50:160:103: GENERAL, ORGANIC & BIOCHEMISTRY I
Spring 2024
15 WEEKS, 1/16-5/3
Sections: 01

Instructor: Christina Nase, Ph.D. christina.nase@rutgers.edu
Tuesday/Thursday 2:00pm-3:20pm PEN 401
Monday 3:45pm-4:45pm SCI-LH
Office Hours: Tuesday/Thursday 1:00-1:50 pm SCI B5
Virtual Office Hours: By appointment

REQUIRED Course Materials:

- **Calculator:** Basic, scientific (non-graphing) calculator
- **Canvas account: use to access all course materials and communications at http://canvas.rutgers.edu-** use your Rutgers net ID to access course content

OPTIONAL Course Materials:

- **Raymond**, Kenneth W.; **General, Organic & Biological Chemistry, 4th Ed.** e-text directly through Wiley Publishers or B&N bookstore.

General Information, Course Description, and Prerequisites:

General, Organic and Biochemistry (GOB) I introduces the chemistry of organic compounds, discusses hydrocarbons & their functional derivatives, stereochemistry, carbohydrates, proteins, lipids & nucleic acids. This course is designed for students who plan to major in nursing or health sciences. It is an introduction to some of the fundamental principles of chemistry and their application to nursing and other health-related fields. The math prerequisite is placement in math 50:640:042 or higher. This is a four (**4**) **credit survey** course. Students who are biology, chemistry, or pre-med majors must take Chemical Principles and Organic Chemistry I and II instead of GOB I and II.

EVALUATION AND ASSESSMENT

Grading Distribution

• Quizzes, 10 @ 20 pts. each (drop lowest quiz)	200 points
• Exams, 4 @ 200 pts. each (in class)	800 points
Optional final exam will replace lowest exam score	1000 points

Grading Scale

The following grading scale will be used in this course:

900-1000 pts. = A	700-749 pts. = C
850-899 pts. = B+	600-699 pts. = D
800-849 pts. = B	Below 600 pts. = F
750-799 pts. = C+	

Learning Objectives: Students will:
1. Gain interest in the fields of general chemistry, organic chemistry and biochemistry
2. Develop a broad knowledge base in these fields
3. Develop skills in communication, teamwork, and quantitative analysis
4. Become proficient in problem solving through engaging in the process of science
5. Make connections to other disciplines
6. Make connections to societal issues, especially those involving medicine and health care.

Serious Emergencies and Absences:
If a serious emergency or problem (hospitalization, serious automobile accident, or death of a close family member, for example) occurs that will cause you to be absent from school, please advise the **Office of Student Affairs, 856-225-6050**. That office will notify all your professors of your absence. **Emergencies need to be documented to be excused from quizzes and exams.**

Academic Integrity:
Every student is prohibited from engaging in violations of academic integrity. Note that every instructor is ethically bound to follow certain procedures once a student is caught, or suspected of, breaching academic integrity (see *Rutgers University Academic Integrity Policy*). Any material submitted by a student in this course for academic credit (i.e., grading) must be that student's own work. Also, all students should strictly adhere to the rules governing any quiz, exam or homework that is assigned.
The Rutgers University Academic Policy is found at http://academicintegrity.rutgers.edu. All students are expected to show respect to everyone both on and off campus and to abide by this policy.

Course material copyrights. Any course materials (including quizzes, lectures, and exams) are protected by copyright. You may not (and you may not allow others to) reproduce or distribute these course materials publicly (whether or not a fee is charged) without the copyright holder's (i.e., the course instructor's) express written consent.

Attendance Policy for Lectures and Recitations:
Attendance to lectures and recitations is essential as it will help you prepare for exams, quizzes, and homework. The Learning Center can provide individual tutoring for this class. Attendance at lectures and recitation is **mandatory**.

Student Accommodations:
Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: https://ods.rutgers.edu/students/documentation-guidelines. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form at https://webapps.rutgers.edu/student-ods/forms/registration. Accommodations are not retroactive and are effective only upon submission of the LOA to the instructor.

Week	Monday (Recitation)	Tuesday	Thursday
1 (1/16-1/21)		Chapter 1: Science and Measurements	Chapter 2: Atoms and Elements
2 (1/22-1/28)	Recitation Problem Sets 1 & 2 **Quiz 1** (Ch 1& 2) In class 1/22	Chapter 3: Compounds	Chapter 3: Compounds
3 (1/29-2/4)	Recitation Problem Set 3 **Quiz 2** (Ch 3) In class 1/29	Chapter 4: Organic Compounds	Chapter 4: Organic Compounds
4 (2/5-2/11)	Recitation Problem Set 4 **Quiz 3** (Ch 4) In class 2/5	**Exam 1** (Ch 1-4) In class 2/6	Chapter 5: Reactions
5 (2/12-2/18)	Recitation Problem Set 5 **Quiz 4** (Ch 5) In class 2/12	Chapter 5: Reactions	Chapter 6: Gases, Solutions, Colloids, and Suspensions
6 (2/19-2/25)	Recitation Problem Sets 5 & 6 **Quiz 5** (Ch 5 & 6) In class 2/19	Chapter 6: Gases, Solutions, Colloids, and Suspensions	Chapter 7: Acids, Bases, and Equilibrium
7 (2/26-3/3)	Recitation Problem Sets 6 & 7 **Quiz 6** (Ch 6&7) In class 2/26	Chapter 7: Acids, Bases, and Equilibrium	**Exam 2** (Chapters 5-7) In class 2/29
8 (3/4-13/10)	Recitation Problem Set 8	Chapter 8: Organic Reactions 1 - Hydrocarbons, Carboxylic Acids, Amines	Chapter 8: Organic Reactions 1 - Hydrocarbons, Carboxylic Acids, Amines
3/11-3/17		**Spring Break**	
9 (3/18-3/24)	Recitation Problem Set 8 **Quiz 7** (Ch 8) In class 3/18	Chapter 9: Organic Reactions 2 – Alcohols, Ethers, Aldehydes, and Ketones	Chapter 9: Organic Reactions 2 – Alcohols, Ethers, Aldehydes, and Ketones
10 (3/25-3/31)	Recitation Problem Set 9 **Quiz 8** (Ch 9) In class 3/25	Chapter 10: Carbohydrates	Chapter 10: Carbohydrates
11 (4/1-4/7)	Recitation Problem Set 10 **Quiz 9** (Ch 10) In class 4/1	**Exam 3** (Ch 8-10) In class 4/2	Chapter 11: Lipids and Membranes
12 (4/8-4/14)	Recitation Problem Set 11	Chapter 11: Lipids and Membranes	Chapter 12: Peptides, Proteins, Enzymes
13 (4/15-4/21)	Recitation Problem Set 12 **Quiz 10** (Ch 11 & 12) In class 4/15	Chapter 12: Peptides, Proteins, Enzymes	Chapter 13: Nucleic Acids
14 (4/22-4/28)	Recitation Problem Set 13 **Quiz 11** (Ch 12) In class 4/22	Chapter 13: Nucleic Acids	**Exam 4** (Ch 11-13) In class 4/25
15(4/29-5/5)	Final Exam Review		