

BASIC CHEMISTRY: CONCEPTS AND APPLICATIONS II (ONLINE)

CHM 1031

3 CREDITS

SPRING 2016

ONLINE COURSE

INSTRUCTOR: Melanie Veige
CLB C130B
E-mail through Canvas only

OFFICE HOURS: see Syllabus page in Canvas

COURSE WEBSITE: <https://ufl.instructure.com/courses/323798>

FIRST THING YOU SHOULD DO: Log into Canvas and access the course. **Click on the Syllabus tab** on the left hand side – once the Syllabus page completes loading, you will see every single due date for every assignment for the entire semester. You should print this page, and cross off assignments as you complete them. Also, click Modules and find **Week 1: Settling In**. Herein you will find detailed information about grading policies, important hints and tips, late policies, and more. Use the list of due dates and details of late policies (if any) to prioritize the order in which you complete assignments, if you find yourself pressed for time on a particularly hectic day or week. Lastly, for those of you on/near campus, find the **Chemistry Learning Center and Broward Teaching Center**, and familiarize yourself with the Academic Technology computer labs on campus, which have computers available for student use 24/7, in case you have a personal computer problem. You will also benefit immensely if you can form a study group with other students in the class. How will you find one another? You can contact other students from within Canvas – by using Piazza, for example. Questions about any of this? Post to Piazza.

COURSE DESCRIPTION: CHM 1031 is the second half of the CHM 1030/1031 sequence, a terminal sequence for nonscience students that presents chemistry from a medical/nursing and life science perspective. CHM 1031 provides an overview of topics in organic and biological chemistry. (P)

PREREQUISITE KNOWLEDGE AND SKILLS: High school algebra is necessary.

COURSE COMMUNICATIONS: General course questions should be posted to Piazza in Canvas. The course instructor will respond to emails & Piazza posts within 24 h during the work week (this usually means a wait until the next weekday morning for responses to questions). Non private/personal questions sent via email will be posted and answered using Piazza so all students can benefit from the response. We're also relying on you to help each other by answering questions on Piazza when instructors/TAs aren't available (after 5 pm, on weekends, etc.).

To get the most out of Piazza, review your notification settings from within Piazza: click on the Piazza tab, then click the little gear icon next to your name in the Piazza window. You will want to review email notifications to see if another student has asked/answered a homework question you've been struggling with, or if additional information has been provided about an upcoming assignment. Before posting a question, check to see if someone else has already asked – you can sort questions by topic and/or search for a homework question or topic by typing in a search term.

I encourage you to post questions related to MasteringChemistry homework on Piazza – the homework isn't meant to be a test, it's a learning tool. For the best response, take a screenshot of your question and/or the answer you've provided, and give the precise HW question # in the title of the post. The more information you provide, the easier it is for your instructor/TA/another student to help.

Private or grade-related questions should be sent to your instructor via the mail function in Canvas.

REQUIRED TEXT: A significant portion of your grade stems from electronic homework associated with an ebook (MasteringChemistry). You have two options for purchasing access, each of which includes an electronic copy of the text (*General, Organic, and Biological Chemistry: Structures of Life*, 4th ed., Timberlake, Pearson): **Option 1**) you may consent to have the purchase price charged to your student account (following the directions posted on the "Syllabus" page in Canvas – you will be refunded the charge if you drop the course during Drop/Add); **Option 2**) you may purchase an access code for the materials at the UF Bookstore (the price may be higher at the bookstore). Note, **these are the only two places you can obtain a valid, working access code for this course.** Option 1 is time-limited; after a few weeks have passed in the course, your only option will be #2.

If you choose, you can also purchase an inexpensive loose leaf hardcopy of the text at the bookstore, though this is not required. You may consult a hardcopy of the text at the

Marston Science Library Reserves, though any general chemistry/introductory chemistry textbook can be referenced.

ADDITIONAL REQUIREMENTS: A computer with webcam, microphone, and speakers is required. This is for proctored exam testing with ProctorU. You should visit their website for specific technical details and requirements.

PURPOSE OF COURSE: This course fulfills the preprofessional requirements in the College of Nursing and some majors in the College of Agricultural and Life Sciences.

COURSE STUDENT LEARNING OBJECTIVES: The student will:

- Demonstrate an understanding of basic concepts in organic and biological chemistry
- Demonstrate the ability to apply chemistry-centered mathematical concepts effectively to real-world solutions
- Distill and analyze information from multiple perspectives, including that presented in tabular or graphic format. The student will apply logical reasoning skills in this task.
- Communicate scientific findings clearly and effectively using oral, written or graphic forms. The student will participate in threaded discussion forums, within small cohorts, based on broader themes related to each module.

