

2401 Organic Chemistry I **Fall 2016**

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|------------------|-----------|---------------|----------------|
| Class: | T Th | 9:25 – 10:40 | Laney Hall 102 |
| Lab (CRN 21763) | Wednesday | 8:00 – 10:50 | Laney Hall 306 |
| Lab (CRN 10543): | Friday | 10:00 – 12:50 | Laney Hall 306 |
| Lab (CRN 10540): | Friday | 1:00 – 3:50 | Laney Hall 306 |

Instructor: Dr. Richard M. Tarkka
Office: 203 Laney Hall
Telephone: 852-5137
email: rtarkka@uca.edu

Office hours: Tuesday: 11:00 – 12:00
Wednesday: 11:00 – 12:00
Thursday: 8:15 – 9:15
Friday 8:15 – 9:15

You can email me questions - please put "chem 2401" in the subject line. This is a better way of getting in touch with me than sending a message through blackboard.

Required Course Materials:

1. Organic Chemistry, 5th Ed., by Janice G. Smith, McGraw-Hill, 2017
2. UCA lab materials (Free for download from Blackboard)
3. Laboratory notebook
4. Clicker from Turning Technologies
5. Safety Glasses with Side Shields or Goggles. Our department policy is that we will not provide students with safety glasses should they be broken, lost, stolen, or forgotten.
6. Model Kit

Optional Course Materials: Lab Coat or Apron; Solution Manual

Course Description: Intended for students majoring in science and/or obtaining courses required for pre-medicine, pre-dentistry, pre-pharmacy, and other related health fields, this course serves as an introduction to organic chemistry. Topics we will explore include, but are not limited to: structure, nomenclature, and properties of organic molecules; alkanes; alkenes; alcohols; alkyl halides; various types of reactions; how to write out and deduce simple reaction mechanisms; how to develop a multi-step organic synthesis. Prior successful completion of Chemistry 1451 (or an approved equivalent course) is a prerequisite.

My objectives for you: (1) acquire good fundamental skills in elementary organic chemistry as described in the first 11 chapters of the Smith text book so that you can be successful in Organic Chemistry II (Chem 3411); (2) develop good record keeping skills in the organic

chemistry lab; (3) make connections between the structures you draw on paper and the solids and liquids you use in the lab; (4) acquire some basic organic chemistry lab skills.

Attendance and Make Up Work: Students are expected to attend all lectures and labs. A student missing multiple classes without contacting me to give me a valid reason may be dropped with a "WF" grade. Students missing four lab meeting, for any reason (exceptions are limited to military service, jury duty, or a conflicting UCA sanctioned event) will be dropped. Makeup exams are not given unless you are participating in a conflicting UCA-sanctioned event or military service. Makeup exams are not given (exceptions listed above). If you miss an exam, and contact me promptly with a valid explanation, your overall grade will be based on your performance vs. class average in the other exams. A detailed explanation of the missed test policy is given on blackboard. Please do not email me without looking this up first. If you do not contact me promptly, or lack a valid reason for missing an exam, a grade of 0 will be assigned. If you miss a quiz, that will count as your dropped quiz.

Writing an Exam Early, Including the Final Exam: Not allowed. Do not book your Christmas vacation to occur during the final exam period.

Electronic Devices: Students may not use any electronic devices during tests or quizzes for any reason. Doing so will be considered academic dishonesty.

Cell Phone Policy: Students should turn their cell phones to silent (turn off the vibrate mode) at the start of class and leave them off throughout the entire class. You may access your messages at the break time if there is one.

Schedule: Although we will work through the material at our own pace, past experience shows that we will be pretty close to the schedule set out in this syllabus. You are responsible to keep up with the material. It is strongly recommended that you read approximately the next day's material before each lecture. We will go through the first 11 chapters of the text book.

Homework

Homework will be assigned, but it will not be collected or graded. It is very strongly recommended that you do all of the assigned homework in a timely manner. It is the only way you can check your understanding of the material. Many of the exam and quiz questions come from the homework.

Grading

| | |
|----------------------------|---|
| <u>3 full period tests</u> | 100 points each |
| <u>1 final exam</u> | 200 points |
| <u>Labs</u> | 225 points |
| <u>5 Quizzes</u> | 100 points (25 points/quiz, lowest one dropped) |

TOTAL: you will graded on a total of 825 available points

Bonus points: If you have fewer than 11 demerits for being late, AND you have handed in all exercises on time (including lab exercises), you will be awarded 15 bonus points. If you have 12 or more demerits, you will not receive the bonus points.

Demerits: Attendance will be taken. I will do this about 5 minutes after I start class. Showing up more than 30 min late will cost 2. Missing an entire class will cost 3. Missing a test or lab session also counts as a miss and will cost you three demerits.

Tentative Grade Cut Levels

A: 742+
B: 660+
C: 577+
D: 495+

"Extra Credit" is not available.

Note: Questions relating to your laboratory exercises will be asked on your exams.

Grades Distribution from the previous five Chem 2401 fall semester classes (367 students):

| GRADE | Spring 2015 | Fall 2014 | Fall 2013 | Fall 2012 | Fall 2011 | Spring 2016 | Total 2011 - 2016 |
|-------|-------------|-----------|-----------|-----------|-----------|-------------|-------------------|
| A | 14 | 18 | 13 | 12 | 12 | 3 | 72 (21 %) |
| B | 15 | 8 | 16 | 17 | 9 | 9 | 77 (22 %) |
| C | 19 | 15 | 18 | 16 | 12 | 9 | 89 (26 %) |
| D | 17 | 10 | 3 | 5 | 6 | 4 | 50 (13%) |
| F | 4 | 6 | 5 | 2 | 1 | 4 | 25 (6 %) |
| W | 0 | 6 | 9 | 12 | 10 | 2 | 39 (11%) |
| TOTAL | 69 | 63 | 64 | 64 | 50 | 31 | 341 (100%) |

A/B: 43%
DFW: 30%

Chem 2401 syllabus, Tarkka, Fall 2016
AVID: UCA is dedicated to Academic Vitality, Integrity, and Diversity.

