

Chemistry 3411 Organic Chemistry II Spring 2021

Class: T Th 9:25 – 10:40 Zoom. Cameras must be on.
Virtual backgrounds allowed.
Lab: (33015) F 10:00 - 12:50 Manion Hall 306
Lab (33016): F 2:00 - 4:50 Manion Hall 306

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

Online (Zoom) Help Sessions: Mon: 2:15 – 3:15 Tue: 11:00 – 12:00
Wed: 12:30 – 1:30 Thu: 12:00 – 1:00

You can email me questions – please put "Chem 3411" in the subject line.

Required Course Materials:

1. Organic Chemistry, 5th Ed., by Janice G. Smith, McGraw-Hill, 2017
 2. UCA lab materials (Free: posted on Blackboard)
 3. Safety Glasses
 4. Laptop computer
 5. Reliable internet service
 6. Subscription to Labflow.
 7. KN95 masks (will be provided for you)
- Optional Course Materials: Model Kit; Lab Coat or Apron; Solution Manual

Course Description Objectives: This is a continuation of Chemistry 2401. You must have a grade of C or better in Chem 2401 to be enrolled in this class. Furthermore, you *must* have a good understanding of the material taught in that class to be successful. This class is intended for students majoring in science and/or obtaining courses required for pre-medicine, pre-dentistry, pre-pharmacy, and other related health fields. Topics we will explore include, but are not limited to: ^1H , COSY and HMQC NMR techniques; conjugated and aromatic molecules; oxidations and reductions of organic compounds; organic free radical reactions; carbonyl compounds; amines; natural and synthetic polymers.

Objectives: At the end of this semester, you should have a good working knowledge of the material covered in the Smith textbook as it pertains to the general field of organic chemistry. Students with a passing grade in this course should be able to do well on graduate school entrance exams for organic chemistry, etc. the organic chemistry portions of MCAT, DAT, PCAT. I also want my students prepared to take senior level biochemistry.

Attendance and Make-Up Work: Students are expected to attend all Zoom lectures. You are expected to do so in a location that allows you to easily take notes. A moving vehicle, for example, is not an appropriate location to attend a Zoom class. Students are expected to attend all face-to-face labs, and to do all

asynchronous dry labs in the time window stated on the syllabus. A student missing multiple classes or labs without contacting me to give me a valid reason may be dropped for non-attendance. Makeup exams are not given unless you are participating in a conflicting UCA-sanctioned event. If you miss an exam, and contact me promptly with a valid explanation, your other exams will be count more to make up for the loss of points. If you do not contact me promptly or lack a valid reason for missing an exam, a grade of 0 will be assigned. See the "missed test policy" on blackboard. Note that the missed test policy will be used if a student has missed one test. If a student misses a substantial amount of graded work, I will have a discussion with that student about how to correct the situation. The detailed explanation of this protocol, posted on blackboard; please read it thoroughly before asking for an explanation.

Writing an Exam Early, Including the Final Exam: Not allowed.

Electronic Devices: Students may not use any electronic devices (cell phones, laptops, calculators, smart watches, etc.) during face-to-face tests (Ida Waldran) for any reason. Doing so will be considered to be cheating.

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 chapters 12-25, and 30, of the text book.

Suggested Problems: will be assigned, but will not be collected or graded. It is very strongly recommended that you do, at a minimum, all of the suggested problems in a timely manner (don't cram! It has to worked on regularly). 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 tests</u>	100 points each	300 points total
<u>1 final exam (cumulative)</u>	100 points	100 points
<u>13 Homework Assignments</u>	20 points each	260 points total
<u>Safety Quiz</u>	30 points	30 points
<u>5 Face-to-Face Labs</u>	30 points each	150 points total
<u>5 Dry Online Labs</u>	20 points each	100 points total

TOTAL: you will graded on a total of 940 available points. "Extra Credit" is not available. Questions relating to your laboratory exercises will be on your exams

Tentative Grading Scale

A: >837; B: 744-836; C: 651 – 743; D: 564 – 650 F: > 564

Chem 3411 Syllabus, Tarkka, Spring 2021
AVID: *UCA is dedicated to Academic Vitality, Integrity, and Diversity.*

Homework Details: There will be one 20 point homework due each week. These are separate from the suggested problems, though it is very likely that some of the problems you see on the homework will look a lot like the suggested problems. These will be available on Blackboard starting on Tuesdays at 10:40 AM. They are due on Fridays at 11:59 PM. You will have 2 attempts timed at 1 hour each, so you should be able to make very high scores on these.

The homework quizzes, like all of your work, must not be collaborative work. You are to your work independently. You must not share your questions or answers with others in the class. You may use your text book and class notes, but you are forbidden from using Chegg, CourseHero, or any other similar cheating web site to help you with these. Further, you are forbidden from asking for or receiving help from any person.

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SCHEDULE CHEM 3411 SPRING 2020

TUESDAY

LAB EXERCISE

THURSDAY

In addition to downloading the modules, you should also download the table of due dates, checklist/rubric, and lab policies sheet.

