



# CAMPBELLSVILLE UNIVERSITY

## COURSE SYLLABUS

PLEASE TYPE. DATE August 24, 2015  
 ACADEMIC UNIT Chemistry/Natural Sciences FACULTY Dr. Chris Mullins  
 Please check to indicate this course has a service learning component.

Discipline	Course# Section	Title of Course	Credit Hours	Cross Reference (if applicable)
CHE	343-91/92	Organic Chemistry I lab	1	

TEXTBOOK  Required  Not Required  
 Author Anne B. Padias Title Making the Connections 2  
 Publisher Hayden-McNeil Date of Publication 2011

WORKBOOK  
 Author Hayden-McNeil Title Organic Chemistry Laboratory Notes  
 Publisher Hayden-McNeil Date of Publication n/a

PLEASE ANSWER THE FOLLOWING QUESTIONS ON A SEPARATE SHEET OF PAPER AND ATTACH TO THIS FORM.

- DESCRIPTION OF COURSE: Develop a brief description of the course as it will appear in the Catalog.
- STUDENT LEARNING OBJECTIVES: List the student learning objectives for the course. Please relate these objectives to the mission and goals of the University and the Academic Unit. For general education courses, please indicate which student learning objectives address general education goals and the intended method of assessment. A minimum of four of the seven general education goals must be included.  
  
*Example: Students will demonstrate their ability to compare and contrast two types of basket weaving. (Goal: Oral and Written Communication; Evidence: research paper and class presentation)*
- COURSE OUTLINE: Outline the topics/units that are to be taught.
- EVALUATION: How do you plan to determine the grade in the course? Please include grading scale.
- REQUIREMENTS:
  - Examinations: State when tests are to be administered, including unit, mid-term, and final examinations.
  - Reports: How many, length required, and what type (Oral, term and/or research, book critiques).
  - Supplemental reading assignments or outside work required.
  - Supplemental instruction aids: Audio visual aids, field trips, guest speakers, etc.
- BOOKLIST

DEAN Michael R. Page Date Copy Received 8/31/2015  
 VICE PRESIDENT FOR ACADEMIC AFFAIRS Date Copy Received \_\_\_\_\_

August 24, 2015

**CHE 343 Organic Chemistry I Lab**

**One credit hour**

**Fall 2015**

**Meeting Times:** Tuesdays; 9:30 am-12:30 pm (Section 91); 2:00-5:00 pm (Section 92) in SB 223

**INSTRUCTOR:** Dr. Chris Mullins **OFFICE:** Room 312 Carter Hall

**Phone:** 270-789-5041

**E-mail address:** [csmullins@campbellsville.edu](mailto:csmullins@campbellsville.edu)

**Website:** [www.campbellsville.edu/csmullins](http://www.campbellsville.edu/csmullins)

**Office hours:** As posted or by appointment

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**Section 1: Course Description**

Studies of typical organic reactions with an emphasis on reactions using apparatus unique with organic chemistry. One three-hour laboratory per week. Co-requisite: CHE 341.

**Section 2: Course Objectives (include but are not limited to):**

1. The student will demonstrate the ability to record and tabulate and explain scientific data *in a concise and organized manner*.
2. The student will be able to perform fundamental laboratory operations with standard organic glassware.
3. The student will develop a basic theoretical knowledge of and experience performing simple laboratory operations such as distillations, recrystallizations and extractions.
4. The student will reveal the ability to do basic stoichiometric calculations, including the calculation of theoretical and percent yields.
5. The student will be able to ascertain the identity of organic compounds through analyses of spectroscopic data.
6. The student will be able to calculate other kinetic or thermodynamic parameters measured in the lab.

**Section 3: Course Outline**

See *separate* course schedule document.

**Section 4: Evaluation**

In the first semester lab, there will be approximately \*11-12 lab experiments, which are coupled with the other activities for a maximum total of 1000 points.

