

**Texas State Technical College Waco
Course Syllabus**

Course Rubric & Number: CHEM 2325

Lecture/Lab Hours: 3- 0

CIP Code: 400505138

Course Title: **Organic Chemistry II**

Course Description: Study of the properties and behavior of hydrocarbon compounds and their derivatives. Designed for students in science or pre-professional programs.

Prerequisites: CHEM 2323, CHEM 2321

Corequisites: CHEM-2125

Instructor: Richard Wheat

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Building & Office Room Number: TSC - Office

Department Chair:

Kirk Hunter



Date: 29 June 2010

Approved by CIP Committee:

Date:

End-of-Course Learning Outcomes:

CO1: Determine different organic families by structure features.

CO2: Nomenclature of organic chemical.

CO3: Preparation of organic chemicals.

CO4: Reactions of organic chemicals.

CO5: Synthesis of organic chemicals.

CO6: Mechanisms of selected reactions.

Resources:

Tools & Materials Students Purchase

| Quantity | Item Description |
|----------|---|
| 1 | Organic Chemistry – Morrison and Boyd – Prentice Hall – 6th edition |

TSTC Grading Policy:

(Grades for all Major courses must be C or better)

| Grade | Percent | Description | Grade Points |
|--|----------|--|--------------|
| A | 90-100 | Excellent/Superior Performance Level | 4 |
| B | 80-89 | Above Required Performance Level | 3 |
| C | 70-79 | Minimum Required Performance Level | 2 |
| D | 60-69 | Below Required Performance Level | 1 |
| F | Below 60 | Failure to meet Performance Requirements | 0 |
| IP | -- | In Progress | |
| W | -- | Withdrawal | 0 |
| CR | -- | Credit | 0 |
| AUD | -- | Audit of Course | 0 |
| See College Catalog for complete descriptions. | | | |

Instructor's Participation Policy:

The student must be present for all tests, quizzes, and assignments. Failure to attend will result in a grade of zero for that particular test, quiz, laboratory or assignment.

Students with Disabilities:

If you have a documented disability that will impact your work in this class, please contact the Office of Deaf and Disabled Student Services (D/DSS) so that appropriate arrangements for your accommodations can be made. In accordance with the federal law, a student requesting accommodations must provide documentation of his/her disability to D/DSS. For information, visit D/DSS in the Fentress Center or call (254) 867-3600.

Once you and a D/DSS representative have signed a Letter of Special Accommodations, take the accommodations letter to each class for which an accommodation has been determined. Meet individually with each class instructor to discuss accommodations letter. Have the instructor sign and keep a copy of the letter. Take the original letter, signed by the instructor, back to D/DSS so they are aware that the instructor has been officially informed of the need for accommodations.

Course Assessments & Grading Scheme:

| <i>Assessments</i> | | <i>% of Final Grade</i> |
|---|------------|-------------------------|
| Test 1: Aldehydes, ketones, carboxylic acid and derivatives | 100 points | 16.67% |
| Test 2: Amines and polymers | 100 points | 16.67% |
| Test 3: Lipids | 100 points | 16.67% |
| Test 4: Carbohydrate | 100 points | 16.67% |
| Test 5 - Proteins | 100 points | 16.67% |
| Test 6 Nucleic Acids | 100 points | 16.67% |
| Final Course Grade | | 100% |

A = 90-100%

B=80-89%

C=70-79%

D=60-69%

Description of Graded Elements of the Course:

| <i>End-of-Course Learning Outcomes</i> | <i>Assessment Measure(s)</i> | <i>Submittal of Assessment</i> | <i>Grading Criteria</i> | <i>% of Final Grade</i> |
|--|---|------------------------------------|-------------------------------------|-------------------------|
| CO1: Determine different organic families by structure features; CO2: Nomenclature | Test 1: Aldehydes, ketones, carboxylic acid and derivatives | Written using a writing instrument | Correct answers based on scientific | 16.67% |

