

Chemistry 1152-010, -011

General Chemistry II

Spring 2019

Instructor: Dr. Deanna L. Zubris

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Office hours: MW 12:00-1:00pm, between our Tuesday recitation sections, and by appointment

Required Textbook:

Chemistry, 13th Edition, Raymond Chang and Jason Overby, 2018, McGraw Hill Education (ISBN: 978-1259911156). You may use either the hardcopy or E-Book version of this textbook. You are responsible for all content in assigned chapter sections, including explanations and problems.

Required access to ALEKS:

You must purchase an ALEKS access code for this course (available at the bookstore or online).

Required Scientific or Graphing Calculator

Bring this to all lectures and recitations. You will need your calculator for all quizzes and exams.

Lecture: MWF 1:30–2:20 pm, Chemical Engineering 202

Recitations: Section 010: T 1:00 pm–1:50 pm, Mendel G87

Section 011: T 2:30 pm–3:20 pm, Mendel G87

Course Content and Learning Objectives: This second semester general chemistry course will emphasize problem solving, critical thinking, and data analysis as it applies to chemistry and chemical problems. The course builds upon topics learned in the first semester general chemistry course. By the end of the semester you should:

- be familiar with fundamental chemical kinetics including reaction rates, rate constants, rate laws, temperature dependence of reaction kinetics, reaction mechanisms, and catalysis;
- understand the concept of equilibrium, equilibrium constants, and the factors that affect equilibria;
- have a working knowledge of acid/base theory, buffers, titrations, and solubility equilibria;
- be familiar with the principles of chemical thermodynamics including entropy and free energy;
- have a basic understanding of electrochemistry including electrochemical cells and batteries;
- have a basic knowledge of radioactivity, nuclear stability, radioactive decay, and nuclear reactions;
- have an introductory knowledge of the characteristics of metals and non-metals

Attendance policy: Attendance is mandatory for all students.

Attendance in lectures and recitations is compulsory for all students. A student will fail a course (receive a grade of Y) whenever he/she has been absent unexcused once more than double the number of weekly meetings for the course. Any student who misses nine class periods for CHM 1152 will receive a failing grade. Excused absences will be granted for the following reasons: approved athletic participation, approved field trips, certified serious illness, death in the immediate family, or approved placement activities. The Student Absence Card, available from the Dean's Office, must be presented to the Dean no later than 4:30 pm on the day the student returns to classes. A student who misses class due to an unexcused absence will not be given the opportunity to make up a recitation worksheet, quiz, or exam distributed during his/her absence. In the event of an excused absence, it is the student's responsibility to meet with the instructor *as soon as possible* to make up the work that was missed during the absence.

Academic Integrity:

All students are expected to uphold Villanova's Academic Integrity Policy and Code. Any incident of academic dishonesty will be reported to the Dean of the College of Liberal Arts and Sciences for disciplinary action. For the College's statement on Academic Integrity, you should consult the [Enchiridion](#). You may view the university's Academic Integrity Policy and Code, as well as other useful information related to writing papers, at the Academic Integrity Gateway web site: <http://library.villanova.edu/help/academicintegrity>

Office of Disabilities (ODS) and Learning Support Services (LSS):

It is the policy of Villanova to make reasonable academic accommodations for qualified individuals with disabilities. Go to the Learning Support Services website (<http://learningsupportservices.villanova.edu>) for registration guidelines and instructions. For physical access or temporarily disabling conditions, please contact the Office of Disability Services at 610-519-4095 or email Stephen.mcwilliams@villanova.edu. Registration is needed in order to receive accommodations.

Absences for Religious Holidays:

Villanova University makes every reasonable effort to allow members of the community to observe their religious holidays, consistent with the University's obligations, responsibilities, and policies. Students who expect to miss a class or assignment due to the observance of a religious holiday should discuss the matter with their professors as soon as possible, normally at least two weeks in advance. Absence from classes or examinations for religious reasons does not relieve students from responsibility for any part of the course work required during the absence.

<https://www1.villanova.edu/villanova/provost/resources/student/policies/religiousholidays.html>

Exams: There will be three in-class 50-minute exams: Exam 1 (Wed. Feb. 13), Exam 2 (Wed. Mar. 20), and Exam 3 (Wed. Apr. 17). Unexcused absences for exams will result in a grade of zero. Makeup exams are only possible in the event of an excused absence – you must contact me as soon as possible to make arrangements for a makeup exam. The final exam will be cumulative and will be held during final exam period on Wed. May 8 from 2:30–5:00 pm.

