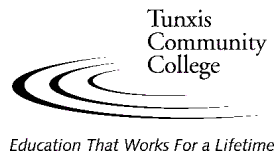


COURSE SYLLABUS



Course Title:	Industrial Energy Systems		Date submitted:	Spring, 2017 (AAC: 17-41)
Department:	Business & Technology Department			
Curriculum:	Energy Management Program			
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)	NRG*132	Prerequisites: C- or better in Intermediate Algebra (MAT*137), AND Composition (ENG*101) or above	Corequisites: Introductory Physics (PHY*110)
	Course Type:	X		
	A: Clinical B: Lab D: Distance Learning I: Individual/Independent L: Lecture N: Internship M: Seminar P: Practicum U: Studio X: Combined Lecture/Lab Y: Combined Lecture/ Clinical/Lab Z: Combined Lecture/Studio			
	Elective Type:	G		
	AH: Art History E: English FA: Fine Arts G: General HI: History HU: Humanities LA: Liberal Arts FL: Foreign Language M: Math S: Science SS: Social Science			
	Credit Hours:	3		
	Developmental: (yes/no)	No		
	Lecture:	2		
	Clinical:	0		
	Lab:	2		
	Contact Hours:	0		
	Other:	0		
TOTAL:	4			
Class Maximum:	24	Other Requirements: None		
Semesters Offered:	Sp			
Ability Based Education (ABE) Statement:	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.			

SYLLABUS — page

<p>Catalog Course Description:</p>	<p>Energy Managers are called upon to assess ways to save money by saving energy in industrial processes. Saving energy can typically lead to other direct benefits such as a more efficient process, better tolerances on parts, and less wear and tear on manufacturing equipment. Understanding these unique systems, accurately projecting energy savings, dealing with a business's core operations and convincing reluctant managers that saving energy equals greater profit are valuable skills into today's energy market. Topics include Compressed Air Systems and Controls, Lighting, Steam Systems, Ventilation, Dust Collection and Energy Auditing.</p>
<p>Topical Outline: List course content in outline format.</p>	<ol style="list-style-type: none"> 1. Process Control Systems Overview 2. Process Control 3. Pressure Systems (Comment: do you mean pneumatic?) 4. Thermal Systems 5. Level Determining Systems Flow Process Systems 6. Analytical Process Systems (Microprocessor Systems 7. Automated Processes and Robotic Systems
<p>Outcomes: Describe measurable skills or knowledge that students should be able to demonstrate as evidence that they have mastered the course content.</p>	<p>After successful completion of the course students will be able to:</p> <ul style="list-style-type: none"> • demonstrate an ability to use critical thinking and problem solving skills to evaluate industrial process and building energy use and be able to recommend effective energy saving solutions; • demonstrate an ability to understand and assess the obstacles associated with the assessment, sale and implementation of industrial energy audits and energy conservation measures (ECSM's • Evaluate the advantages, limitations and potential of various industrial system ECSM's • demonstrate an understanding of the evaluative engineering and financial aspects of industrial projects; • demonstrate familiarity with the regulatory aspects of industrial energy projects; • demonstrate familiarity with State policies, financing and utility-led programs in CT <p>PROGRAM: (Numbering reflects Program Outcomes as they appear in the college catalog)</p> <ol style="list-style-type: none"> 5. develop and evaluate inferences and predictions that are based on collected data 7. demonstrate an ability to use problem-solving techniques & mathematics to transform concepts into energy related projects. <p>GENERAL EDUCATION: (Numbering reflects General Education Outcomes as they appear in the college catalog)</p>
<p>Evaluation: List how the above outcomes will be assessed.</p>	<p>Assessment will be based on the following criteria:</p> <ol style="list-style-type: none"> 1. Tests and Quizzes 2. Homework - Problem Sets, Short Answer Questions, and Research Problems 3. Class Participation 4. Term Project and/or Final Exam
<p>Instructional Resources:</p>	<p>Required: Smartboard</p>

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SYLLABUS — page

<p>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>Textbook(s)</p>	<p>Required: textbook will be adopted at the discretion of the instructor: Class Handouts & Tutorials Online readings of OER's.</p>