Syllabus

CHEM-111 General Chemistry I, Section 1
SUNY College at Oneonta

Fall 2017
Lecture Tuesday, Thursday 8:30 am – 9:45 am, Fitzelle 105
Laboratories, Monday 12:00 – 2:50 pm or 3:00 – 5:50 pm, Physical Science 234

Instructor:

Bill Vining, William.Vining@oneonta.edu
Office – 249A Physical Science, (607) 436-2698

Office Hours:

Office Hours:
Also by appointment or just stop in.

Course Website: http://employees.oneonta.edu/viningwj/Chem111/index.html
Online Lecturettes: http://employees.oneonta.edu/viningwj/lecturettes/
Text Book: MindTap General Chemistry, Cengage Learning; Vining, Young, Day and Botch.
To log into the online homework/text: https://login.cengagebrain.com/course/MTPN-F88P-1ZK9
Laboratory: Purchase a lab manual, duplicating lab notebook and goggles from the bookstore.

Required Materials:

Textbook: We will be using an on-line MindTap (an electronic book). You should also purchase a paper copy of the book at the Bookstore. This book will also be used for CHEM-112.

Calculator: GRAPHING CALCULATORS NOT PERMITTED in exams. Purchase a good quality scientific calculator (usually costing about $10-15 is sufficient). ***Phones, graphing calculators, PDAs, iPods, etc. may not be used for calculators during an exam.***

Laboratory: Laboratory experiments and pre-lab assignments are contained in a laboratory manual available in the bookstore. You are required to have safety **goggles**, not glasses. A duplicating laboratory notebook is REQUIRED and is available at the Bookstore. You will use this in CHEM-111 and can use it again in CHEM-112 or any other science laboratory requiring a duplicating notebook.

General Information and Expectations:

The Student Code of Conduct (consult the SUNY Oneonta website), covers the ordinary rules regarding academic honesty, use of computer resources, etc. Chemistry & Biochemistry department course guidelines are also part of this syllabus.

General Chemistry 111 is the first of a two-semester course designed to understand the core concepts of chemistry, develop problem solving skills and prepare a foundation onto which upper level chemistry courses can be built upon. There is a heavy emphasis on mathematical calculations and therefore a large amount of data analysis practice (calculations) will be required both in class and as homework. This course is challenging and it is expected that students spend 6-10 hours per week outside of class on the material to be successful. **If you begin to struggle or fall behind, get help from me immediately.**

Text and Homework:
It is expected that students will read the text chapters in advance of the week that the chapters will be covered in lecture. Students will be responsible for the on-time completion of homework assignments using the MindTap program or written assignments.

Electronics:
Laptops, headphones, cell phones and other electronic devices except calculators are not allowed in class. You may not use your cell phone or hand-held electronic device as a calculator during class.

Attendance:
You are expected to be in class every day. Contact me if you will not be. Your best chance to learn this challenging material is through several repetitions and practice (i.e. text, lecture, homework, extra help, study groups etc.) so attendance is crucial.

There is no mechanism to make up in-class work. Missing a quiz or exam will result in a zero unless the absence is excused and you schedule a make-up in advance.

Punctuality:
It is expected that you are on-time for class. If you are late, do not disrupt the class when you enter. Additional time will not be given for quizzes and exams if you are late. If you are late you will not receive credit for missed questions.

Respectful Behavior:
It is expected that students will conduct themselves as they would if they were at their future employment. Respectful behavior is expected for all interactions, including with the instructor and all other students in the class. For example, there will be no inappropriate language, symbols or other disrespectful behavior tolerated. This behavior will result in ejection from the class and the student may be referred to the College's Judicial System. In-class work, quizzes or exams will receive a zero for the class missed. See the student handbook for details on the College policies for student conduct.

Accommodations:
Students with SDS accommodations should be sure to see me in a timely manner (in accordance with SDS guidelines). It will be my pleasure to facilitate the accommodations.

Instructional Sequence:

We will be covering most of the topics in chapters 1-10. The chapters in the text will be covered in numerical order.

Grading:

Grading

Three Hour Exams (100 pts each)	=	300 points
Final Exam	=	150 points
Homework and Quizzes	=	150 points
Laboratory	=	150 points
Total	=	750 points

Letter grade ranges on a percentage basis are:

A	90.0 – 100%	**C-**	67.0 – 69.9%
A-	87.0 – 89.9%	**D+**	64.0 – 66.9%
B+	84.0 – 86.9%	**D**	60.0 – 63.9%
B	80.0 – 83.9%	**D-**	57.0 – 59.9%
B-	77.0 – 79.9%	**E**	Below 57%
C+	74.0 – 76.9%		
C	70.0 – 73.9%		

Exam Dates: September 21, October 26, December 5; Final Exam 8:00 – 10:30 am Thursday, December 15

Special Lab Grade Rule:

Be aware that the policy of the Department of Chemistry & Biochemistry is to require a C- or higher grade in pre-requisite courses. As a result, you will need a C- or higher in order to enroll in CHEM 112, CHEM 226 or any other CHEM course with 111 as a pre-requisite. **You will also need to pass the laboratory, by earning 60 points or more (60%) in order to pass the class (regardless of any other achievements). If you fail the lab, you fail the course.**

Laboratory Notes:

Prior to each laboratory experiment, you are expected to read the laboratory description and complete the pre-lab assignment in your lab notebook. Hand in the copy pages and keep the originals. Laboratory experiments and pre-lab assignments are contained in a laboratory manual available in the bookstore. You are required to have safety **goggles**, not glasses. A duplicating laboratory notebook is REQUIRED and is available at the Bookstore. You will not use all of the pages in CHEM 111 and can use it again in CHEM 112 or any other science laboratory requiring a duplicating notebook.

