BARTON COMMUNITY COLLEGE

**COURSE SYLLABUS**

1. **GENERAL COURSE INFORMATION**

Course Number: DRAF 1840

Course Title: Computer-Aided Drafting and Design I

Credit Hours: 3

Prerequisites: None

Division/Discipline: Workforce Training and Economic Development/Drafting

Course Description: This course is a study of the basic elements in Computer Aided Drafting and Design. Selected drawing and design projects will be completed using CAD software for comprehension of basic shapes to complete sets of engineering drawings. Upon completion of the course, students will be prepared to take the Autodesk AutoCAD Certified User Exam, an official, industry-standard credential recognized by schools and employers.

1. **INSTRUCTOR INFORMATION**
2. **COLLEGE POLICIES**

Students and faculty of Barton Community College constitute a special community engaged in the process of education. The College assumes that its students and faculty will demonstrate a code of personal honor that is based upon courtesy, integrity, common sense, and respect for others both within and outside the classroom.

Plagiarism on any academic endeavors at Barton Community College will not be tolerated. The student is responsible for learning the rules of, and avoiding instances of, intentional or unintentional plagiarism. Information about academic integrity is located in the Student Handbook.

The College reserves the right to suspend a student for conduct that is determined to be detrimental to the College educational endeavors as outlined in the College Catalog, Student Handbook, and College Policy & Procedure Manual. (Most up-to-date documents are available on the College webpage.)

Any student seeking an accommodation under the provisions of the Americans with Disability Act (ADA) is to notify Student Support Services via email at [disabilityservices@bartonccc.edu](mailto:disabilityservices@bartonccc.edu).

1. **COURSE AS VIEWED IN THE TOTAL CURRICULUM**

This is one of a series of technical courses for the Drafting Technology program. This course is designed to develop useful, job-oriented skills. It is highly recommended for individuals entering the fields of architecture, drafting, engineering, interior decorating and design, or the machine trades. If students are planning to enter an engineering program at a university, each student should verify with the transfer university how this course will transfer.

The transferability of all college courses will vary among institutions, and perhaps even among departments, colleges, or programs within an institution. Institutional requirements may also change without prior notification. Students are responsible to obtain relevant information from intended transfer institutions to insure that the courses the student enrolls in are the most appropriate set of courses.

## ASSESSMENT OF STUDENT LEARNING

Barton Community College is committed to the assessment of student learning and to quality education. Assessment activities provide a means to develop an understanding of how students learn, what they know, and what they can do with their knowledge. Results from these various activities guide Barton, as a learning college, in finding ways to improve student learning.

Course Outcomes, Competencies, and Supplemental Competencies:

1. Utilize CAD software
   1. Access tools to create, open, and publish files
   2. Interact with software using the menu bar, ribbon, and shortcut keys
   3. Navigate by using zoom and pan commands
2. Create drawings
   1. Utilize multiple coordinate entry options
   2. Create objects using the appropriate draw tools
   3. Utilize object snaps, polar tracking, polar snaps, and object snap tracking to accurately place and create objects
   4. Apply drawing and drafting settings
   5. Create hatch patterns and fills
3. Manipulate and modify objects
   1. Utilize grip editing to manipulate objects
   2. Utilize different object selection methods
   3. Alter objects by using the appropriate modify tools
4. Organize drawings elements
   1. Utilize layers to organize objects
   2. Utilize properties pallete to display and change properties
   3. Utilize linetypes to distinguish objects
   4. Utilize inquiry commands to obtain geometric information
5. Work with layouts
   1. Create a new layout
   2. Create and manipulate viewports
   3. Establish sheet size and scales
   4. Create a working drawing with multiple layouts
6. Annotate and dimension your drawing
   1. Utilize commands to create and format text
   2. Create and use text styles
   3. Create multiple types of dimensions for objects
   4. Create and modify dimension styles to control appearance of dimensions
   5. Create and edit multileaders
   6. Utilize tables
7. Work with reusable content.
   1. Define and create blocks
   2. Use DesignCenter to reuse data and blocks
   3. Access tool palettes and utilize tools
   4. Create a drawing template file
8. Plot and publish drawings
   1. Create and utilize page setups
   2. Plot drawing using multiple methods
   3. Use a large-format plotter
9. **INSTRUCTOR’S EXPECTATIONS OF STUDENTS IN CLASS**
10. **TEXTBOOKS AND OTHER REQUIRED MATERIALS**
11. **REFERENCES**
12. **METHODS OF INSTRUCTION AND EVALUAITON**
13. **ATTENDANCE REQUIREMENTS**
14. **COURSE OUTLINE**