| <i>End-of-Course Learning Outcomes</i> | <i>Assessment Measure(s)</i> | <i>Submittal of Assessment</i> | <i>Grading Criteria</i> | <i>% of Final Grade</i> |
|---|------------------------------|------------------------------------|--|-------------------------|
| of organic chemical; CO3: Preparation of organic chemicals; CO4: Reactions of organic chemicals; CO5: Synthesis of organic chemicals; and CO6: Mechanisms of selected reactions. | | | fact | |
| CO1: Determine different organic families by structure features; CO2: Nomenclature of organic chemical; CO3: Preparation of organic chemicals; CO4: Reactions of organic chemicals; CO5: Synthesis of organic chemicals; and CO6: Mechanisms of selected reactions. | Test 2: Amines and polymers | Written using a writing instrument | Correct answers based on scientific fact | 16.67% |
| CO1: Determine different organic families by structure features; CO2: Nomenclature of organic chemical; CO3: Preparation of organic chemicals; CO4: Reactions of organic chemicals; CO5: Synthesis of organic chemicals; and CO6: Mechanisms of selected reactions. | Test 3: Lipids | Written using a writing instrument | Correct answers based on scientific fact | 16.67% |
| CO1: Determine different organic families by structure features; CO2: Nomenclature of organic chemical; CO3: Preparation of organic chemicals; CO4: Reactions of organic chemicals; CO5: Synthesis of organic chemicals; and CO6: Mechanisms of selected reactions. | Test 4: Carbohydrate | Written using a writing instrument | Correct answers based on scientific fact | 16.67% |
| CO1: Determine different organic families by structure features; CO2: Nomenclature of organic chemical; CO3: Preparation of organic chemicals; CO4: Reactions of organic chemicals; CO5: Synthesis of organic chemicals; and CO6: Mechanisms of selected reactions. | Test 5 - Proteins | Written using a writing instrument | Correct answers based on scientific fact | 16.67% |

| <i>End-of-Course Learning Outcomes</i> | <i>Assessment Measure(s)</i> | <i>Submittal of Assessment</i> | <i>Grading Criteria</i> | <i>% of Final Grade</i> |
|---|------------------------------|------------------------------------|--|-------------------------|
| CO1: Determine different organic families by structure features; CO2: Nomenclature of organic chemical; CO3: Preparation of organic chemicals; CO4: Reactions of organic chemicals; CO5: Synthesis of organic chemicals; and CO6: Mechanisms of selected reactions. | Test 6 Nucleic Acids | Written using a writing instrument | Correct answers based on scientific fact | 16.67% |

Course Policies:

Late Work:

Late work receives a zero.

Electronic Communication Devices:

All cell phones, pagers, computers and other electrical communication devices will be turned off completely during class (this includes no vibrate mode). Failure to comply with this requirement will result in the student being required to leave the class for the rest of the class period during which the violation occurs. Any work missed may not be made up.

Make-up work:

Make-up work receives a zero

Course Schedule:

Week # 1: Syllabus and Course Outline, **Aldehydes and ketones,**

Week # 2: **Aldehydes and ketones**

Week # 3: **Carboxylic acids**

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| Week # 4: Carboxylic acids | | |
| Week # 5: Amines | | |
| CO1: Determine different organic families by structure features; CO2: Nomenclature of organic chemical; CO3: Preparation of organic chemicals; CO4: Reactions of organic chemicals; CO5: Synthesis of organic chemicals; and CO6: Mechanisms of selected reactions. | Test 1 | Aldehydes, ketones, carboxylic acid and derivatives |
| Week # 6: Amines and polymers | | |
| Week # 7: Amines and polymers | | |
| Week # 8: Infrared | | |
| Week # 9: Lipids | | |
| CO1: Determine different organic families by structure features; CO2: Nomenclature of organic chemical; CO3: Preparation of organic chemicals; CO4: Reactions of organic chemicals; CO5: Synthesis of organic chemicals; and CO6: Mechanisms of selected reactions. | Test 2 | Amines and polymers |
| Week # 10: Lipids and carbohydrates | | |
| CO1: Determine different organic families by structure features; CO2: Nomenclature of organic chemical; CO3: Preparation of organic chemicals; CO4: Reactions of organic chemicals; CO5: Synthesis of organic chemicals; and CO6: Mechanisms of selected reactions. | Test 3 | Lipids |
| Week # 11: - Carbohydrates and proteins | | |
| Week # 12: Proteins | | |
| CO1: Determine different organic families by structure features; CO2: Nomenclature of organic chemical; CO3: Preparation of organic chemicals; CO4: Reactions of organic chemicals; CO5: Synthesis of organic chemicals; | Test 4 | Carbohydrates |

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| and CO6: Mechanisms of selected reactions. | | |
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| Week # 13: Proteins and nucleic acids |
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| Week # 14: Nucleic Acids | | |
| CO1: Determine different organic families by structure features; CO2: Nomenclature of organic chemical; CO3: Preparation of organic chemicals; CO4: Reactions of organic chemicals; CO5: Synthesis of organic chemicals; and CO6: Mechanisms of selected reactions. | Test 5 | Proteins |

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|---|--------|---------------|
| Week # 15: Nucleic Acids | | |
| CO1: Determine different organic families by structure features; CO2: Nomenclature of organic chemical; CO3: Preparation of organic chemicals; CO4: Reactions of organic chemicals; CO5: Synthesis of organic chemicals; and CO6: Mechanisms of selected reactions. | Test 6 | Nucleic Acids |

Modification of the syllabus:

This syllabus is intended as a tentative set of guidelines for this course and is not a contract. At any time during the semester, the instructor reserves the right to make modifications in content, schedules and requirements as deemed necessary to promote the best education possible within the prevailing conditions and circumstances affecting this course.