Item Description	Points
Weekly Pre-lab write-up (notebook inspection)	120
Post-lab informal reports/worksheets (10)	300
Formal Laboratory Reports (3 x 100 pts)	300
Video presentation on Unknown (expt. 11)	50
Midterm Lab exam	80
Comprehensive Lab Practical Exam	150
<b>TOTAL</b>	<b>1000</b>

***If, for any reason, you cannot continue to attend this class, be certain that you DROP IT OFFICIALLY. Otherwise you will automatically receive a failing grade.***

The total number of points needed to attain a certain grade are as follows:

850.0+ points	A
750.0 to 849.9 points	B
650.0 to 749.9 points	C
550.0 to 649.9 points	D
Below 550.0 points	F

## Section 5: Requirements

A. **Attendance:** Each student is expected have punctual attendance at each course meeting. The University Undergraduate Student Attendance Policy will be followed in this course. According to that policy, only **two (2) absences** are allowed, because this course meets once a week. The University Undergraduate Attendance policy will be followed for this course. Do NOT expect to be able to make-up lab time missed (without an instructor approval for justifiable absence) to conduct experiments!

All of the following will constitute an absence:

- a) Arrival at class more than ten (10) minutes after the class period has begun
- b) Leaving the classroom before class has ended without permission from the instructor
- c) Texting, sleeping, or otherwise disrupting the flow of the classroom activities.

B. **Safety:** Students are required to follow all necessary safety precautions including protective eyewear and clothing. Failure to do so will result in the immediate expulsion from the laboratory room. Cell phones, beepers, devices that require headphones, etc. should not be used in the lab. Long hair must be tied back. Gloves are available and sometimes will be made mandatory. Precautions about each experiment are to be noted in the lab write up.

Students who fail to follow all safety rules may be asked to leave the lab or suffer grading penalties.

1. No unauthorized experiments are to be performed. If you are curious about trying a procedure not covered in the experimental procedure, consult with your laboratory instructor.
2. Students must absolutely wear a pair of ANSI Z87.1 approved goggles the **entire time** they are in the laboratory. *The Chemistry Department does not keep spare goggles to lend to students.* It is the students' responsibility to bring their goggles with them to the lab meeting.
3. You **must** wear clothing that is consistent with good laboratory safety. Older pants, slacks, or jeans should be worn, although female students *may* wear longer dresses if they desire. The goal is to cover up as much of the body as possible with clothing that you do not mind having a few acid holes in. This goal is often contrary to the prevailing sense of fashion. Long pants must be worn. ***Shorts, skirts, and kilts are not permitted in the lab at any time.*** Arms should be covered to the elbow and midriffs should not be exposed. Wearing a full-length lab coat or apron at all times is required for most experiments. Shoes/ sneakers that cover the entire foot should be worn. Sandals, clogs, open-top, high heels or open-toe shoes are not permitted in the lab at any time. Female students should ensure that hair or jewelry does not hang down into the work area. ***Students dressed inappropriately for lab will be required to leave the laboratory to redress properly.***
4. Neatness and cleanliness are important for everyone's safety in the laboratory. The cleanliness of your work area is your responsibility. The cleanliness of the entire lab (particularly balances, sinks and fume hoods) is the responsibility of the entire class. If the lab is not left clean and neat, the responsible individuals or the entire class may have their grade lowered.
5. Do not come to lab if you are ill with a contagious disease or under the influence of any medications that might cause you to hallucinate or become excessive drowsy. If on any medication, please consult with the instructor and make me aware prior to entering the lab on a respective day.
6. Eating, drinking, and smoking are strictly prohibited in the laboratory.
7. Horseplay will not be tolerated and will result in immediate expulsion from the laboratory.

**C. Lab Preparation:** Read the appropriate sections noted in the syllabus PRIOR to each experiment. **Before entering the lab, you MUST provide evidence that you have satisfactorily completed ALL of the pre-lab assignment.** Failure to do so will result in lost time (and points) in lab while you are doing the pre-lab.

In addition to any assigned pre-lab questions, the following sections should also be set-up in your lab notebook *prior to* starting an experiment: title of experiment, purpose, overall reaction scheme, and general procedure. Add observations, data, and conclusion during the course of the experiment.

