DRAF 226 3D Parametric Modeling with Inventor

Credit Hours: 3

Scheduled hours per week

Lecture: 3
Lab: 0
Other: 0

Catalog Course Description: Introduction to Autodesk Inventor 3D parametric modeling software. Topics covered are 3D drawing, solid modeling, assemblies, parametric modeling, layouts, and explosion drawings.

Pre-requisites: DRAF 116

Co-requisites: None

Course Learning Outcomes:

- Visualize and draw 3D Models using primitives and composites, model extrusions and revolutions, part files, assembly files and solid model edit.
- 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:

- Drawings setup and saving
- Extrusions and revolutions
- Model display
- Rendering
- Assembly modeling
- Printing
- Model space viewports
- Solid model editing
- UCS options
- Materials
- Drawing layouts

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.	
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.	
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

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