LECTURE CONTENT		LAB (See specific schedules for each section)	LECTURE CONTENT	
Jan 19	Ch. 14	Safety/Check-In	Jan 21	Ch. 14
Jan 26	Ch. 14	Block 1	Jan 28	Ch. 12
Feb 2	Ch. 12	Block 1	Feb 4	Ch. 15
Feb 9	Ch. 15	Block 2	Feb 11	Ch. 15
Feb 16	TEST 1 IDA WALDRAN	Block 2	Feb 18	Ch. 16
Feb 23	Ch. 16	Block 2	Feb 25	Ch 17
Mar 2	Ch. 17	EVERYBODY Diels Alder, Part 1 Polymers, Part 1	Mar 4	Ch. 18
Mar 9	Ch. 18	EVERYBODY Diels Alder, Part 2, Online	Mar 11	Ch. 18
Mar 16	TEST 2 IDA WALDRAN	Block 3	Mar 18	Ch. 19
Mar 23	SPRING BREAK	SPRING BREAK	Mar 25	SPRING BREAK
Mar 30	Ch. 20	Block 3	Apr 1	Ch. 20
	Ch. 21	Block 4	Apr 8	Ch. 21
Apr 13	Ch. 22	Block 4	Apr 15	Ch. 22
Apr 20	Ch. 22	Missed Lab/Snow Day Make-up Week	Apr 22	TEST 3 IDA WALDRAN
Apr 27	Ch. 25	No Lab This Week	Apr 29	Ch. 30

Important Dates: Tuesday, May 4, 8:00 AM; FINAL EXAM

Other Important Dates: **January 25:** Last date to register, add classes, change from credit to audit, audit to credit, or drop the course for 100% refund; **February 8:** Final date to drop the course for 75% refund. 0% refund after this date. **April 12:** W deadline; **April 30:** Study Day; **May 8:** Undergraduate Spring Commencement

LAB SCHEDULE CHEM 3411
LAB SECTION: FRIDAY 2 PM – 5 PM

Date	LAB	
January 22	Check-In/Safety (Online)	
January 29	¹ H NMR (Online)	
February 5	Pechmann Condensation (F2F)	
February 12	Last Names A-H Heck Reaction (F2F)	Last Names I-Z Labflow #1 (Online)
February 19	Last Names A-H Labflow #1 (Online)	Last Names I-Z Heck Reaction (F2F)
February 26	Labflow #2	
March 5	Diels-Alder Part 1 (F2F) Polymers Part 1 (F2F)	
March 12	Diels-Alder Part 2 (Zoom - Synchronous)	
March 19	Polymers Part 2 (F2F)	
April 2	Mass Spectrometry (Online)	
April 9	Reductive Amination (F2F)	
April 16	Labflow #3 (Online)	
April 23	Snow Day/Make-up Day	
April 30	No Lab	

Labflow #1 = Reduction of Benzil

Labflow #2 = Grignard Reaction

Labflow #3 = Banana Oil

See the separate document "Lab Due Dates" that gives specific details about when lab assignments will be available to you and when they are due.

LAB SCHEDULE CHEM 3411 FRIDAY 10 AM – 1 PM
Last Name A – K*

Date	LAB	
January 22	Check-In/Safety (Online)	
January 29	¹ H NMR (Online)	
February 5	Pechmann Condensation (F2F)	
February 12	Last Names A- G Heck Reaction (F2F)	Last Names H-L Labflow #1 (Online)
February 19	Last Names A-G Labflow #1 (Online)	Last Names H-L Heck Reaction (F2F)
February 26	Labflow #2	
March 5	Diels-Alder Part 1 (F2F) Polymers Part 1 (F2F)	
March 12	Diels-Alder Part 2 (Zoom Synchronous)	
March 19	Polymers Part 2 (F2F)	
April 2	Mass Spectrometry (Online)	
April 9	Reductive Amination (F2F)	
April 16	Labflow #3 (Online)	
April 23	Snow Day/Make-up Day	
April 30	No Lab	

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LAB SCHEDULE CHEM 3411 FRIDAY 10 AM – 1 PM
Last Name L – Z*

Date	LAB	
January 22	Check-In/Safety (Online)	
January 29	Pechmann Condensation (F2F)	
February 5	1H NMR (Online)	
February 12	LabFlow #1	
February 19	Last Name H-L Heck Reaction (F2F)	Last Names M-Z Labflow #2 (F2F)
February 26	Last Name H-L Labflow #2	Last Name M-Z Heck Reaction (F2F)
March 5	Diels-Alder Part 1 (F2F) Polymers Part 1 (F2F)	
March 12	Diels-Alder Part 2 (Zoom Synchronous)	
March 19	Mass Spectrometry (Online)	
April 2	Polymers Part 2 (F2F)	
April 9	Labflow #3 (Online)	
April 16	Reductive Amination (F2F)	
April 23	Snow Day/Make-up Day	
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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.