

COURSE SYLLABUS

Course Title:	Engineering Graphics	Date submitted:	02/12/08 (08-41)
Department:	Business and Technology		
Curriculum:	Technology Studies		
Course Descriptors: Make certain that the course descriptors are consistent with college and Board of Trustees policies, and the current course numbering system.	Course Code: (eg. ACC 101)	MFG*127	Prerequisites: C- or better in Elementary Algebra Foundations (MAT*095)
	Course Type:	X	
	A: Clinical B: Lab D: Distance Learning I: Individual/Independent L: Lecture N: M: Seminar Internship P: Practicum U: Studio X: Combined Lecture/Lab Y: Combined Lecture/ Clinical/Lab Z: Combined Lecture/Studio		
	Elective Type:	G	
	E: English FA: Fine Arts HI: History HU: Humanities LA: Liberal Arts FL: Foreign Language M: Math S: Science SS: Social Science G: General		
	Credit Hours:	3	Corequisites: None
	Developmental: (yes/no)	No	
	Lecture:	3	
	Clinical:	0	
	Lab:	0	
Studio:	0		
Contact Hours:	0		
Other:	0		
TOTAL:	3		
Class Maximum:	19	Other Requirements: None	
Semesters Offered:	F/Sp		
Ability-Based Education (ABE) Statement:	<p>Tunxis faculty and staff have identified a set of specific abilities (skills and knowledge) that students should develop in a successful and well-rounded education. We believe that ten of these abilities, the general-education abilities, are necessary for all students to be successful at work, in future education, and as citizens. In most college-levels course at Tunxis, students will be assessed on at least one general-education ability as well as abilities that are specific to the course. Students in professional programs will also be assessed on abilities that are important to that profession. (In some externally accredited programs, general-education abilities may not be assessed in every course, but all abilities will be assessed by the time the student completes the program.)</p> <p>On some assignments, students will receive feedback on the degree to which they have mastered certain abilities. When this happens, students will receive a rating of 1 (Not Satisfactory), 2 (Satisfactory), or 3 (Distinguished) and an explanation for the rating. The goal will be to let students know where they stand at a specific time and what they need to do in order to improve in these abilities. We are convinced that development of these abilities, and the general-education abilities in particular, is critical to students' success in all aspects of life.</p>		
Catalog Course Description:	Provides practical explanations of how to interpret engineering/technical drawings using the latest American National Standards Institute (ANSI) standards. Focus is on standardization and quality standards applied in the engineering and technology trades with regard to technical drawings.		

Topical Outline:

List course content in outline format.

1. Introduction to Print Reading
 - a. Basis for Interpreting Drawings
 - b. Types of Drawings
2. Drawing to Scale
 - a. Types of Scales
 - b. Interpretation of Scaled Objects
 - c. Notation
3. Dimensioning
 - a. Angles
 - b. Symbols
 - c. Specifications
 - d. Tolerance and Allowances
 - e. Fits and Form Tolerances
4. Interpreting Drawings
 - a. Arrangement of Views
 - b. Section Views
 - c. Auxiliary Views
 - d. Assembly Drawings
5. Drawings and Manufacturing Processes
 - a. Castings
 - b. Numerical Control
 - c. Welding
 - d. Forging
 - e. Machining
 - f. Sheet Metal Drawings
6. Quality Control and Advanced Tolerancing

Outcomes:
Describe measurable skills or knowledge that students should be able to demonstrate as evidence that they have mastered the course content.

Upon successful completion of this course, the student will be able to do the following:
COURSE:

1. interpret ANSI and SI Metric drafting symbols and standards
2. define common terminology associated with engineering and technical drawings
3. identify manufacturing process and notes and their meanings
4. use scale types and factors to interpret drawing measurements
5. identify the types of drawings used to describe mechanical parts and systems
6. explain the importance of tolerancing and engineering specifications to the quality control process

PROGRAM: *(Numbering reflects Program Outcomes as they appear in the college catalog)*

Technology Studies Associate Degree:

1. identify and apply the design principles of engineering and technology when solving basic engineering problems
2. utilize the tools, materials, techniques, and technical processes of engineering and technology when solving technical problems
3. apply the basic concepts of science and mathematics to the study of electricity and electronics, materials, computer-aided design (CAD), manufacturing, and construction

GENERAL EDUCATION: *(Numbering reflects General Education Outcomes as they appear in the college catalog)*

1. **Communication**
 - 1.1 uses basic techniques of the medium to communicate in assigned tasks

<p>Evaluation: List how the above outcomes will be assessed.</p>	<p>Assessment will be based on the following criteria: Homework assignments Projects Quizzes and exams</p>
<p>Instructional Resources: List library (e.g. books, journals, on-line resources), technological (e.g. Smartboard, software), and other resources (e.g. equipment, supplies, facilities) required and desired to teach this course.</p>	<p>Required: None Desired: None</p>
<p>Textbook(s)</p>	<p>Refer to current academic year printout.</p>