COURSE POLICIES:

QUIZ/EXAM POLICY: Four proctored exams (the fourth is cumulative) will be administered in Canvas. These exams are remotely proctored by ProctorU. It is your responsibility to register with ProctorU and reserve an exam time on the available dates. To register follow the instructions on the ProctorU page in Week 1: Settling In. **Ensure that you are reserving for the correct course** – there are examinations for similarly numbered courses in their system that may have different dates available. If you fail to make a reservation sufficiently in advance, a late fee may be assessed by ProctorU, and you may have difficulty obtaining a desirable exam time. Failure to reserve a time slot in advance is not an acceptable reason for a make-up. If you encounter technical difficulties with ProctorU, call ProctorU directly.

End-of-module quizzes are delivered in Canvas. These quizzes are not proctored, but are timed, and are subject to the Honor Code. When you're ready to begin, simply click the link to start! You will have 2 attempts at each quiz, with the highest score counting for credit. **The lowest one such quiz score is dropped.**

If you believe you have found an error on a quiz/exam or would like to dispute a response, the deadline for doing so is the last day of term (Apr. 20th @ 11:59 pm) after which quiz and exam scores are considered final.

MAKE-UP POLICY: A conflict exam will be offered to those students with valid conflicts (<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>). It is your responsibility to identify yourself as requiring such accommodation at least one week prior to the exam. If, during the exam, you experience technical difficulties with ProctorU, the correct course of action is to contact ProctorU. If you experience technical difficulties with Canvas, contact the Help Desk immediately at 392-HELP. A ticket number will be created to log the time and nature of the problem. You must contact your instructor via e-mail within 24 h of the technical difficulty to be considered for a make-up. The ticket number will be required by your instructor should a make-up exam be requested.

ASSIGNMENT POLICY:

1. MASTERINGCHEMISTRY (MC): You will access your electronic textbook and the MasteringChemistry homework directly from within Canvas (*Modules>Mastering Chemistry*). Full assignment descriptions, grading policy, late policy, estimated homework completion times, and a list of due dates are provided in Canvas (see the “Settling In” section).

Important note: if you reach your 8th or 9th attempt at answering a question, you’re better off waiting a day or two to get help with the answer and submitting that particular question late than if you “give up” on the question. Each question is individually penalized for lateness – if you complete 9/10 questions on time, you can always score 90% on the assignment (assuming no deductions). If you “give up” on the remaining question to submit the assignment on time, you can still only score 90%. If you wait a day after the assignment due date to get help with one question, only that question will be penalized for lateness – if one question has a 10% late deduction, your score can be as high as 99%.

Additional practice, not-for-credit practice quizzes have been created for you in MasteringChemistry. These are not mandatory, and are not considered for credit or extra credit. You are strongly encouraged to do extra problems – this is how you’ll know you’re ready for an exam, by your ability to solve a new, challenging, problem the first time, by only referring to a standard formula sheet. For the majority of students, the assigned, for-credit problems are insufficient preparation for exams in this course or for prep for future courses – with students from diverse backgrounds, the path to success will vary greatly for each of you.

The lowest one of the weekly MC assignments is dropped; the “introduction to MC” assignment grade is not eligible to be dropped.

2. DYNAMIC STUDY MODULES: These study aid assignments can be found within MasteringChemistry. Each such assignment is equally weighted. **The lowest one of these grades are dropped.** The assignments vary in estimated duration from between 10-30 minutes. These assignments have a specific grading policy (see the Start Here section in Canvas) and cannot be submitted late – they are submitted as-is at their due dates/times.

COURSE TECHNOLOGY: The student may require Adobe Acrobat Reader, Adobe Flash Player, Microsoft Silverlight and other software; there are free tutorials on many software applications you may encounter on Lynda.com. All UF students are expected to have reliable access to a computer; suggested configurations may be found here: <https://training.helpdesk.ufl.edu/computing.shtml>. ProctorU has specific hardware/software requirements: <http://www.proctoru.com/tech.php>. Check the [MasteringChemistry requirements](#) to ensure you have the necessary plugins to complete the assignments.

UF POLICIES:

UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES: Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations. You may request a .pdf version of your accommodation letter from the Dean of Students Office to send electronically to your instructor.

UNIVERSITY POLICY ON ACADEMIC MISCONDUCT: As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.” You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida. The following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” It is assumed that you will

complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see:

<http://www.dso.ufl.edu/SCCR/honorcodes/honorcode.php>.”

NETIQUETTE: COMMUNICATION COURTESY: All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats.

