

**CHEM 1106L General Chemistry Lab II**  
**Summer, 2024**  
**Class Times:** Anytime  
**Class Location:** Anywhere

**Instructor:** William Bare  
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### **CLASS MATERIALS**

The labs conducted in this course require a home lab kit which can be purchased from eScience Labs. The lab kit for this course is *2<sup>nd</sup> Edition General Chemistry Version 2* (SKU: Kit 4252). If you have taken the CHEM 1105 online lab course and purchased Version 3 at that time, then that kit should contain everything that you need. The URL below provides a link to the proper kit from the eScience Lab website:

<https://esciencelabs.com/productdisplay/2nd-edition-general-chemistry-version-2>

### **Textbook:**

The eScience lab materials include access to printed and video material that can be accessed through the course Moodle page. However, you may also find it helpful to have a General Chemistry textbook. You text used for the accompanying lecture course is an online text and is free to view or to download. That text is *OpenStax Chemistry 2<sup>nd</sup> Edition*:

<https://openstax.org/details/books/chemistry-2e>

### **Calculator:**

A scientific calculator is required. An inexpensive scientific calculator with scientific notation, square root, trigonometric, exponential, and logarithmic functions can be purchased for less than \$20, and will be sufficient for the needs of this course. You are expected to bring your calculator to all class meetings, quizzes and exams. Graphing calculators are permitted but are not required.

### **ASSIGNMENTS:**

Each lab has an associated worksheet to be submitted through Moodle. We will complete approximately two labs per week starting in the second week of class.

### **ASSESSMENT:**

Your lowest lab grade of the semester will be dropped, and your grade will be calculated as the average of the remaining labs.

Over the past several years, I have found the following scale to be appropriate in the assignment of final course grades:

> 92	90 - 92	88 - 90	82 - 88	80 - 82	78 - 80	72 - 78	70 - 72	etc...
A	A-	B+	B	B-	C+	C	C-	

### **CONTACT INFORMATION:**

#### **Office Hours:**

Virtual office hours will be conducted using the Google Meet link which is posted on the Moodle page. Office hours will be Tuesday and Thursday from 1 to 2 PM. If you are working or have scheduling conflicts that make these times difficult for you we can arrange to meet online at another time. Just contact me, and we can set up a time to meet.

#### **Email:**

You will be able to reach me most easily by e-mail, which I check at least once a day. I will assume that I can reach you by e-mail also and that you check it daily. I will use your Randolph College account for transmission of important class information, and you will be expected to read those messages at least daily.

## **HONOR CODE:**

*“I pledge absolute honesty in my academic work and in all personal relationships at Randolph College. I will maintain the integrity of my word and I will respect the rights of others. Realizing that these standards are an integral part of life at Randolph College, I assume my obligation to uphold this honor pledge. If at any time I fail to live up to my obligation to this pledge, I will report myself to the Chairperson of the Judiciary Committee. I will also ask others to report themselves for any infraction of this pledge.”*

The Honor Code at Randolph College is not just a set of rules for academic work; it is a pledge about character that allows us all to be able to work together from a position of mutual respect, both in and out of class. Teaching a class (or **taking** a class) in which one is able to assume that all participants are acting honorably at all times creates an atmosphere that is much more conducive to our mutual success than one which is clouded by anxiety or suspicion. For this reason, the Honor Code is absolutely essential to the proper functioning of this class. Any violation of the Honor Code in this class will be referred to the Judiciary Committee.

All work is to be considered as pledged work under the Honor Code. You may (and in fact are encouraged to) study with friends or classmates, and (unless specifically stated) you may also discuss homework assignments. However, any work that you submit must be yours and yours alone. If you are not sure about how the Honor Code applies to any work in this class, please ask me.

## **ACADEMIC SERVICES CENTER:**

The Academic Services Center (ASC) provides free subject tutoring for students who are having difficulty in courses, or for those who simply want to use all of their available resources to perform to the best of their ability. We will have a summer tutor available for free on-line tutoring associated with this class. For more information, visit the Academic Services Center online at <http://www.randolphcollege.edu/academicservices/>

## **DISABILITY SERVICES:**

Randolph College is committed to providing learning experiences that are accessible for all students, and will make reasonable accommodations for individuals with documented disabilities. If you have a learning difference or a disability – mental health, medical, or physical impairment – please contact Diane Roy, Coordinator of Access Services, in the Academic Services Center, 4<sup>th</sup> floor, Lipscomb Library; at (434) 947-8132; or at [droy@randolphcollege.edu](mailto:droy@randolphcollege.edu).

## **Lab Activities:**

- Lab 1: Introduction
- Lab 2: Safety
- Lab 3: Reaction Rates – Measuring the rate of a chemical reaction
- Lab 4: Nuclear Chemistry – An example of a first order kinetic process
- Lab 5: Equilibrium Constants
- Lab 6: Standardization of a Solution
- Lab 7: Titration of a Weak Acid
- Lab 8: Preparation of a Buffer Solution
- Lab 9: Observation and Description of a Redox Reaction
- Lab 10: Construction and Cell Potentials of Electrochemical Cells