Quizzes: Quizzes will be held during the first 25 minutes of class on the following days: Quiz 1 (Wed. Jan. 30), Quiz 2 (Wed. Feb. 27), and Quiz 3 (Wed. Apr. 3). Unexcused absences for quizzes will result in a grade of zero. Makeup quizzes are only possible in the event of an excused absence – you must contact me as soon as possible to make arrangements for a makeup quiz. The quiz problems will be similar in style and difficulty to exam problems.

Recitations: Recitation worksheets (practice problems) will be distributed at the start of each recitation and collected at the end of each recitation. You will work in assigned groups to solve these problems each week. These practice problems will reinforce lecture concepts. Recitation is also a great opportunity to ask questions about the course content, especially before quizzes or exams.

ALEKS: Chemistry is a subject that is best learned with lots of practice! There are many topics in General Chemistry I and II that build on each other, and require you to use prior knowledge to move forward in Chemistry. We will be using an online adaptive learning program, ALEKS, where you will solve problems on the topics we are covering to work towards achieving a high level of mastery for each topic. You will complete weekly Objectives and periodic Knowledge Checks. Your ALEKS course grade will reflect completion of your weekly Objectives and your overall course mastery in ALEKS at the end of the semester (the ratio of topics you have mastered versus all topics assigned).

Villanova University – Department of Chemistry
CHM 1152 Section 010 (CRN 31774), Section 011 (CRN 31775)

General Policies:

1. Please be respectful of your peers: arrive promptly for class and silence your electronic devices (cell phones, etc). Laptops will not be needed nor permitted in class except when specified. During quizzes and exams, all cell phones must be put away for the full testing period.
2. Aside from in-class announcements, e-mail will be my primary form of communication with you. Please check your Villanova email address regularly. If you want to get in touch with me, you can reach me by email, during office hours, or by appointment. I'll do my best to respond to emails within 24 hours during the week and 48 hours during the weekend and breaks. (FYI, I'm early-to-bed-early-to-rise, so I typically won't see late night emails until early the next morning.)
3. I will use Blackboard to post handouts from class and answer keys for recitation worksheets, quizzes, and exams. Typically I will update our Blackboard site on a weekly basis.

Grading:

• Exams (3):	35%	• Recitation worksheets:	10%
• Quizzes (3):	15%	• ALEKS:	15%
		• Final Exam:	25%

*Grading System**

Faculty members are responsible for maintaining the integrity of the evaluation and grading system. Presented below is the Undergraduate Grading System.

A	Is the highest academic grade possible; an honor grade which is not automatically given to a student who ranks highest in the course, but is reserved for accomplishment that is truly distinctive and demonstrably outstanding. It represents a superior mastery of course material and is a grade that demands a very high degree of understanding as well as originality or creativity as appropriate to the nature of the course. The grade indicates that the student works independently with unusual effectiveness and often takes the initiative in seeking new knowledge outside the formal confines of the course.
B	Is a grade that denotes achievement considerably above acceptable standards. Good mastery of course material is evident and student performance demonstrates a high degree of originality, creativity, or both. The grade indicates that the student works well independently and often demonstrates initiative. Analysis, synthesis, and critical expression, oral or written, are considerably above average.
C	Indicates a satisfactory degree of attainment and is the acceptable standard for graduation from college. It is the grade that may be expected of a student of average ability who gives to the work a reasonable amount of time and effort. This grade implies familiarity with the content of the course and acceptable mastery of course material; it implies that the student displays some evidence of originality and/or creativity, works independently at an acceptable level and completes all requirements in the course.
D	Denotes a limited understanding of the subject matter, meeting only the minimum requirements for passing the course. It signifies work which in quality and/or quantity falls below the average acceptable standard for the course. Performance is deficient in analysis, synthesis, and critical expression; there is little evidence of originality, creativity, or both.
F	Indicates inadequate or unsatisfactory attainment, serious deficiency in understanding of course material, and/or failure to complete requirements of the course.
N	Incomplete: course work not completed.

* Reproduced from the VU Faculty Handbook

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Important dates:

- Last day for drop/add: January 18
- MLK Day (no class): January 21
- Spring Break (no class): March 4-10
- Midterm grades submitted: March 13
- Advising begins for Fall 2019: March 15
- Last day for WX: April 3
- Easter recess (no class): April 18-22
- Friday UG class day: April 30
- Monday UG class day and last day of this class: May 1
- Quiz 1: Wed. January 30
- Exam 1: Wed. February 13
- Quiz 2: Wed. February 27
- Exam 2: Wed. March 20
- Quiz 3: Wed. April 3
- Exam 3: Wed. April 17
- Final Exam: Wed. May 8, 2:30-5:00pm