

## **HEB 99 A Syllabus Fall 2024**

Instructors:

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### **What this Class Entails:**

HEB 99 A is a course that runs concurrently with independent research in your final year at Harvard. While your principal investigator (PI) is responsible for guiding you through the nuance of your first research project, HEB 99A is responsible for assisting you on your journey of reading, scientific writing, and scientific discourse.

### **Meeting Times:**

Our class will meet on **Tuesday afternoons from 3:00 – 4:15 PM in Peabody 52H**. We will meet to discuss progress on the thesis work (updates on how research/experiments are going, and share the highs and lows of scientific writing). HEB 99 offers peer support through the thesis writing process. It is also a forum to ask big and small questions about your thesis, and covers the practicalities of starting, completing, and submitting your work.

**HEB 99 meetings are a mandatory part of the thesis process. Failure to come to 2 or more classes will result in a letter grade deduction.**

### **Absences and Missed Deadlines:**

If you cannot make class one week, please let me know as soon as you can (at least 24 hours in advance, if possible) and we will find another way for you to check in with the course.

### **Due Dates and Deadlines:**

There are scheduled due dates for drafts of parts of your thesis throughout the semester as part of HEB 99. These are drafts. They are a great opportunity for you to get feedback as you go along. They are not meant to be finished products, or anything near ‘submission ready’. We use these submissions to check your progress, encourage you to write throughout the year instead of all at once, and to see where we can improve our scientific writing as a class. These draft submissions are ungraded.

### **Grading:**

Grading for 99 A is very straightforward. Your grade will be jointly determined by the HEB instructor and your principal investigator. As long as you come to class, turn in your assignments, and communicate/work with your advisors - you will do just fine.

## **Class Schedule, Topics to Cover, and Due Dates:**

### **September 17<sup>th</sup>**

Introduction to HEB 99 and each other  
What a thesis entails  
What to expect from your PI this semester  
Beginning the research: How to find, read, and critically analyze good scholarly articles.

### **October 1st**

Writing your Introduction  
Referencing  
Honing your research gap, questions, and hypotheses

### **October 15<sup>th</sup> & 29<sup>th</sup>**

Mini presentations on research topic

### **November 5<sup>th</sup>**

How to write a Methods section  
Due Date: Submit a draft of your introduction by November 7<sup>th</sup> via Canvas

### **November 19<sup>th</sup>**

How to compile and write your Results  
Due Date: Submit a draft of your Methods section by November 28<sup>th</sup> via Canvas

*\*November 27th – December 1st: Thanksgiving Recess*

### **December 3<sup>rd</sup>**

Preparing for winter break  
Final Questions  
Individual Meetings

*\*December 5th – December 10th: Reading Period*

## **Helpful Resources on Your Journey to A Successful Thesis:**

### **The Harvard Writing Center:**

The writing center offers Senior Thesis Support –tutors will read your drafts in advance, as well as, talk to you about the argument you are trying to craft.

[https://writingcenter.fas.harvard.edu/pages/appointments?admin\\_panel=1](https://writingcenter.fas.harvard.edu/pages/appointments?admin_panel=1)

<https://writingcenter.fas.harvard.edu/pages/strategies-essay-writing>

### **How to Write A Good Report by: Andy Ruina**

This page has a lot of information. The part that I think will be particularly helpful is section 3. Titled '13 things that lots of students don't get.' The title of the section may seem vaguely off-putting, however it contains a lot of content. Specifically, Dr. Ruina lists common mistakes he has seen when working with students and he provides targeted advice. One of the most important aspects (in my opinion) is the emphasis on the drafting a revising stage of writing. Scientific writing takes work, time, and practice.

[http://ruina.tam.cornell.edu/research/joining/Practical\\_Writing\\_advice.html](http://ruina.tam.cornell.edu/research/joining/Practical_Writing_advice.html)

### **How to Construct an Outline By: George M Whitesides**

This PDF covers a lot of information. I find it is particularly good at describing (in great detail) the importance of a strong outline before you write. Many academic writers start with a blank page that can be overwhelming. IN this instance an easy first step is to create an outline, which will act as a useful exercise walking you through each step of what you want to say in your paper.

<https://gmwgroup.harvard.edu/files/gmwgroup/files/895.pdf>

### **Ten Simple Rules for Structuring Papers by: Brett Mensh and Konrad Kording**

In this PDF on page 5, there is a good visual about the questions you should ask yourself when writing different parts of the paper. Please bear in mind, however, while this outline may make sense to some people –it won't work for other students. Please don't be discouraged if this flow chart doesn't help you, it simply means we need to find a different one to 'click'.

<https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1005619>