

# BIOSCI 0835 Our Changing World Syllabus

Nathan L. Brouwer

2022-08-25



# Contents

<b>1</b>	<b>Welcome!</b>	<b>7</b>
<b>2</b>	<b>Introduction</b>	<b>9</b>
<b>3</b>	<b>Meeting times</b>	<b>11</b>
<b>4</b>	<b>Instructor</b>	<b>13</b>
<b>5</b>	<b>Assessment overview</b>	<b>15</b>
<b>6</b>	<b>Academic integrity</b>	<b>17</b>
<b>7</b>	<b>Course communication - Overview</b>	<b>19</b>
7.1	Primary modes of communication . . . . .	19
<b>8</b>	<b>Course communication - Email and Canvas Messages</b>	<b>21</b>
<b>9</b>	<b>Communication - University email policy</b>	<b>23</b>
<b>10</b>	<b>Catalog description</b>	<b>25</b>
<b>11</b>	<b>Course materials</b>	<b>27</b>
<b>12</b>	<b>Course content is cumulative</b>	<b>29</b>
<b>13</b>	<b>Disability Resource &amp; Services</b>	<b>31</b>
<b>14</b>	<b>Extra credit policies</b>	<b>33</b>
<b>15</b>	<b>Grade and exam inquiries</b>	<b>35</b>
<b>16</b>	<b>Grading scale</b>	<b>37</b>
<b>17</b>	<b>Test and class averages</b>	<b>39</b>
<b>18</b>	<b>Masks and COVID-19</b>	<b>41</b>

<b>19 Mental health &amp; wellness</b>	<b>43</b>
19.1 Resources: . . . . .	43
<b>20 Office hours</b>	<b>45</b>
20.1 INSTRUCTOR OFFICE HOURS . . . . .	45
20.2 UTA OFFICE HOURS . . . . .	45
20.3 Individual appointments . . . . .	45
<b>21 Office hours tips</b>	<b>47</b>
<b>22 Office hours canceled after tests</b>	<b>49</b>
<b>23 Office hours canceled finals week</b>	<b>51</b>
<b>24 Partial credit</b>	<b>53</b>
<b>25 Practice tests</b>	<b>55</b>
<b>26 Rounding numeric responses</b>	<b>57</b>
26.1 How to round . . . . .	57
<b>27 How to succeed in this course</b>	<b>59</b>
<b>28 Final exam</b>	<b>61</b>
<b>29 Exam study guides</b>	<b>63</b>
29.1 Study guides . . . . .	63
<b>30 Test grading policies</b>	<b>65</b>
30.1 Number of tests & drop/replace policy. . . . .	65
30.2 Test length & format . . . . .	65
30.3 Test question formats . . . . .	66
<b>31 Tests</b>	<b>67</b>
31.1 General Test policies & Information: . . . . .	67
31.2 Testing technology policies . . . . .	67
<b>32 TopHat</b>	<b>69</b>
<b>33 Updates to schedule &amp; syllabus</b>	<b>71</b>
<b>34 Videos of lectures</b>	<b>73</b>
<b>35 FAQ - Frequently Asked Questions</b>	<b>75</b>
35.1 “What textbook will we use?” . . . . .	75
35.2 “What content is asynchronous?” . . . . .	75
35.3 “I joined the class late, what can I do?” . . . . .	75

