

CH 111: Introduction to Chemical Principles (4 credits)
University of Oregon, Department of Chemistry and Biochemistry
Fall 2017; CRN 16986

Instructor: Randy Sullivan.
Office: COL 154
Office phone: (541) 346-4391
Email: smrandy@uoregon.edu

Lectures: Monday through Thursday, 12-12:50pm in 123 PAC.

Office Hours: Students are strongly encouraged to ask questions and seek help early. Chemistry is challenging. Office hours provide a great venue for working on homework problems in smaller groups or to get help on specific topics.

Instructor Office Hours:

Randy Sullivan (12:00 pm section): Mondays 2:00 – 2:50pm and Thursdays 3:00 – 3:50pm in 107 KLA
Dr. Kovac (8:00 am section): Mondays 10:00 – 10:50am in 107 KLA and Tuesdays 11:00- 11:50am in 171 OYX

Teaching Assistants:

Huiying Ji (8:00 am section) **Email:** huiyingj@uoregon.edu; Office Hours: TBA
Tabit Xthona (12:00pm section) **Email:** txthona@uoregon.edu; Office Hours: TBA

Required Materials:

Simple scientific calculator with no data storage
i>clicker 2 (register online)

Online homework program: Mastering Chemistry

Text: *Introductory Chemistry Essentials* by Nivaldo J. Tro. This text is accessible online within the Mastering Chemistry homework program. Purchase of a loose-leaf printed version of the text is optional.

Online Information: Important course information will be posted on Canvas and sent via email. Students are responsible for checking the course Canvas homepage and their UO email daily to avoid missing important course information.

Pre-requisites: Math 95. Students are expected that to be proficient with exponents, scientific notation, fractions, and solving simple algebraic equations.

Course Content: Introduction to Chemical Principles familiarizes students with the foundational concepts and models of modern chemistry while emphasizing problem solving and critical thinking skills that will support students' success as they continue their studies. Fundamental mathematical techniques and skills are incorporated to illustrate the quantitative aspects of chemistry and to develop student ability to model quantitative systems.

CH 111 will focus on aspects of chemistry that are important for students who are either continuing on in their study of chemistry or pursuing a career in health care, the biological sciences, or environmental studies. Topics include atomic structure, energy, chemical bonding, reactions, solutions, acid and bases, equilibrium, organic functional groups, and biomolecules. It would be a mistake to assume that all the material covered in the lectures appears in the text, or vice versa. Therefore, it is important to study both the text and the lecture notes.

Course Learning Outcomes:

Participating in this course will allow you to begin to develop your ability to:

- Read, write, and talk about chemistry using a basic chemical vocabulary.
- Describe matter and transformations of matter at a particulate level.
- Select the appropriate chemical models or skills that are needed to analyze and understand particular chemical states and changes.

- Write routine chemical formulas and equations.
- Set up and solve chemistry problems.
- Apply what you've learned to everyday situations.
- Prepare and evaluate claims based on scientific evidence.
- Feel that you can be successful in chemistry and other scientific and mathematical endeavors.
- Think critically.

Course Expectations:

Students enrolled in CH 111 are required to learn a new language - the language of chemistry. This class will focus on understanding and describing chemical phenomena in terms of macroscopic, sub-microscopic, and symbolic representations. Success in this course requires not only an understanding of the basic vocabulary, facts and concepts, but also the ability to critically analyze relationships between phenomena and to apply knowledge to novel situations. In addition to presentations by the instructor, students will participate in classroom activities and assignments designed to promote development of problem-solving and thinking skills required for success in a university-level science class. Students are expected to prepare for and attend class, to arrive on time and not leave early, to read and study the assigned sections in the textbook, to complete assignments, to participate in classroom activities and discussions by working in groups, *and to ask questions when you need help*. Please respect fellow students and refrain from chatting, cell phone use, outside reading, web surfing, gaming and text messaging during class. Students using computers in class may be requested to sit in a designated section of the lecture hall.

