

# COURSE SYLLABUS

<b>Course Title:</b>	Engineering Statics	<b>Date submitted:</b>	March 2014 (AAC: 14-27)		
<b>Department:</b>	Business and Technology				
<b>Curriculum:</b>	Engineering Science/Technology Studies				
<b>Course Descriptors:</b> Make certain that the course descriptors are consistent with college and Board of Trustees policies, and the current course numbering system.	<b>Course Code:</b> (eg. ACC 101)	EGR*211	<b>Prerequisites:</b>		
	<b>Course Type:</b>	L		C- or better in Calculus II (MAT*256)	
	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	<b>Elective Type:</b>	G/LAS	<b>Corequisites:</b>	
	E: English FA: Fine Arts FL: Foreign Language G: General HI: History HU: Humanities LAS: Liberal Arts & Sciences M: Math S: Science SS: Social Science	<b>Credit Hours:</b>	3		Calculus II (MAT*256)
	<b>Developmental:</b> (yes/no)	No	<b>Other Requirements:</b>		
	Lecture:	3		None	
	Clinical:	0			
	Lab:	0			
	Studio:	0			
	Other:	0			
<b>Contact Hours:</b>	TOTAL:	3			
<b>Class Maximum:</b>	19	<b>Semesters Offered:</b>			
<b>Semesters Offered:</b>	F/Sp				
<b>Ability-Based Education (ABE) Statement:</b>	At Tunxis Community College students are assessed on the knowledge and skills they have learned. The faculty identified the General Education Abilities critical to students' success in their professional and personal lives. In every class, students are assessed on course abilities, sometimes program abilities, and, in most classes, at least one General Education Ability. Students will receive an evaluation of the degree to which they have demonstrated or not demonstrated that General Education Ability.				
<b>Catalog Course Description:</b>	Fundamentals of statics, including the resolution and composition of forces, the equilibrium of force systems, the analysis of forces acting on structure and machines, centroids, and moment of inertia.				
<b>Topical Outline:</b> List course content in outline format.	<ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Statics of Particles</li> <li>3. Equilibrium of Rigid Bodies</li> <li>4. Centroids and Centers of Gravity</li> <li>5. Analysis of Structures</li> <li>6. Analysis of Frames and Machines</li> <li>7. Forces in Beams</li> </ol>				

	8. Friction
<p><b>Outcomes:</b> Describe measurable skills or knowledge that students should be able to demonstrate as evidence that they have mastered the course content.</p>	<p><b>Upon successful completion of this course, the student will be able to do the following:</b> <b>COURSE:</b></p> <ol style="list-style-type: none"> <li>1. demonstrate an understanding of systems of forces and be able to draw free-body diagrams</li> <li>2. demonstrate an understanding of the concepts of tensor stress and strain</li> <li>3. analyze simple solid mechanics problems</li> <li>4. analyze the range of material response to stress, up to and including failure</li> <li>5. explain the roles played by stress concentrations and flaws in promoting failure</li> </ol> <hr/> <p><b>PROGRAM:</b> <i>(Numbering reflects Program Outcomes as they appear in the college catalog)</i> <b>Engineering Science Associate Degree</b></p> <ol style="list-style-type: none"> <li>1. demonstrate an understanding of the foundational mathematical and scientific concepts appropriate to the fields of mechanical, civil, or industrial engineering</li> </ol> <p><b>Technology Studies Associate Degree</b></p> <ol style="list-style-type: none"> <li>1. identify and apply the design principles of engineering and technology when solving basic engineering problems</li> </ol> <hr/> <p><b>GENERAL EDUCATION:</b> <i>(Numbering reflects General Education Outcomes as they appear in the college catalog)</i></p> <p>7. <b>Quantitative Reasoning</b> -Students will learn to recognize, understand, and use the quantitative elements they encounter in various aspects of their lives. Students will develop a habit of mind that uses quantitative skills to solve problems and make informed decisions.</p> <p><b>Demonstrates:</b> Interprets numerical information and applies sufficient laws of logic and mathematics to solve problems using numbers, symbols, graphs and/or descriptions.</p> <p><b>Does Not Demonstrate:</b> Misinterprets numerical information or insufficiently applies laws of logic and mathematics to solve problems using numbers, symbols, graphs and/or descriptions.</p>
<p><b>Evaluation:</b> List how the above outcomes will be assessed.</p>	<p><b>Assessment will be based on the following criteria:</b></p> <ol style="list-style-type: none"> <li>1. Homework assignment</li> <li>2. Hands-on projects</li> <li>3. Quizzes and exams</li> </ol>
<p><b>Instructional Resources:</b>  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><b>Required:</b> None <b>Desired:</b></p>
<p><b>Textbook(s)</b></p>	<p>Refer to current academic year printout.</p>