*CONTENTS*

5

**36 Zoom**

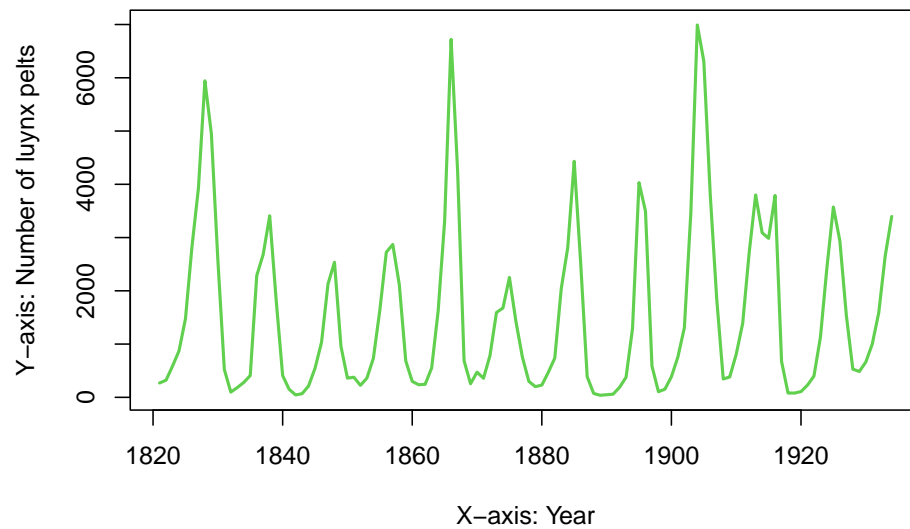
**77**



# Chapter 1

## Welcome!

This is the syllabus for BioSci 0835, Our Changing World







## Chapter 2

# Introduction

**This is the syllabus for BIOSCI 0835: Our Changing World.**

The first several pages contain key information about the course. Subsequent pages are organized alphabetically by major topic.



## Chapter 3

# Meeting times

The course will meeting in-person on Tuesdays and Thursday.

**Location:** 169 Crawford Hall **Days:** Tuesday & Thursday

**Times:** 1:00PM - 2:15PM Aug 30, 2021-Dec 08, 2021

169 Crawford is 1 floor below street level, next to the elevators. Enter through Langley Hall near The corner of Tennyson and Bigelow

There is no recitation for this course.

The official Pitt **Academic Calendar** can be found [here](#)



## Chapter 4

# Instructor

**Nathan L. Brouwer**, PhD Office: Langley Hall A255.

Email: nlb24 at pitt.edu

My office is on the main floor of the Biological Sciences building.



## Chapter 5

# Assessment overview

The primary form of assessment in the course will be 3 regular unit exams and a semi-cumulative final that combines information from Unit 4 and the previous units.

Approximately 75% of your grade will be based on these tests. See the course point breakdown for the exact number.

Other forms of assessment include

- Assignments
- “In-class” participation through TopHat. (All in-class assignments will remain open for 24 hours)

As detailed elsewhere in the syllabus a portion of each of these individuals components of your grade will be dropped to accommodate illness or other personal issues. You do not need to submit information (e.g. from a doctor) when you miss an assignment or test.

Sometimes assignments or questions will be marked as being based partially or entirely scored for participation. These assignments ARE required - “for participation” does NOT mean optional.

Occasionally, fully optional assignments worth 0 points will be released - these will be clearly marked as worth 0 points and for practice only.

The syllabus will take you step-by-step through all the policies related to these elements of the course.





## Chapter 6

# Academic integrity

Dr. Brouwer, the Bio Sci department, and the University all take academic integrity very seriously. Cheating includes any form of plagiarism, including copying other students' work or using other resources without proper attribution.

1. If you are caught cheating on a graded assignment, you will receive a zero on the assignment.
2. If you are caught cheating on an exam, you will receive a zero on the exam, an F in the course, and an Academic Integrity Violation Report will be filed.

Below is the University's Policy on Academic Integrity:

“Students in this course are expected to comply with the University of Pittsburgh School of Arts & Sciences Academic Integrity Code located at [www.as.pitt.edu/faculty/policy/integrity.html](http://www.as.pitt.edu/faculty/policy/integrity.html). Any student suspected of failing to meet the student obligations of the code during the semester will be required to participate in the procedures for adjudication, initiated at the instructor level. This may include, but is not limited to, confiscation of the assignment of any individual suspected of violating the code. A minimum sanction of a zero score for the assignment will be imposed. Violation of the Academic Integrity Code requires the instructor to submit an Academic Integrity Violation Report to the Dean.”



## Chapter 7

# Course communication - Overview

### 7.1 Primary modes of communication

All important details will be sent via Canvas messages and mentioned/discussed in class. It is your responsibility to regularly check Canvas messages to stay abreast of the course. Most communication will occur on Fridays, but important updates may be sent out at other times.



## Chapter 8

# Course communication - Email and Canvas Messages

Announcements to the whole course via Canvas will occur typically on **Friday** afternoons. Other communication related to course administration will also occur via Canvas messages. It is your responsibility to regularly check Canvas messages to stay abreast of the course.

You can message me on Canvas or email me at nlb24 at pitt.edu.

Please include “OCW” (Our changing world) as the 1st thing in your email subject line with an informative bit of information as the “...”. e.g. “OCW: problem accessing TopHat”.

If you use another email service as your primary email (eg GMail) please set your Pitt email to forward there.

For info on forwarding your Pitt email to your personal account follow this link: <https://bit.ly/2Riz7dx>

I try to answer all emails received on weekdays before 5 pm within 24-36 hrs. Emails received after 5 pm will be answered at the earliest the following morning. Emails received on the weekend will be answered Monday.

