

**Chemistry 108**  
Fundamentals of Chemistry  
Spring 2016

**Course Instructor:** Dr. Jie Floyd  
Office: 212 Collier Hall of Science, 610-217-7589  
Email: [floydj@moravian.edu](mailto:floydj@moravian.edu)

**Lecture:** Mon. Wed., Fri. 10:20-11:10, 204 Collier Hall of Science

**Office Hrs:** Fri. 11:15am-12:15pm

**Lab:** Tues or Thurs 8:30-11:30am, 208 Collier Hall of Science

**Lab Instructors:** Dr. Floyd, Dr. Burrows

**Required Materials:**

- **Text:** Karen C. Timberlake *Chemistry. An introduction to General, Organic, and Biological Chemistry, 12<sup>th</sup> Edition, Prentice Hall*
- **Scientific Calculator:** Must be able to calculate logs | no cell phones!

**Course Goals:**

- Use real-life examples, particularly those that are health related, to illustrate the relationship between chemical principles and living organisms.
- Relate the properties of atoms and molecules with the organization of elements in the periodic table.
- Recognize relationships between physical properties of atoms, compounds, and molecules; and the physical states of matter, solubility, reactivity, molecular shape, and biochemical function.
- Apply qualitative and quantitative aspects of chemistry to problem solving.
- Use the scientific method to actively seek knowledge through the study of chemical processes in a laboratory environment.

**Attendance:** It will be *very difficult* for you to learn chemistry concepts and follow them over the semester if you miss course meetings (class, problem sessions, and laboratories). If you anticipate an unavoidable absence, please *notify me ASAP before* you are absent. Makeup exams, and labs are given at the discretion of the instructor. As a reminder, the college policy on attendance can be found at <http://www.moravian.edu/studentLife/handbook/academic/academic.html>

**Academic Honesty:** Please be familiar with the college policy on academic honesty  
<http://www.moravian.edu/studentLife/handbook/academic/academic2.html>

**Disability Statement :** Students who wish to request accommodations in this class for a disability should contact the Academic Support Center, located in the lower level of Monocacy Hall, or by calling [610-861-1401](tel:610-861-1401). Accommodations cannot be provided until authorization is received from the Academic Support Center.

**Grading:** Your grade will be determined only by the the total points you achieve.

**Percentage Based Grading Scale**

97-100	A	73-76	C
90-92	A-	70-72	C-
87-89	B+	67-69	D+
83-86	B	63-66	D
80-82	B-	60-62	D-
77-79	C+	< 60	F

There are a total of 100 pts that will be factored into your final grade in this course. A point on an exam, homework, or laboratory counts the same amount.

4 Exams	45 pt (45%)
Graded homework	20 pts (20%)
Labs	25 pts (25%)
Attendance & Participation	10 pts (10%)
Total	100 pts

**Exams:** Three in-class exams (10 pts each) and one final (15 pts).

While the material you will be responsible for each exam could vary, (dependent upon the pace of the course) the following dates will be used for examinations:

Exam 1	Wednesday, February 10
Exam 2	Wednesday, March 2
Exam 3	Wednesday, April 6
Final	Wednesday, May 4, 11:30am

**Graded homework:** Graded homework will be assigned based on each chapter or chapters. These time sensitive assignments will be posted on the blackboard, which will not be available after the due date. To get credit for a collected homework assignment, the student must submit the answers prior to the deadline. Graded homework not submitted prior to the deadline will be assigned a grade of zero. Total homework grade is the sum of the fifteen highest grades of homework assignments.

**Non-graded homework:** All the questions with a red number in each chapter in the textbook are assigned as non-graded homework. These questions have answers at the end of the chapter. You should work on these problems in order to get a better understanding of the material covered in this course.

**Labs:** Laboratory experiences (2.5 pts for each lab) consisting of:

- Group write up and summary data
- Individual participation, being on time, and working safely
- Group participation, the group cooperates positively

Total lab grade is the sum of ten highest grades of laboratories.

**Makeup Labs, and Exams:** If an excused lab is missed, arrangements should be made to make up the lab within one week upon students' return during lab sections. Any unexcused missed lab will be assigned the grade of zero. You are responsible for understanding the content of the material covered during a missed lab. Makeup exams will be given at the discretion of the instructor for absences that have been documented by the Dean of Students Office and/or a health professional.

**Attendance & Participation:** Punctuality is basic requirement. Attendance and participation will be taken by plicker cards at the beginning, or in the middle, or at the end of the class in the form of your answers to question(s) of class materials. Each student will have one assigned plicker card, which will be used throughout the semester.

**Class Etiquette:**

Turn off or silence cell phones! NO-text messaging during class

- Do not record or take pictures of classmates or instructors without their permission.

**Email Etiquette:** Although email may seem like an instantaneous form of communication, it is not. Just because you sent me an email, does not mean that I have: 1) read it, 2) understood it, and/or 3) approved any requests you made in it.

- I will reply individually, or as a class response to all emails received.
- Assume that email sent between the hours of 5PM and 9AM has NOT been read.

**Pace of the Course:** The schedule below is a guide for course coverage this semester.

**Tentative Lecture Schedule**

Week Beginning	Topic	Text Ref. Chapter
01-18	Measurements, Matter, Energy	1,2,3
01-25	Atoms and Elements	4
02-01	Nuclear Chemistry	5
02-08	Ionic and Molecular Compounds. <b>Exam 1</b>	6
02-15	Chemical Quantities and Reactions	7
02-22	Gases Solutions	8,9
02-29	Acids and Bases <b>Exam 2</b>	10
03-07	Spring Break	
03-14	Introduction to Organic Chemistry:Hydrocarbons	11
03-21	Alcohols, Thiols, Ethers, Aldehydes, and Ketones	12
03-28	Carbohydrates	13
04-04	Carboxylic Acids, Esters, Amines and Amides <b>Exam3</b>	14
04-11	Lipids, Amino Acids	15, 16
04-18	Proteins, Enzymes, Nucleic Acids	16, 17
04-25	Protein Synthesis, Metabolic Pathways, Energy Production	17, 18
05-04	<b>Final Exam 11:30am</b>	

**Lab Schedule:** Lab starts on January 26, Tuesday, ends on April 21, Thursday.  
Please note that lab sequence may be changed if deemed necessary.

Date start /end

01-26/01-28	Lab 1	Measurement
02-02/02-04	Lab 2	Ions
02-09/02-11	Lab 3	Modeling Molecular Structure and Shapes
02-16/02-18	Lab 4	Solubility of Ionic and Molecular Compounds
02-23/02-25	Lab 5	Acid and base
03-01/03-03	Lab 6	Solutions
	spring break	
03-15/03-17	Lab 7	OTC medicines
03-22/03-24	Lab 8	Esters
03-29/03-31	Lab 9	Carbohydrate
04-05/04-07	Lab 10	Soap
04-12/04-14	Lab 11	Protein
04-19/04-21	Lab 12	To be determined