

COURSE SYLLABUS



Education That Works For a Lifetime

Course Title:	Principles of Organic Chemistry II		Date submitted: Spring 2016 (AAC: 16-02)	
Department:	Mathematics and Science			
Curriculum:	Chemistry			
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)	CHE*214	Prerequisites: C- or better in Organic Chemistry I (CHE*211) or Principles of Organic Chemistry I (CHE*213); and permission of department chair or instructor	
	Course Type:	D/L		
	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/LAS/S		
	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			
	Credit Hours:	3		
	Developmental: (yes/no)	NO		
	Lecture:	3		
	Clinical:	0		
	Lab:	0		
Studio:	0			
Other:	0			
Contact Hours:	TOTAL: 3			
Class Maximum:	20	Corequisites: None		
Semesters Offered:	Sp/Su			
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.			
Catalog Course Description:	Continuation of Organic Chemistry I. Topics include: aromatic compounds, aldehydes, ketones, carboxylic acids and their derivatives, amines, phenols and aryl halides. Reaction mechanism studies include carbanions, electrophilic substitutions and nucleophilic additions and nucleophilic substitutions. This course is intended for students who have successfully completed Organic Chemistry Laboratory sessions but who wish to review their lecture component without repeating the laboratory requirement. This course is not intended for those students who believe they only need the lecture or do not have time for the laboratory requirements, as the laboratory sessions will not be available later alone. This course is the second of a two-semester sequence.			

Topical Outline: List course content in outline format.	<p>Lecture:</p> <ol style="list-style-type: none"> 1. Aromatic compounds, including halides and aryl alkanes 2. Conjugation, resonance and dienes: Diels Alder Reaction 3. Aldehydes and ketones 4. Carboxylic acids and derivatives 5. Carbonyl Condensation Reactions: Aldol, Claisen 6. Amines 7. Phenols 8. Heterocyclic compounds 9. Condensed ring systems 10. Electrophilic aromatic substitution reactions 11. Nucleophilic addition and substitution reactions
Outcomes: Describe measurable skills or knowledge that students should be able to demonstrate as evidence that they have mastered the course content.	<p>Upon successful completion of this course, the student will be able to do the following:</p> <p>Lecture:</p> <ol style="list-style-type: none"> 1. identify aromatic compounds, including halides and aryl alkanes 2. explain conjugation, resonance and dienes: Diels Alder reaction 3. identify and predict reactions of aldehydes and ketones 4. identify, give examples and discuss reactivity of carboxylic acids and derivatives 5. discuss the carbonyl condensation reactions: e.g., aldol, claisen 6. identify and discuss Amines and reactions 7. identify phenols and discuss phenolic chemistry 8. identify heterocyclic compounds and illustrate their chemistry 9. explain condensed ring systems 10. discuss electrophilic aromatic substitution reactions 11. discuss nucleophilic addition and substitution reactions
	<p>PROGRAM: (<i>Numbering reflects Program Outcomes as they appear in the college catalog</i>)</p> <p>N/A</p> <p>GENERAL EDUCATION: : (<i>Numbering reflects General Education Outcomes as they appear in the college catalog</i>)</p> <p>8. Scientific Knowledge - Students will gain a broad base of scientific knowledge and methodologies in the natural sciences. This will enable them to develop scientific literacy, the knowledge and understanding of scientific concepts and processes essential for personal decision making and understanding scientific issues.</p> <p>Demonstrates: Consistently recalls and correctly applies discipline-specific terms, relevant theories, laws, and concepts to analyze and explain scientific information.</p> <p>Does Not Demonstrate: Inconsistently recalls or incorrectly applies discipline-specific terms, relevant theories, laws, and concepts to analyze or explain scientific information.</p>
Evaluation: List how the above outcomes will be assessed.	<p>Assessment will be based on some or all of the following criteria:</p> <p>quizzes examinations brief reports library research reports</p>
Instructional Resources:	<p>Desired: Software for molecular modeling</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.	
Textbook(s)	Smith, <i>Organic Chemistry</i> , 4 nd ed.; McGraw Hill A Student Study Guide/Solutions Manual is available