

Course Syllabus

Department: Science/Technology

Date: 01/18/13

I. Course Prefix and Number: TECH 219

Course Name: 3D AutoCAD

Credit Hours and Contact Hours: 4 credit hours and 6 contact hours

Catalog Description including pre- and co-requisites: *supporting data required for grade prerequisite of 'C' or higher.*

Techniques for creating, viewing, plotting, and displaying 3D AutoCAD models will be presented. Lectures, demonstrations, and labs in a variety of in-depth application projects will enhance the student's CAD creative ability and professional development. Topics include 3-D display, User Coordinate Systems, point filters, extrusion, surfaces, solid modeling, plotting, rendering, and software customization. Prerequisite: TECH 106 or permission of instructor.

Relationship to Academic Programs and Curriculum including SUNY Gen Ed designation if applicable:

This course is a technical elective for the AAS Mechanical Technology and AAS Architectural Technology and Building Sciences programs.

Other students from other programs may also take the course if they have the appropriate background.

II. Course Student Learning Outcomes: *State the student learning outcome(s) for the course (e.g. Student will be able to identify...)*

At the conclusion of this course the student will be able to:

- Use model space and layout space.
- Display 3D models with varying viewpoints and visibility.
- Use User Coordinate Systems (UCS).
- Use Point Filters.
- Extrude 2D objects.
- Create surfaced 3D objects.
- Plot 3D models.
- Create custom menus and toolbars.
- Create and edit 3D solids using Boolean and Modify commands.
- Use solid inquiry commands.
- Create rendered views using backgrounds, lights and materials.

College Learning Outcomes Addressed by the Course: *(check each College Learning Outcome addressed by the Student Learning Outcomes)*

- | | |
|---|---|
| <input type="checkbox"/> writing | <input checked="" type="checkbox"/> computer literacy |
| <input type="checkbox"/> oral communications | <input type="checkbox"/> ethics/values |
| <input type="checkbox"/> reading | <input type="checkbox"/> citizenship |
| <input type="checkbox"/> mathematics | <input type="checkbox"/> global concerns |
| <input checked="" type="checkbox"/> critical thinking | <input checked="" type="checkbox"/> information resources |

III. Assessment Measures (Summarize how the college and student learning outcomes will be assessed): *For each identified outcome checked, please provide the specific assessment measure.*

List identified College Learning Outcomes(s)	Specific assessment measure(s)
<i>eg: writing</i>	<i>eg: student will complete a research paper</i>
Critical Thinking, Information Resources	Student will complete independent design projects.
Computer Literacy	Student will complete directed computer lab assignments.

IV. Instructional Materials and Methods

Types of Course Materials:

A textbook is required for this course. Necessary software is provided by FLCC.

Methods of Instruction (e.g. Lecture, Lab, Seminar ...):

Lecture, Demonstration, Applied Labs

V. General Outline of Topics Covered:

- Introduction to 3D Viewing and Tools
- Creating and Modifying Curves in 3D
- Creating and Modifying Meshes
- Creating 3D Solids and Surfaces
- Editing 3D Solids and Surfaces
- Generating Drawings
- Rendering and Presentations
- Customization

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