

University of Arkansas - Fort Smith
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General Syllabus

DFTG 2664 Digital Design

Credit Hours: 4 Lecture Hours: 4 Lab Hours: 0

Prerequisites: DFTG 1234 Engineering Graphics or consent of instructor

Effective Catalog: 2023-2024

I. Course Information

A. Catalog Description

Techniques for visualizing, modeling, texturing, and lighting scenes in a 3D environment using industry-leading software.

B. Additional Information

Topics to be covered in this course include working in a 3D environment, modeling using a variety of techniques, introduction to CG Lights, and using reference images to recreate objects, etc. Students will learn how Autodesk products interact with each other and other software packages.

II. Student Learning Outcomes

A. Subject Matter

Upon successful completion of this course, the student will be able to

1. Use and understand vocabulary and terminology used in industry.
2. Recognize and break down objects into their basic elements/geometric shapes for modeling purposes.
3. Utilize reference images from concept sketches to technical drawings to develop 3D models.
4. Create 3D assets through modeling, texturing, and lighting techniques using computer software.
5. Create final rendered images in multiple digital formats following use-specific application purposes.

B. University Learning Outcomes

This course enhances student abilities in the following areas:

Analytical Skills

Critical Thinking Skills – Students will identify the intended purpose or audience for a given project and then utilize the appropriate software and file formats that will best suit that purpose.

Communication Skills (written and oral)

Students will choose from a list of topics provided and create a tutorial covering that topic, then present the tutorial to the class.

III. Major Course Topics

- A. Introduction to software and User Interface elements.
- B. Project setup and file management practices.
- C. Modeling 3d content using primitives and modifiers.
- D. Modeling 3d content with Compound Objects and Splines.
- E. Working with Editable Mesh and Editable Poly objects.
- F. Creating and editing materials using the Material Editor.
- G. Introduction to Standard CG Lights including shadows and shadow maps.
- H. Working with and placing Camera objects within a digital environment.
- I. Developing images through Render engines to create still and sequence image files.
- J. Describe various types of animations.
- K. Generate rendered images for a variety of media formats.