Teaching the CH 111 course is a privilege. You are investing a lot of time and money in this course and you have the right to expect effective instruction. As your instructor, I am expected to show up for every class session or to provide a qualified substitute instructor, to present material in class that is pertinent to the course learning outcomes, to hold regularly scheduled office hours and exam study sessions, to clearly communicate to you what you need to do to succeed in this course, to respond to reasonable questions, to guide your learning, to help you develop a framework for your new knowledge, and to facilitate the application of what you have learned to new situations.

Grading:

Final grades will be assigned based on the following:

Online homework (16 assignments of equal weight)	15%
Participation (i>Clicker points)	5%
Midterm 1 (Thu. Oct. 19 th , 7 PM)	25%
Midterm 2 (Thu. Nov. 9 th , 7 PM)	25%
<u>Final Exam (Tue. Dec. 5th, 5 PM)</u>	<u>30%</u>
Total	100%

The following percentages ensure the corresponding grades: 90% = A, 80% = B, 70% = C, 60% = D, <60% = F. These cut-offs may change downwards at the end of the term, depending on the course average. Students who choose the P/NP option must earn the equivalent of a C⁻ to receive a P (pass) in this course. Students who receive a C- or higher grade (or P) in this course are not eligible to re-take the class at a later date. A course grade of incomplete (I) will be considered only for individual cases with cause. An incomplete grade is not meant to be a substitute for an undesirable regular letter grade. *An incomplete may be issued when the quality of work is satisfactory, but some minor yet essential requirement has not been completed, for reasons acceptable to the instructor (http://registrar.uoregon.edu/incomplete_policy).*

Homework Assignments: Students must complete and submit online homework assignments available using Pearson's Mastering Chemistry homework system. All assignments are due at 11:59 pm on the date indicated on this syllabus (usually Tuesdays). On-line homework assignments are worth 10% of the course grade. Study groups are encouraged. Each student is responsible for completing and submitting *their own work*. If you experience technical difficulty working on an online homework assignment, please contact the Mastering Chemistry technical support staff. If you experience a serious ongoing issue related to the online homework,

please email your TA.

Deadlines for assignments are not negotiable and technology failure is not an excuse for late work.

Flipped Thursdays: Some Thursdays, students will be responsible for viewing an online presentation and/or answering questions online BEFORE attending class. During class, students will work in groups to solve problems based on the online material.

Participation: Throughout the term, there will be several quiz questions based on the previous or current day's reading and the lecture material. Questions will be asked and you will respond with your i>Clicker. Clickers must be brought to every lecture; *hand written responses to the Clicker questions will not be accepted*. One point will be awarded for each Clicker response regardless of the correctness of the selected answer. Zero points will be awarded for no response. At the end of the term, your two lowest clicker question scores will be dropped. Every student must respond with their own Clicker; having someone else respond to clicker questions with your clicker is a form of plagiarism and will be treated accordingly.

Clicker Registration: Students are responsible for bringing an i>clicker2 to each class session. Students must register their clickers via the i>Clicker link on their CH 111 Canvas page by Tuesday, October 3rd, 2017. Registrations made through the non-UO i>clicker website *will not link to the University of Oregon system*. Failure to meet the registration deadline will result in points not being awarded until the end of the term.

Calculator policy: A *simple, inexpensive* scientific calculator is required for use during quizzes/exams. The calculator should be capable of square roots, logarithms, scientific notation operations, and have a y^x key. Calculators that can be programmed, communicate with other devices, store text, product graphs, or that make noise are NOT ALLOWED. Violation of the calculator policy will result in academic sanctions.

Exam/Quiz policies and procedures: All exams and quizzes are cumulative; a question may pertain to anything that we have studied in class so far. An exam/quiz booklet will be provided, with a seat number provided on the front. Students are required to sit in their assigned seat. Test booklets assigned to left-handed desks will be available at the front of the classroom.

