



# MODULE: EXPECTATIONS AND PROGRAM OVERVIEW

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## OVERVIEW

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### Learning Objectives

*Note – Each Module Workbook will contain this element. The Learning Objectives section will list the outcomes of the module, or what it is that you will be learning.*

At the conclusion of this module, you will be able to:

- Interpretation: Define the expectations for mentors and mentees in this program
- Interpretation: Identify general lab safety guidelines
- Interpretation: Discuss the methods used in a 'flipped classroom' setting
- Evaluation: Evaluate examples of email etiquette to identify 'good' and 'bad' practices
- Evaluation: Generate a schedule of how you manage your time during an average day and evaluate the efficiency of how your time is used.

### Checklist

*Note – Each Module Workbook will contain this element. As you review the materials for each module and prepare for your discussion(s) with your mentor, use the Checklist to ensure thoroughness.*

Prior to meeting with mentor

- Read overviews on program in this workbook and the associated handouts for this module – overview, expectations, lab and safety guidelines, flipped classrooms, email etiquette, lab notebooks, research planning, and time management
- Complete email etiquette and time management activities
- Five minute reflection
- Set up a weekly time you and your advisor can meet

Discussion with mentor

- Preference for correspondence (i.e. calling, office visits, texts, email)



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- Big picture of research
- How project fits within big picture
- Relevant research articles that the group has previously published or are relevant to research topic
- Safety training requirements
- Discuss and evaluate goals – rework if necessary
- Five Minute Reflection

## Mentee Deliverables

- Deliverable 1: Bring a printed copy of the email you composed to the next meeting.**
- Deliverable 2: Bring a printed copy of the completed time management exercise to the next meeting.**
- Deliverable 3: Bring a printed copy of your responses to the Five-Minute Reflection to the next meeting.**

## Materials for this Module

*Note – Each Module Workbook will contain this element. Be sure that you locate and review each item listed in the Materials section of each module to ensure you have thoroughly completed each module. Your mentor may also revise materials in any particular module in the case that more pertinent materials are available for your area(s) of study.*

- Email Etiquette Handout
- Time Management Handout and Activity

## Introduction

*Note – Most Module Workbooks will include a brief introduction or overview to the module topic. These are meant to provide a quick primer on the content and why it is important to your research experience.*



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Research is:

The search for knowledge or any systematic investigation to establish facts [1]

Scholarly or scientific investigation or inquiry [2]

Research means a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge.[3]

[1] <http://en.wikipedia.org/wiki/Research>

[2] <http://education.yahoo.com/reference/dictionary/entry/research>

[3] 45 CFR 46 102(d)



Research helping the torch of knowledge (1896). Library of Congress [Thomas Jefferson Building](#), Washington, D.C.

Working as an undergraduate researcher can be difficult at times, but will certainly be rewarding. Remember to always be open to working and learning as much as you can. This is an opportunity that will help you learn how to discover things on your own accord and develop the ability to be an independent worker, which your future employer (whether that be in graduate school or in an industry position) will be impressed with. Before you get started working with your advisor we want to explain to you the purpose and drive of this packet. Your advisor is an extremely busy person and may not have a ton of time for one-on-one work with you. The goal of this program is to provide you with a foundation for professional and career development that can coordinate with the work that you do in lab for your advisor. Always remember work hard and don't be afraid to ask questions.

The research you will conduct is not an isolated experience... it has the potential to influence fellow researchers and the general public. Throughout these modules, you will learn the various modes of disseminating research results to scientists and non-scientists.

*The following short sections appear only in this Expectations and Overview Module. They are meant to introduce you to general guidelines that will be applicable to your research experience, as well as your overall college experience. Please review below: Expectations; Laboratory and Safety Guidelines; Flipped Classroom Concept; Email Etiquette*



## Expectations

### Expectations of mentees

- To be on time
- To use good lab practices when conducting experiments
- To use proper documentation of all experiments and literature research
- To be an awake, engaged, team player
- To complete all homework assignments and professional development activities

### Expectations of mentors

- To be approachable and easy to find in research building
- To be responsive; in both emails and in person
- To be knowledgeable
- To be helpful
- To adequately prepare for weekly lab work and professional development activities

## Laboratory & Safety Guidelines

The first criteria for a successful experiment is that no people were injured and no equipment was damaged. A well run laboratory will have carefully developed procedures to ensure safety and quality of results. We start with the idea that ALL students can and should learn science by conducting laboratory investigations, that is why you are here. The start of this journey is to step into the laboratory understanding p[rocedures and protocols:

- Lab safety is critical, and students should learn to proceed with caution.
- Each discipline and laboratory setting has its own set of hazards.
- Follow closely the safety training requirements given by lab managers and mentors.
- Correct documentation and certification are critical steps to complete prior to working in the lab.

## Flipped Classroom Concept

The Flipped Classroom is a trend in college education that may represent a departure from what you remember from high school. Rather than using the majority of class meeting times for lecturing, students in flipped classes are expected to cover a good deal of content on their own, prior to coming to class. This way, valuable class time can be used for application-based learning of the concepts. It is imperative that students recognize and understand their responsibilities in the flipped classroom setting. It can be easy to fall behind. Students are expected to come prepared to each class meeting having reviewed the content. The flipped classroom provides a realistic transition into the roles students will be expected to play as researchers, professionals, or academics. It is the responsibility of the mentee to stay on top of content so that time in the



class and lab can be used for collaboration and application. A brief video describing the flipped classroom methods can be found at: <https://youtu.be/WEMGzbAyRj8>

## Email Etiquette

Communication is an essential part of research, collaboration, and academic and professional life. Email is an efficient and effective communication tool. However, it can also be easy to neglect professionalism while using such a ubiquitous communication method. As researchers, mentees, colleagues, and professionals, it is important to utilize email in an appropriate manner. Strong email etiquette can lead to effective collaboration and communication. Poor etiquette can affect perceptions and yield unsatisfactory results. Review the associated handout on email etiquette, and be sure to always consider best practices in all communication.

## Assignment(s) for this Module

*Note – Each Module Workbook will include this element. Most modules have at least one or two activities or deliverable that will be used to illustrate your mastery of the learning objectives. Each module’s assignment list will also include a ‘Five-Minute-Reflection’ that will help seed the discussions with your mentor. Along with materials, your mentor may also tailor the module assignments to best suit the needs for you area(s) of study.*

### Email Etiquette Activity

Read Handout 1 “Email Etiquette” Mentors and mentees should discuss examples of their own experiences with “good” and “bad” email etiquette examples. Identify elements that contribute to good and bad email practices.

Compose an email message to your research mentor requesting a meeting to discuss a research article that you have been reading. Below is a poor attempt. What is wrong with the below?

Hey Ms. Smaith,

i didn’t have time to read the article u sent me...can u tell me what u thought i needed to know?

Billy-Bob

**Deliverable 1: Bring a printed copy of the email you composed to the next meeting.**

### Time Management Activity

Review the Handout 2 “Time Management “. Consider how you use your time on a typical day. Complete the matrix provided in the handout and evaluate your own time management practices. The last page of the handout provides a completed sample matrix

**Deliverable 2: Bring a printed copy of the completed time management exercise to the next meeting.**



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## Five-Minute Reflection

Come up with one question to discuss with your mentor (maybe a concept you are unclear on, something you found interesting, etc.)

What information did you feel was the most informative? Least?

Briefly describe your mentor's research.

What are your three goals for this semester?

**Deliverable 3: Bring a printed copy of your responses to the Five-Minute Reflection to the next meeting.**