**D. "Notebook pages":** Each experiment must be completed and written up in the appropriate form. Details on the format for these pages will be given in the first laboratory period. This semester in Organic I lab, I will collect each student's duplicate notebook pages on a regular (weekly) basis. These assignments (pre and post-lab) will be worth 40 points each, for a subtotal of 400 points. These "informal" lab reports are due at the start of the lab period on the dates noted in the course schedule UNLESS indicated otherwise in writing by the instructor. NO LATE PAPERS will be accepted. Failure to submit the lab report on time will result in a grade on zero.

**Laboratory Notebook:** Learning to keep an accurate and detailed record of results is an extremely important skill for all engineers and scientists. ***Your notebook is a permanent record of your experiment and your data!*** Students are required to keep a bound laboratory notebook detailing the procedures, data, etc obtained in the lab analyses conducted during the course. The format for the notebook will be discussed on the first day of lab.

This notebook will include the procedural strategy, observations, balanced chemical reactions, raw data, etc. obtained in the lab analyses conducted during the course. Notebook entries should be written clearly, concisely, and neatly. The following guidelines for recording entries in your lab notebook will be graded for competency when lab notebook entries are due:

- a) You must use a spiral-bound carbonless duplicate notebook. The purpose of having a notebook is so your records represent a *complete* log of your work. Only tear out the duplicate pages for submission.
- b) The first several pages of a notebook are to be reserved for a *table of contents*.
- c) All entries in your notebook MUST be made in blue or black *ink pen*. Any mistakes should be crossed out with a single horizontal line and initialed. *Do not use whiteout*.
- d) Each page should be numbered sequentially in the upper outside corner.
- e) Each experiment should start on a new page. Your entry should include your name and your title, the date, a title for the experiment, and a reference for the procedure.
- f) Sign each entry after you have completed the experiment. This signifies that the data reported came from the person responsible for the notebook.
- g) Have your instructor initial your lab entry before leaving the lab.

Furthermore, if a product is synthesized during the experiment it will be submitted for grading with the following information on the container's label.

CHE 343 Lab Analysis
STUDENT NAME
NAME OF EXPERIMENT:
ACTUAL YIELD: (grams)
RESULTS OF ANALYSIS: (% yield)

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**E. Formal (Full) Lab Reports:** During the middle part of the semester, students will complete and turn in three formal lab reports. Each formal lab report will be worth 100 points.

- All formal reports are to be submitted to the course TigerNet page under the "Coursework" tab as a MS Word .doc file. *No exceptions!*
- Failure to comply with this policy will result in an automatic loss of 5 points for the first offense and subsequent events will result in the report not being graded.
- Reports will be penalized five (5) points per day (including the weekend as one day) for every day the report is late and will not be accepted more than one week after a report is due and this will result in a grade of zero.
- An automatic five-point penalty will be assessed for a report considered grossly insufficient or inadequate. An example of this includes missing section(s) of the report.
- Further details about the laboratory report will be given in class.

**F. Lab Examinations:** A midterm examination (80 points) and a final laboratory examination (150 points) will be given to test for the student's understanding of the subject matter over the course of the term.

**G. Teaching Methods:** The instructor will demonstrate important laboratory procedures, safety precautions and a review of necessary calculations at the beginning of the lab period. Students will then proceed at a self-regulated pace and complete the assigned experiment. The instructor will be available to answer questions throughout the lab period.

**H. Academic Integrity:** Any student caught cheating on an examination or altering a test for re-grade will receive an automatic "F" in the course. Be aware that aggressive methods are used to protect the majority of you who are honest. Other violations of this code of conduct include, but are not limited to, copying someone else's work and representing it as your own, "dry-labbing", discussing the content or degree of difficulty of quizzes or exams with anyone before the entire class has completed the requirement, collaborating on assignments which are of an individual nature, plagiarism of primary or secondary sources of information, and not reporting violations of this implied code of conduct. Violations will be dealt with according to University and Division of Natural Sciences (DNS) policies. All students must acknowledge they have read and understood the DNS policy prior to beginning work in the laboratory.