1. Exams and quizzes will be administered on the days and times indicated on this syllabus. Written requests for alternate testing arrangements due to conflicts with authorized and unavoidable university events or due to a valid academic accommodation must be made during the first two weeks of the term. Documentation must be included with all requests. No make-up exams or quizzes will be offered.
2. Students must bring #2 pencils, an approved non-programmable calculator, and student identification card to quizzes and exams.
3. Only approved calculators (see Calculator policy, above) may be used during quizzes and exams. Sharing of calculators is not allowed.
4. All calculators and associated covers are subject to search and inspection before the start of and during exams and quizzes; improper calculators may be temporarily confiscated or seized. A limited number of calculators will be available to check out during the exam on a first-come, first-served basis. Use of these calculators will result in a 5% penalty on the exam.
5. The use of electronic dictionaries during exams is not allowed. Paper dictionaries must not contain ANY extra writing and must be presented to the instructor or head proctor before the beginning of the exam for inspection. The instructor and head proctor have the right to refuse a student the use of a dictionary for good cause.
6. UO Student identification cards must be brought to each lecture quiz and exam. Students are required to show their UO Student ID when requested to do so by the instructor, assisting proctor, or UO staff.
7. The "hat rule" will be enforced during all quizzes and exams. (All baseball style caps or brimmed hats

must be removed. Upon approval of the instructor, for a valid medical reason, baseball style caps may be turned backwards.)

8. All cell phones (i-phone) and other wireless communication devices (i-pads) must be turned OFF and stowed out of sight before beginning a quiz or exam. *Use of a cell phone during an exam for ANY reason will be regarded as a violation of academic dishonesty guidelines. Students experiencing an emergency situation should speak to the course instructor.*
9. Headphones and unauthorized earpieces must not be used during quizzes and exams.
10. Students must keep all exam or quiz material at their seat – not on adjacent seats. ALL other personal materials (bags, packs, phones, etc.) must be stored under the appropriate seat during the quiz/exam.
11. A Periodic Table, appropriate equations, and physical constants will be provided on each quiz/exam.

Academic Dishonesty: Academic dishonesty in any guise, including plagiarism, fabrication, and cheating, will not be tolerated. All work submitted by students must be their own work and produced exclusively for this course. The use of sources (ideas, quotations, paraphrases) must be acknowledged and cited using a consistent format. Because one of the best ways to fully learn a subject is to try and teach it to another person, collaborative and group work are very much encouraged. However, ***students must submit their own answers homework, quiz and exam questions.***

Electronic devices: The use of electronic devices during lecture is distracting to other students. Students who plan to use a laptop to take notes during class must sit in the upper balcony of the lecture hall. All uses of cell phones and other electronic devices during exam times are prohibited.

E-mail Policy: The University of Oregon has adopted university email addresses as an official means of communication. *It is the responsibility of each individual student to regularly check their UO email account to stay current with course communications.*

Email is a very handy method for communicating with people, whether around the world or across campus. In some situations email protocol is not as formal as paper communications. In others, (academia, jobs, etc.) there are some expectations of protocol. When communicating with us (or any faculty member or TA) by email, please adhere to the following guidelines:

- The subject line should indicate the course number and the nature and topic of the email.
- Always sign your messages with first and last name. Unsigned messages will not receive a response.

Please refer to the syllabus and/or course materials posted on Canvas for answers to questions before sending the course instructor/TA an email. If an answer to your question is readily available from one of those sources, do not expect to receive a response in a timely manner.

Communication or comments sent through Canvas will not be addressed. Please always use your UO email account to correspond with me. This includes responding to announcements posted by the instructor on Canvas.

Inclement Weather Policy: Check the UO home page to determine if the university has suspended classes. In that case, no further action is required. In the unlikely event that we cancel a class due to inclement weather even though the university remains open, an announcement will be made on the CH 111 Canvas web site and an email will be sent to all students.

Learning Resources:

- The SUPeR Chem program provides drop-in help sessions for CH 111 students at several convenient times each week. Check the SUPeR Chem calendar that is posted on Canvas.
- The Department of Chemistry and Biochemistry provides contact information for private tutors. For more information, visit the office in room 91 Klamath Hall.

- Small group and individual tutoring is also available through the Teaching and Learning Center in Room 68, Prince Lucien Campbell Hall.

Accessible Education: The University of Oregon is working to create inclusive learning environments. Any student with a documented disability, who may anticipate needing accommodations in this course, should request the appropriate documentation for Professor Baldock from the Office of Accessible Education (164 Oregon Hall).