Please consult this syllabus before asking questions about course policies and the schedule, and refer to relevant information such as URLs, subject headings or dates. Screenshot are super helpful. If the entire answer to your question can be found in the syllabus I will likely respond by saying something like

*“This is in the syllabus, Cheers, Dr. B.”.*

Questions relevant to the whole class may be re-posted (with identifying details removed) to Canvas.



## Chapter 9

# Communication - University email policy

Each student is issued a University e-mail address (username at pitt.edu). This e-mail address may be used by the University for official communication. Students are expected to read e-mail sent to this account on a regular basis. Failure to read and react to University communications in a timely manner does not absolve the student from knowing and complying with the content of the communications.

The University provides an e-mail forwarding service that allows students to read their e-mail via other service providers. Students that choose to forward their e-mail from their pitt.edu address to another address do so at their own risk. If e-mail is lost as a result of forwarding, it does not absolve the student from responding to official communications sent to their University e-mail address.

To forward e-mail sent to your University account, go to <http://accounts.pitt.edu>, log into your account, click on Edit Forwarding Addresses, and follow the instructions on the page. Be sure to log out of your account when you have finished.

For the full E-mail Communication Policy, go to [bc.pitt.edu/policies/policy/09/09-10-01.html](http://bc.pitt.edu/policies/policy/09/09-10-01.html).





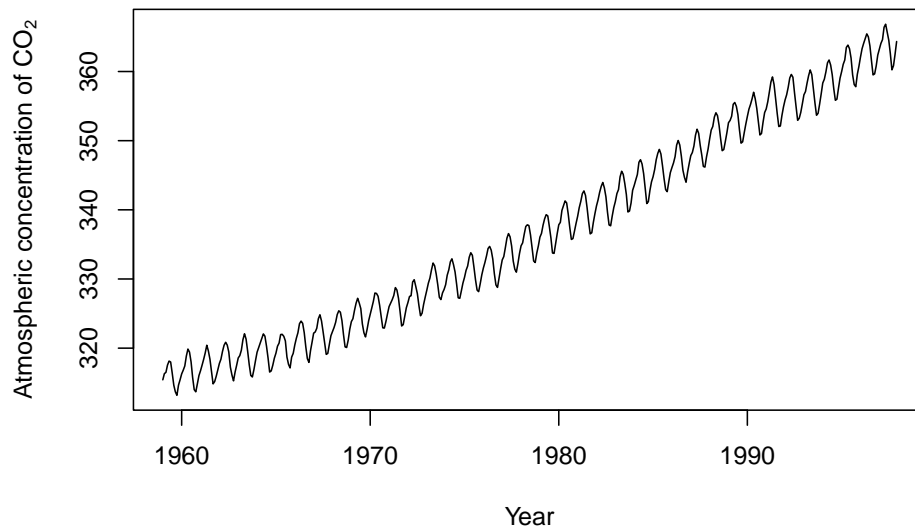
## Chapter 10

# Catalog description

The catalog description of this course is:

“This course is an introduction to the evolutionary and ecological forces that change our world. We will consider how organisms change over time (evolution), how they interact with each other and with their environment (ecology), and how they assemble as communities and ecosystems. We will then apply these concepts to understand how human activity is changing the biosphere.”

### Monthly CO<sub>2</sub> observations in ppm, Mauna Loa, HI





## Chapter 11

# Course materials

Thanks to an open educational resources (OER) grant from the state of Pennsylvania there is no text to purchase for this course. **All readings will be provided as webpages or PDFs.**

Most readings will be based on chapters from the book *Ecology for All!*.



## Chapter 12

# Course content is cumulative

Content within the course is technically cumulative with each test referring back to concepts from previous material!

**Luckily, this integration will occur within the lectures also so you shouldn't be surprised by the connections being made.**



## Chapter 13

# Disability Resource & Services

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and Disabilities Resources and Services. DRS will verify your disability and determine reasonable accommodations.

216 William Pitt Union  
(412) 648-7890  
(412) 383-7355 (TTY)





## Chapter 14

# Extra credit policies

Extra credit will be made available at times; I will decide when to do it. Requests for extra credit opportunities are likely to be ignored. I will not come up with extra credit assignments on a person-by-person basis.

“Buffer questions” on the mini-tests (detailed elsewhere) and the final are NOT extra credit.



