**BARTON COMMUNITY COLLEGE**

**COURSE SYLLABUS**

# **GENERAL COURSE INFORMATION**

Course Number: DRAF 1843

Course Title: Descriptive Geometry

Credit Hours: 3

PrerequisiteS: MATH 1809 Basic Applied Mathematics with a grade of C or better, *or* an appropriate ASSET, ACT, SAT, or Accuplacer score.

Division/Discipline: Workforce Training and Economic Development/Drafting

Course Description: This course involves an examination of the graphical solution to problems involving points, lines and planes in space. This will include principal, primary, and oblique views, intersections, warped surfaces, and surface developments.

# **INSTRUCTOR INFORMATION**

# **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).

# **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.

1. **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. Demonstrate understanding of the “language” of descriptive geometry

## demonstrate analytic problem solving skills

1. apply mathematical calculations for proper view placement
2. convert standard measuring systems to metric system
3. identify and demonstrate use of drafting tools/equipment and computer
4. Display proficiency in descriptive geometry computations
   1. apply algebraic formulas in geometric construction
   2. calculate and implement the use of rise and run
   3. solve for the true length and true size of lines and planes
   4. solve for the true slope, grade, and bearing of planes
5. Implement geometric techniques to solve drafting problems
   1. determine the edge view of planes
   2. determine the views, slopes, and bearing of:
      1. the shortest possible distance between two lines
      2. the shortest possible distance at a predetermined slope or grade between two lines
      3. a line intersecting two lines at predetermined angles
      4. a line or plan making predetermined angles with two given planes
   3. establish the cut and fill lines of straight, curved, level, or inclined roadways and other shapes
   4. determine the figure of intersection between surfaces, surfaces and solids, and solid and solids
   5. demonstrate graphical analysis of simple problems
   6. use concepts of dimensions and tolerances
   7. identify types and applications of fasteners

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1. **INSTRUCTOR'S EXPECTATIONS OF STUDENTS IN CLASS**

# **TEXTBOOKS AND OTHER REQUIRED MATERIALS**

# **REFERENCES**

# **METHODS OF INSTRUCTION AND EVALUATION**

# **ATTENDANCE REQUIREMENTS**

# **COURSE OUTLINE**