[http://teach.ufl.edu/wp-](http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf)

[content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf](http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf)

FEEDBACK: Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online at

<https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open.

Summary results of these assessments are available to students at

<https://evaluations.ufl.edu>.

GETTING HELP:

For issues with technical difficulties with Canvas, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

** Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up/extension.

Other resources are available at <http://www.distance.ufl.edu/getting-help> for:

- Counseling and Wellness resources

- Disability resources
- Resources for handling student concerns and complaints
- Library Help Desk support

Should you have any complaints with your experience in this course please visit <http://www.distance.ufl.edu/student-complaints> to submit a complaint.

TUTORING/CHEMISTRY HELP:

The Chemistry Learning Center (CLC) is located in Keene-Flint Hall rooms 257 and 258. Chemistry graduate students offer free help, usually weekdays between periods 2-9.

The [UF Teaching Center](#) has free walk-in help, or you can schedule an appointment. You can also watch interactive practice exams from similar chemistry courses.

GRADING POLICIES:

Should a student wish to dispute any grade received in this class (other than simple addition errors), the dispute must be in writing and be submitted to the instructor within 72 h of receiving the grade (within 24 h of Exam 4).

GRADE DISTRIBUTION:

1. MasteringChemistry homework (lowest weekly HW is dropped) (20%)
2. Quizzes (lowest 1 dropped) (10 best @ 1% = 10%)
3. Proctored (online) exams 1-3 (3 @ 15% each = 45%)
4. Proctored (online) exam 4 (cumulative) (20%)
5. Dynamic study modules (lowest 1 dropped) (4%)
6. Syllabus quiz and surveys (4 total @ 0.25% each = 1%)

GRADING SCALE:

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
88%	85	81	78	75	71	67	65	61	57	55	<55

For more information:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx#hgrades>

<http://www.isis.ufl.edu/minusgrades.html/>

COURSE SCHEDULE:

Week 1

Orientation – familiarize yourself with Canvas, MasteringChemistry, the ebook and course policies

Week 2: Chapter 11: Introduction to organic chemistry: alkanes

- Organic compounds
- Alkanes
- Alkanes with substituents
- Properties of alkanes
- Functional groups

Week 3: Chapter 12: alkenes, alkynes, and aromatic compounds

- Alkenes and alkynes
- Cis-trans isomers
- Addition reactions
- Polymers of alkenes
- Aromatic compounds

Week 4: Chapter 13: alcohols, phenols, thiols and ethers

- Alcohols, phenols and thiols
- Ethers
- Physical properties of alcohols, phenols and ethers
- Reactions of alcohols and thiols

Week 5: Chapter 14: aldehydes, ketones, and chiral molecules

- Aldehydes and ketones
- Physical properties of aldehydes and ketones
- Oxidation and reduction of aldehydes and ketones
- Hemiacetals and acetals
- Chiral molecules

EXAM 1: Chapters 11-14

Week 6: Chapter 15: carbohydrates

- Carbohydrates
- Fischer projections of monosaccharides
- Haworth structures of monosaccharides
- Chemical properties of monosaccharides
- Disaccharides

polysaccharides

Week 7: Chapter 16: carboxylic acids and esters

Carboxylic acids

Properties of carboxylic acids

Esters

Naming esters

Properties of esters

Week 8: Chapter 17: lipids

Lipids

Fatty acids

Waxes and triacylglycerols

Chemical –properties of triacylglycerols

Phospholipids

Steroids

Cell membranes

Week 9: Spring Break

Week 10: Chapter 18: amines and amides

Amines

Properties of amines

Heterocyclic amines

Amides

Hydrolysis of amides

Neurotransmitters

EXAM 2: Chapters 15-18

Week 11: Chapter 19: amino acids and proteins

Proteins and amino acids

Amino acids as zwitterions

Formation of peptides

Protein structure: primary and secondary levels

Protein structure: tertiary and quaternary levels

Protein hydrolysis and denaturation

Week 12/13: Chapter 20: enzymes and vitamins

Enzymes and enzyme action

Classification of enzymes

Factors affecting enzyme activity

Enzyme inhibition

Regulation of enzyme activity

Enzyme cofactors and vitamins

Week 14: Chapter 21: nucleic acids and protein synthesis

Components of nucleic acids

Primary structure of nucleic acids

DNA double helix

DNA replication

RNA and transcription

The genetic code

Protein synthesis: translation

Genetic mutations

Recombinant DNA

viruses

EXAM 3: Chapters 19-21

Week 15: review and cumulative EXAM 4

Disclaimer: This syllabus represents my current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.