## Chapter 15

# Grade and exam inquiries

If you are concerned that your grade has been miscalculated, a key was wrong, or that there were multiple correct answers please fill out a **Grade Inquiry Form**. A link will be provided when the form is ready for us.

I will briefly evaluate all submitted forms to determine if there is an issue that requires immediate attention. *Otherwise, the resolution of the issue will not occur until grades are calculated.*

*AFTER* final grades have been calculated I will determine if the resolution of issues on a Grade Inquiry form will impact your final grade.

If your final grade will potentially be impacted I will fully evaluate your inquiry and notify you via email regarding its resolution.

If you did not receive information about your inquiry it means your final grade would not have been impacted.

Inquiries about exam are due one week after its key is released.

Unless you submitted an Exam Inquiry Form I will not discuss specific test questions during office hours.

Inquiries about the final exam will not be addressed until the next semester.



## Chapter 16

# Grading scale

**Note:** Students planning to major in Biological Sciences must pass this course with a C (not C- !) or better. Rounding is not done until final grades are computed and is done by computer to 1 decimal place.

Final letter grades are assigned after rounding and is done automatically by Canvas including the decimal value. For example, a score of 91.99% rounds to 92.0% and is an A, but a score of 91.94% rounds to 91.9% and is an A-.

Note: Students planning to major in Computational Biology must pass this course with a C (not C- !) or better.



## Chapter 17

# Test and class averages

I do not report the mean, max or other information about test score or the class as a whole.





## Chapter 18

# Masks and COVID-19

During this pandemic, it is extremely important that you abide by the public health regulations, the University of Pittsburgh's health standards and guidelines, and Pitt's Health Rules.

These rules have been developed to protect the health and safety of all of us. Please check your Pitt email for updates to the current masking policy.



## Chapter 19

# Mental health & wellness

School is hard - please take care of yourself as best you can given the many demands on your time. Diminished mental health, including significant stress, mood changes, excessive anxiety, or problems with sleeping can interfere with your academic performance. You have a support network here at Pitt to help you through challenging times. Acknowledging that you need help, and getting that help, is smart and courageous.

- If you are in an EMERGENCY situation, call 911 or Pitt Police at 412-624-2121.
- If your symptoms are due to FINANCIAL strain, please visit [pitt.libguides.com/assistanceresources](http://pitt.libguides.com/assistanceresources) to see all available University resources.
- If your symptoms are due to strained RELATIONSHIPS, families, or personal crises, please visit the University Counseling Center at [www.studentaffairs.pitt.edu/cc/](http://www.studentaffairs.pitt.edu/cc/) for free confidential services.
- If your symptoms are strictly related to your COURSE WORK and performance in this course, please contact me.

### 19.1 Resources:

**University Counseling Center:** 412-648-7930

**Sexual Assault Response:** 412-648-7856

**RE:SOLVE crisis network:** 888-796-8226

**Pitt Police:** 412-624-2121

**Pitt Pantry food bank:** <https://www.studentaffairs.pitt.edu/pittserves/the-pitt-pantry/>



## Chapter 20

# Office hours

### 20.1 INSTRUCTOR OFFICE HOURS

Office hours will be via Zoom and in-person.

**MONDAY:** 11-12 pm. Zoom: <https://pitt.zoom.us/j/94009208405> Password: “puppies” (all caps)

**WEDNESDAY:** 11-12 pm Zoom: <https://pitt.zoom.us/j/94009208405> Password: “puppies” (all caps)

**Other days:** By appointment: [calendly.com/brouwern](https://calendly.com/brouwern)

### 20.2 UTA OFFICE HOURS

UTA office hours will be posted by the beginning of the 2nd week of lectures.

### 20.3 Individual appointments

I’m available for individual 15 minute appointments 10 am to noon on Tuesdays, Thursdays and Fridays. Schedule these appointments via Calendly:<https://calendly.com/brouwern/15min>

If office hours or available times for appointments do not work for you, please email me to coordinate a different meeting time.



## Chapter 21

# Office hours tips

Some guidelines for office hours:

1. **Don't be intimidated by office hours.** One of my favorite parts of my job is talking with students one-on-one.
2. **Be prepared for office hours.** Come with specific questions related to slides, figures, etc. But if you just want to listen what I'm talking about with other students, that's totally cool.
3. **Office hours are for everyone.** If multiple people show up I will alternate between them to answer their questions. If I feel I have answered your main questions I may ask that we table our discussion to cover other questions.

