

## **NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY CAD 233 - COMPUTER AIDED DRAFTING III (3 CR.)**

### **Course Description**

Exposes students to 3-D and modeling. Focuses on proficiency in Production drawing using a CAD system. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

### **General Course Purpose**

This course will give students, in various technical discipline, knowledge and proficiency in using Computer Aided Drafting and Design (CAD) software in generating three-dimensional wireframe, surface, and solid models. The course will use CAD software extensively, it provides students hands-on skills and experiences in generating 3D models and 3D model presentation using the different visual styles. Students will also be able to assign the materials to 3D models and create various lighting types for rendering and presentation. Skills acquired in previous CAD classes will be complimented with these 3D modeling and presentations skills to prepare the student for employment in the design and/or manufacturing.

### **Course Prerequisites/Corequisites**

Prerequisite: CAD 202

### **Course Objectives**

Upon completion of the course the student will be able to:

- Create 3D models (wire frame, surface and solid models)
- Use 3D solid commands to create and edit
- Use 3D surface commands to generate surface models
- Assign various materials to 3D models
- Assign different types of lighting options to 3D models
- Position different the lights to enhance visual presentation and prints
- Prepare 3D graphics presentation

### **Major Topics to Be Included**

- Review of CAD basic and intermediate operations
- Designing and working with 3D
- Wireframe models
- Surface models
- Solid Models
- Materials assignment
- Lighting
- Rendering
- Printing 3D models
- 3D graphics presentations