**DRAF 229 Autodesk Revit**
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 using Autodesk Revit. Architectural drafting and design will be studied using 3D modeling that can be applied to many areas of engineering and construction.

**Pre-requisites:** DRAF 111

**Co-requisites:** None

**Course Learning Outcomes:**

- Identify, visualize, and draw elevations, floor plans, sleeping area, living area, service area, and place architectural components.
- Create 3D models in Revit that apply to industrial, product, civil, or architectural design.
- Create two dimensional floor plans using Revit software, while following the rules of architectural design.
- Compute and solve geometric construction problems using the principals of plane geometry.
- Use accuracy and neatness, and speed in producing all required drawings.

**Topics to be studied:**

- Levels
- Floor Plans
- Exterior Walls
- Interior Walls
- Placing Doors, Windows, and Wall Openings
- Roofs
- Staircase
- Railings
- Columns
- Components

| **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. | |
| **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**<br>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**<br>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