DRAF 413 Character Modeling for Computer Graphics

Credit Hours: 3

Scheduled hours per week

Lecture: 1
Lab: 5
Other: 9

Catalog Course Description: A continuation of DRAF 316. Students will learn advanced modeling techniques to create character models with computer graphics software. Basic character modeling, rigging, mapping, and animation will be applied to character models.

Pre-requisites: DRAF 316

Co-requisites: None

Course Learning Outcomes:

- Create 3D models in 3DS Max Design that apply to industrial, product, civil, or architectural design.
- Create 3D animations using 3DS Max software.
- Create 3D character models using 3DS Max software.
- 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:

- 3D Character Modeling
- Using character front and side profiles as templates for modeling
- Creating custom character models
- Creating accessories for character models
- Combining objects into a single object
- Rigging
- Applying materials
- Advanced rendering
- Animation for visualization of projects
- Advanced mapping
- Autodesk 3DS Max mental ray
- Cameras and rendering
- Modeling vehicles
- Saving character positions for animation
- Duplicating characters

Relationship of Course to Program Learning Outcomes:	
Create two and three-dimensional drawings using AutoCAD, 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 3/27/18

Date: 3/27/18