**Note:** *During finals week I do not hold office hours and am not available for appointments.*

During office hours, specific questions are better than vague ones, even if it's just "*I specifically don't understand Fig. 4 in this chapter.*"

A question like "*I don't understand natural selection*" is harder for me to work with.

I'm also happy to talk about study strategies, classes you might want to take, research opportunities etc.





## Chapter 22

# Office hours canceled after tests

Office hours and personal appointments are canceled the rest of the week after a test so I can catch up on other tasks. They resume the week following the test.



## Chapter 23

# Office hours canceled finals week

I do not hold office hours the week of finals.



## Chapter 24

# Partial credit

Most assignments will be automatically graded by Canvas or TopHat. The system for awarding partial credit depends on whether its Canvas or Tophat, and the type of question. I try to indicate how a question will be graded, but I do not in the grade book override how each of these programs assign partial credit.



## Chapter 25

### Practice tests

Questions from previous exams will be provided for on Canvas. These may not always line up perfectly with this semester's content but will help you see how questions are delivered.





## Chapter 26

# Rounding numeric responses

I frequently require numeric answers on assignments and tests. I always include a buffer to accommodate reasonable variation in rounding, and re-check these questions before posting grade.

For example, if the answer is 1.05, a typical buffer would allow answers from 1.044 to 1.064 to be accepted as correct.

If you believe you entered a correct numeric answer but the buffer was too narrow you can submit a test-inquiry form as detailed elsewhere in the syllabus.

### 26.1 How to round

I will often include reminders or instructions about rounding, but may not always do this. Partial credit will not be assigned if you fall outside the buffer or do not follow the stated rounding rules or the general principles below.

In general, it acceptable to round to two digits after any initial zeros to the right of the decimal place.

Examples:

- 1.05 is left as 1.05
- 1.052 is left at 1.052
- 1.0545 is rounded to 1.055
- 1.05409999 is rounded to 1.054

When doing calculations round your answer only at the very end.

If you need to round intermediate numbers, rounding to the first 4 non-zero digits to the right of the decimal should be ok.

Examples:

- 1.0545 is left as 1.0545 during intermediate calculations
- 1.05409999 is left as 1.054099 during intermediate calculations

## Chapter 27

# How to succeed in this course

Below are some suggestions on how to take on this challenge.

1. **Have confidence** – you can learn the material!
2. Read the assigned readings before the lectures.
3. Read slowly and thoroughly, but **taking notes isn't necessary**. Familiarize yourself with the vocabulary terms and look up unfamiliar words.
4. Read the **figure captions** in the book and walk through the illustrations.
5. I recommend taking notes by hand with pen and paper or on a tablet during lecture.
6. If possible, print out the slides and fill in key information.
7. Review your notes at least briefly after a short time after the lecture.
8. As soon as possible, fill in any gaps with information from the book, other suggested study resources, re-watching the appropriate video, information from the discussion boards or office hours, etc.
9. Study with a partner or small study group, perhaps using Zoom.
10. Attend office hours, even if it's just to listen to what other people are asking.
11. Try not to study for long, uninterrupted periods of time without a significant break. Two half-hour or 45-minute study sessions are better than one marathon 1-2 hour session.
12. Ask for help when necessary - before you fall behind. Go to office hours as often as necessary. The UTAs and I are here to help!



## Chapter 28

# Final exam

The final exam will ...

1. Take place during finals week on the day scheduled by the University
2. Be administered in-person using Canvas
3. Follow the general format of the unit tests, including having buffer points.

Note: I do not hold office hours during finals week.

Questions on the final exam will be of similar difficulty as the regular unit tests.

Information about the final exam schedule for the University can be found here:  
<https://www.registrar.pitt.edu/students/final-exams>.

What if I have more than one final exam on the same day? If you have multiple finals scheduled for the same day see here: [https://www.registrar.pitt.edu/sites/default/files/pdf/final\\_guideline.pdf](https://www.registrar.pitt.edu/sites/default/files/pdf/final_guideline.pdf)



## Chapter 29

# Exam study guides

When lecturing I try to minimize diversions and content that will not be assessed on an exam. In my lectures I will flag information as “background” or “not on the test” when necessary.

In general I don’t require you to memorize numbers or dates, and any exceptions will be clearly marked.

I also don’t require you to remember the names of people (e.g. famous scientists) or events in their lives. The only standing exception to this is Charles Darwin - any time I talk about Darwin’s life its important. Any other exception will be clearly noted.

In contrast, vocab is very important. Unless stated otherwise all vocab is important and could be on the test.