## **Section 6: Book/Supplies List**

### **Required:**

- 1) *Making the Connections 2: A How-To Guide for Organic Chemistry Lab Techniques*, Anne B. Padias, 2nd Ed., Hayden-McNeil, 2011, ISBN: 978-0738041353
- 2) *Organic Chemistry Laboratory Notebook, Spiral, Carbonless Duplicate*, Hayden-McNeil, 2010, ISBN: 978-1-930882-46-1
- 3) Calculator
- 4) Lab Apron and Safety Goggles or Safety Glasses with side-shields

### **Supplemental (provided on a loan basis by the instructor):**

*Macroscale and Microscale Organic Experiments*, Kenneth L. Williamson, 5th ed., Houghton Mifflin, 2007.

\*Relevant handouts will also be posted on the course webpage well in advance of the experiment period.

### **Section 7: Disabilities**

Campbellsville University is committed to reasonable accommodations for students who have documented learning and physical disabilities, as well as medical and emotional conditions. If you have a documented disability or condition of this nature, you may be eligible for disability services. Documentation must be from a licensed professional and current in terms of assessment. Please contact the Coordinator of Disability Services at 270-789-5192 to inquire about services.

### **Section 8: Miscellaneous**

Guests are only allowed in class at the discretion of and with prior approval from the instructor. Electronic recording devices of any kind are not permitted except in special circumstances and with the specific permission of the instructor. **Pagers, cell phones, and similar items are disruptive to the entire class and must be turned off during class. The owner of any such device that activates during class will be immediately excused from class and counted as absent for the entire period.**

### **Section 9. Emergency Contact Information**

Campbellsville University Security Cell Phone:	270-403-3611
Campbellsville University Security Office Phone:	270-789-5556
Science Division Office:	270-789-5065

### **Section 10: Academic Support:**

The Academic Support area, located in the Badgett Academic Support Center (BASC), exists to help students. At certain times, most students need some help with studying, choosing a career, major/minor, or assistance in a difficult course. The following services are available: Career Services, Disability Services, tutoring, and the Citizens Bank & Trust Writing Center. *These services are provided at no extra cost to the student.* Space is also available for individual and group study, and laptop computers are available for students to check-out and use within the building. Information about these services is accessible by clicking on the "Current Students" tab on the University website at [www.campbellsville.edu](http://www.campbellsville.edu). Information is also available by calling the Office of Academic Support at (270)789-5064.

### **Section 11: Title IX statement**

Campbellsville University and its faculty are committed to assuring a safe and productive educational environment for all students. In order to meet this commitment and to comply with Title IX of the Education Amendments of 1972 and guidance from the Office for Civil Rights, the University requires all responsible employees, which includes faculty members, to report incidents of sexual misconduct shared by students to the University's Title IX Coordinator, Mr. Terry VanMeter, 1 University Drive, UPO Box 944, Administration Office 8A, Phone: 270-789-5016; Email-[twvanmeter@campbellsville.edu](mailto:twvanmeter@campbellsville.edu).

\*Information regarding the reporting of sexual violence and the resources that are available to victims of sexual violence is set forth at: [www.campbellsville.edu/titleIX](http://www.campbellsville.edu/titleIX).

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**CHE 343: Organic Chemistry II Lab – Fall 2015-Student's Acceptance of Course Policies**

Please fill out and sign the following form and **return it no later than the 2nd lab meeting** to the instructor.

**Please use ONLY BLUE ink pen (no pencil).**

I, \_\_\_\_\_, have read the entire syllabus describing the course policies for CHE 343, Organic Chemistry I Lab, taught by Dr. Chris Mullins. I fully understand these policies and I agree to comply with them during the entire Fall 2015 semester.

\* By signing below, I also acknowledge that I have read, understand, and agree to abide by the policies set forth in the DNS Academic Integrity Policy.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_