SCHEDULE CHEM 2401 FALL 2016

| TUESDAY | | LAB EXERCISE | THURSDAY | |
|---|------------------------------|--|-----------------------------|-------------------------|
| <i>In addition to downloading the modules, you should also download the table of due dates, checklist/rubric, and lab policies sheet.</i> | | | August 18 | Ch. 1 |
| August 23 | Ch. 1 | Check In/Review* (no prelab, notebook not required) | August 25 | Ch. 1 |
| August 30 | Ch. 2 | Natural Dyes You MUST do the prelab exercises BEFORE you arrive to lab, and you MUST have safety glasses!! | September 1 | Quiz 1 Ch. 3 |
| September 6 | Ch. 3/4 | IR Spectroscopy* (no prelab, notebook not required)) | September 8 | Ch. 4 |
| September 13 | Ch. 4 | Thin Layer Chromatography | September 15 | Ch. 4 |
| September 20 | EXAM 1 (Ch. 1-4) | ¹³ C NMR Spectroscopy* (no prelab, notebook not required) | September 22 | Ch. 5 |
| September 27 | Ch. 6 | CHAPTER 5 Stereochemistry* (no prelab, notebook not required) | September 29 | Quiz 2 Ch. 6 |
| October 4 | Ch. 7 | Melting Points | October 6 | Ch. 7 |
| October 11 | Exam 2 (Ch. 5 – 7) | NO LAB (FALL BREAK) | October 13 | <i>Fall Break</i> |
| October 18 | Ch. 8 | S _N 1 and S _N 2 REACTIONS (Blackboard PDF) | October 20 | Ch. 8 |
| October 25 | Ch. 8 | Green Chemistry* | Quiz 3 October 27 | Ch. 9 |
| November 1 | Ch. 9 | Dehydration of 2-methyl-2-butanol | November 3 | Ch. 9 |
| November 8 | Quiz 4 Ch 10 | Epoxidation of Carvone | November 10 | Ch. 10 |
| November 15 | Ch. 10 | Bromination of Alkenes | November 17 | Exam 3 |
| November 22 | Ch. 11 | No Lab (Thanksgiving) | November 24 | <i>Thanksgiving</i> |
| November 29 | Ch. 11 | No Lab | December 1 | Ch. 11 QUIZ 5 |

*DRY LAB The dry labs, including check-in, are worth 10 points each (no quiz, prelab write-up or lab writeup). The others are worth 25 points each. See table with due dates and point values.

IMPORTANT DATES FOR CHEMISTRY 2401 FALL 2016

August 18: First day of class

August 24: Final Day to register or add in to this class

September 5: Labor Day

September 1: Quiz 1

September 8: Last day to get a refund if you withdraw (75%). 0 % back after this day.

September 20: Exam 1

September 29: Quiz 2

October 11: Exam 2

October 13 – 16: Fall Break

October 27: Quiz 3

October 28: Final Day to Withdraw with a W

November 8: Quiz 4

November 17: Exam 3

November 24 – 27: Thanksgiving Break

November 28: WP/WF Deadline

December 4: Quiz 5

December 2: Study Day

December 6: Final Exam 8:00 AM

The Fine Print – Mandated by UCA

Academic Integrity: The University of Central Arkansas affirms its commitment to academic integrity and expects all members of the university community to accept shared responsibility for maintaining academic integrity. Students in this course are subject to the provisions of the university's Academic Integrity Policy, approved by the Board of Trustees as Board Policy No. 709 on February 10, 2010, and published in the *Student Handbook*. Penalties for academic misconduct in this course may include a failing grade on an assignment, a failing grade in the course, or any other course-related sanction the instructor determines to be appropriate. Continued enrollment in this course affirms a student's acceptance of this university policy.

Americans with Disabilities Act: The University of Central Arkansas adheres to the requirements of the Americans with Disabilities Act. If you need an accommodation under this Act due to a disability, please contact the UCA Office of Disability Support Services, 450-3613.

Building Emergency Plan: An Emergency Procedures Summary (EPS) for the building in which this class is held will be discussed during the first week of this course. EPS documents for most buildings on campus are available at <http://uca.edu/mysafety/bep/>. Every student should be familiar with emergency procedures for any campus building in which he/she spends time for classes or other purposes.

Title IX Disclosure: If a student discloses an act of sexual harassment, discrimination, assault, or other sexual misconduct to a faculty member (as it relates to "student-on-student" or "employee-on-student"), the faculty member cannot maintain complete confidentiality and is required to report the act and may be required to reveal the names of the parties involved. Any allegations made by a student may or may not trigger an investigation. Each situation differs and the obligation to conduct an investigation will depend on those specific set of circumstances. The determination to conduct an investigation will be made by the Title IX Coordinator. For further information, please visit: <https://uca.edu/titleix>. **Disclosure of sexual misconduct by a third party who is not a student and/or employee is also required if the misconduct occurs when the third party is a participant in a university-sponsored program, event, or activity.* Students should familiarize themselves with all policies included in the *Student Handbook*, particularly the following: Sexual Harassment Policy; Academic Policies.

Evaluations (Fall and Spring): Student evaluations of a course and its professor are a crucial element in helping faculty achieve excellence in the classroom and the institution in demonstrating that students are gaining knowledge. Students may evaluate courses they are taking starting on the Monday of the thirteenth week of instruction through the end of finals week by logging in to myUCA and clicking on the Evals button in the top right.