revit, Inventor and 3D Studio Max.	X
Apply arithmetic, algebraic, and trigonometric calculations in solving basic design problems.	X
Apply physics to solve mechanical design problems.	
Understand by verbal and visual means the design of drawings and models.	X
Understand in writing to fellow coworkers and customer of any comments and concerns	X

Relationship of Course to General Education Learning Outcomes:	
Composition and Rhetoric Students illustrate a fundamental understanding of the best practices of communicating in English and meet the writing standards of their college or program-based communication requirements.	X
Science & Technology Students successfully apply systematic methods of analysis to the natural and physical world, understand scientific knowledge as empirical, and refer to data as a basis for conclusions.	X
Mathematics & Quantitative Skills Students effectively use quantitative techniques and the practical application of numerical, symbolic, or spatial concepts.	X
Society, Diversity, & Connections Students demonstrate understanding of and a logical ability to successfully analyze human behavior, societal and political organization, or communication.	X
Human Inquiry & the Past Students interpret historical events or philosophical perspectives by identifying patterns, applying analytical reasoning, employing methods of critical inquiry, or expanding problem-solving skills.	X
The Arts & Creativity Students successfully articulate and apply methods and principles of critical and creative inquiry to the production or analysis of works of art.	X
5/3/2016	

Special requirements of the course:

Additional information:

Prepared by: Callix Miller 10/20/17

Date: 10/20/17