SUNY Oneonta Undergraduate Catalog Course Description:

CHEM 111 General Chemistry I
4 s.h.
Studies chemical principles, with emphasis on stoichiometric relationships; the kinetic molecular theory of gases, atomic theory, chemical bonding, periodicity, solutions and electrolytes, and redox reactions. Includes lab. *(LA, NL2, NS3)*
Prerequisite: high school chemistry.

Chemistry & Biochemistry Program Student Learning Outcomes:

Some of these are emphasized more in CHEM 111 and some less. The outcomes are a general list of how you may be evaluated on the specific topics we will consider, and not an indication of any specific question you would be asked at any given time.

Student Learning Outcomes
Students will demonstrate an understanding of chemical elements and inorganic compounds, their properties, reactions and uses.
Students will demonstrate an understanding of organic compounds, their properties, reactions and uses.
Students will demonstrate an understanding of what controls chemical stability and reactivity, reaction kinetics and how to detect and analyze chemical reactions.
Students will learn and practice basic laboratory safety and chemical hygiene procedures.
Students will exhibit a working knowledge of classical and modern analytical techniques and instrumentation, and understand their uses and limitations.
Students will gain experience in the use of computers for chemical simulation and computation, data acquisition, and data analysis.
Students will demonstrate knowledge of the models chemists use to understand matter and energy at the atomic, molecular and macromolecular dimensions.
Students will exhibit an understanding of the process of science as inquiry, including the role of collaboration and the evolving nature of scientific knowledge as it applies to chemistry.
Students will demonstrate competence in analytical thinking and critical analysis of chemical literature.

General Education NL2 Attribute Student Learning Outcomes:

These student learning outcomes are germane to all NL2 General Education attribute courses at SUNY Oneonta.
Students will demonstrate:

- Understanding of the methods scientists use to explore natural phenomena, including observation, hypothesis development, measurement and data collection, experimentation, evaluation of evidence, and employment of mathematical analysis; and
- Application of scientific data, concepts, and models in one of the natural sciences.

Emergency Evacuation/Shelter-in-Place Procedures:

In the event of an emergency evacuation (i.e., fire or other emergency), our laboratory classes meeting in the Physical Sciences building are directed to reassemble at the Chase Gymnasium so that all persons can be accounted for. Evacuation from our Fitzelle lecture hall is the IRC Lobby. Complete details of the emergency evacuation, shelter-in-place, and other emergency procedures can be found at http://www.oneonta.edu/security.

Department of Chemistry and Biochemistry

Policy on Course Attendance, Performance, Participation and Behavior

1. Students are expected to attend all scheduled course sessions and should be prepared by reading in advance any relevant material assigned or provided. Participation (defined by interacting with the instructor, working problems at the board, individually or in groups, using personal response "Clicker" systems and other mechanisms defined in the syllabus) is expected.
2. Students are reminded that instructors are not required to accept assignments submitted late, except in instances allowed according to College policies. College Policies as defined in the Student Code of Conduct apply to lecture, recitation and laboratory portions of all courses.
3. Laboratories are an integral part of education in chemistry courses. As a result, participation in all laboratories scheduled for a course is expected. Unless alternate activities are scheduled, students can expect that their laboratory section will meet each week, and failure to attend laboratories may lead to failure in the course.
4. The minimum acceptable grade for a chemistry course prerequisite is a C-. For example, a student with a D+ in General Chemistry I may not enroll in General Chemistry II. This standard applies to all Chemistry prerequisites for all Chemistry courses.
5. **The laboratory for a course must be passed**, normally by earning 60% of the available score or points for the laboratory, in order to pass the course. Exceptions may be noted in syllabus.
6. Students are expected to bring to laboratory the laboratory manual (or printout of the experiment), a laboratory notebook (if required), a calculator, ruler or other materials as specified by the instructor or in the syllabus.
7. Students are not allowed to work in the laboratory without direct faculty supervision.
8. Unless announced in advance, **SAFETY GOGGLES (WHICH PROVIDE A COMPLETE SEAL AROUND THE EYES AND ARE EQUIPPED WITH INDIRECT VENTS) ARE REQUIRED TO BE WORN AT ALL TIMES IN THE LABORATORY. STUDENTS ARE REQUIRED TO PROVIDE THEIR OWN SAFETY GOGGLES.**
9. Open-toed shoes (e.g. sandals, "Birkenstocks", flip-flops, etc), unrestrained long hair, excessively loose clothing and other items, which may be easily ignited or snag on apparatus are not allowed.
10. Food, drink, candy, cosmetics, tobacco products, etc. are not allowed in the laboratory.
11. Students are expected to be attentive to the material and any experiments and apparatus in the laboratory. The following must be turned off and stored away from the laboratory bench while in laboratories:

    Portable music players (e.g. iPods, MP3 players and the like)

    Cellular telephones, pagers, text messaging devices and the like

    Other portable electronic devices as defined by the laboratory instructor
12. Horseplay, practical jokes, "goofing around" or interfering with other students' work is not allowed in the laboratory.
13. Students should not expect to be able to makeup missed laboratory sessions or experiments. If a makeup session is possible, it will be at the discretion of the laboratory instructor and will normally be during the same week as the missed laboratory section.
14. Students will not be permitted to work in any laboratory section other than that they are registered for unless they have the **written approval** of both their regular instructor AND the instructor in the section they wish to enter.

Course instructors may modify these guidelines as necessary to meet the requirements of individual courses or chemical specialties in consultation with the Department Chairperson. Students should expect to receive a copy of these guidelines in their course syllabus or be given a copy by the course instructor (either in paper form or by electronic mail).