### 29.1 Study guides

Given the above, when preparing for the tests the best study guides are your notes from.

Exam study guides MAY be made available before each test but these study guides are in no way complete, comprehensive, or representative.

If they are available, I’ll let you know.

If available, they are most useful to look over AFTER you have thoroughly reviewed all your other class materials.





## Chapter 30

# Test grading policies

### 30.1 Number of tests & drop/replace policy.

- There will be 4 tests administered throughout the semester.
- The final exam will be semi-cumulative.
- No makeup exams will be given for any reason.
- Your lowest scores of the 4 mini-test will be automatically dropped when grades are calculated at the end of the semester.
- If you are unable to take a unit test for ANY reason it will be counted zero.
- If you miss just 1 test, that score will be automatically dropped as your lowest score when grades are calculated after the final.
- You can take one of the 3 regular unit exams remotely via Zoom if you contact me beforehand.
- You must take the final exam in-person

### 30.2 Test length & format

NOTE: the following policies are provisional and may be adjusted as needed to optimize test length and how to implement the “buffer question” policy in Canvas.

- Tests will be scored out of 35 points. However, there will be at least 37 points worth of questions on the test. Each test therefore will effectively contain 2 or “buffer points” that you can miss without harming your grade.
- The maximum score on a mini-test will always be capped at 35/35. If there are 37 points on a test and you get all 37 questions correct your score will be 100%.

- No extra credit will be offered on tests; the maximum score on a test will be 100%.

### 30.3 Test question formats

- Test questions will frequently be multiple choice. Keyword: “frequently”
  - there will other types of questions too.
- Most tests will have at least one question requiring a numeric calculation.
- Other common forms of questions are fill in the blank, dropdowns, or matching.
- There will likely NO True/False questions on tests.
- For fill-in-the-blank questions, spelling errors will result in 0 points. No partial credit will be given.

# Chapter 31

## Tests

### 31.1 General Test policies & Information:

1. Tests will be administered in-class but taken on Canvas.
2. There will be 4 exams semester. 1 will be dropped as detailed elsewhere in the syllabus.
3. I will not answer questions during the test. This is my normal policy during my other classes, and also is in line with COVID social distancing policies.
4. Though I do not currently plan on doing this, I reserve the right to require anyone with an accommodation (e.g. DRS, quarantine) to take the test remotely to log into Zoom and have your camera on while taking tests.

### 31.2 Testing technology policies

1. If you accidentally exit and re-enter the exam you must restart it.
2. It is your responsibility to assure that you have adequate power to your device and internet access.
3. Devices can be borrowed from the library if necessary.
4. If a power or WiFi issue beyond our control impacts the class the test may be re-scheduled.



## Chapter 32

# TopHat

We will use TopHat in-class and for homework. Please bring a charged TopHat compatible device to all lectures and recitations.

### **TopHat**

Join Code: **907997**

[www.tophat.com](http://www.tophat.com)

When logging into TopHat it will ask you for your university. Typing in “University of Pittsburgh” brings up 3 options: **select the first one** that just says “University of Pittsburgh”.

If this is your first time using TopHat see Joining TopHat for more information.



## Chapter 33

# Updates to schedule & syllabus

I reserve the right to update the syllabus, schedule, point allocation and all other components of the course as necessary.

If changes occur after the first day of class, they will be clearly communicated in class and via email, and a revised syllabus and schedule distributed with major changes flagged.





## Chapter 34

# Videos of lectures

This is an in-person course. Lectures will not be live-streamed. Recordings of at least the audio of each lecture will be posted for reference. I can briefly review key parts of lectures during office hours but will not fill in all the gaps in your notes if you missed class. It is your responsibility to watch the class recordings and obtain notes you missed from classmates.



## Chapter 35

# FAQ - Frequently Asked Questions

### 35.1 “What textbook will we use?”

There is no textbook to purchase - I will provide all readings via Canvas.

### 35.2 “What content is asynchronous?”

No content will be asynchronous. Any in-class assignments can be submitted for up to 24 after class for full credit.

### 35.3 “I joined the class late, what can I do?”

All assignments questions associated with the Unit 1 lectures will remain open for an extended period of time to accommodate people who join the class later.



## Chapter 36

### Zoom

I will use Zoom for recording my lectures and posting them to Panopto but will not release the link for watching the lecture off-site.

Each student can take 1 regular unit exam remotely during the scheduled exam period. You must contact me ahead of time to do this.

The final exam must be taken in-person.