Course Description

ARC2171C| Computer Aided Drafting 1 | 4.00 credits

Computer-aided drafting as it applies in the fields of architecture and interior design using office simulation. Emphasis is on the production of computer-aided drafting of working drawings involving different types of structure. Prerequisite: ARC 1126 or 2461. Laboratory fee

Course Competencies

Competency 1: The student will demonstrate knowledge of computer hardware and software in 2-dimension drawings using the Autodesk AutoCAD by**:**
1. Developing an ability to manage and organize files generated by the software
2. Inputting data through keyboard, mouse, and screen interaction
3. Retrieving, managing, and saving files as necessary into a personal device or cloud-based storage.
4. Becoming familiar with the operation of peripheral devices

Competency 2: The student will demonstrate the ability to generate two-dimensional computer drawing files by:
1. Defining drawing parameters and variable settings as required by the AutoCAD software
2. Demonstrating an operational knowledge of all two-dimensional CAD commands used for drawing, editing, dimensioning, and managing a drawing file
3. Detecting symmetry and repetitive patterns, as well as understanding the geometric relationships that exist between objects in a drawing file
4. Efficiently reproducing detected geometric relationships using the commands of the required
5. Software: AutoCAD
6. Utilizing the text editor for the purpose of generating text
7. Producing drawings that illustrate skills needed to use the required software: AutoCAD

Competency 3: The student will be able to develop a drawing management system within the required AutoCAD software by:
1. Creating the settings related to common drawing templates
2. Using template files efficiently to create new drawing files
3. Setting up a system of drawing layers
4. Creating and deploying a system of dimension settings to efficiently utilize dimensioning commands and options
5. Creating a manageable library of complex objects or "blocks."

Competency 4: The student will demonstrate an ability to print a drawing file to conventional printers and plotters, as well as create a digitally shareable drawing file:
1. Understanding modeling and printing interfaces
2. Creating viewports windows to print drawings in different scales
3. Plotting architectural drawings including elements such as lines, systems, dimensions, and notes
4. Creating PDF files of plotted drawings and resizing them to various paper sizes while ensuring the accurate scale is maintained

Learning Outcomes:
- Use quantitative analytical skills to evaluate and process numerical data
- Formulate strategies to locate, evaluate, and apply information
- Demonstrate an appreciation for aesthetics and creative activities