

Behavioral Ecology

EEOB 3420 Autumn 2020

Course Information

- **Course times:**
 - Synchronous Lecture: Wednesdays 9:10-10:05 AM + Monday, Nov 9 9:10-10:05 AM
 - Asynchronous Lecture: 2 hours per week
 - In-person Lab: Thursdays 8:00-8:55 (Jennings 60); Thursdays 11:30-12:25 (Jennings 160 or Pomerene Hall 280); Fridays 8:00-8:55 (Jennings 124)
 - Asynchronous Lab: 2 hours per week
- **Credit hours:** 4
- **Mode of delivery:** Hybrid
- **Carmen Zoom Link:**
<https://osu.zoom.us/j/95122160679?pwd=cEpNbEFWwGE2ZlFSVzFOak5GU1gzUT09>

Instructor

- **Name:** Ian Hamilton
- **Email:** hamilton.598@osu.edu
- **Office location:** 390 Aronoff Laboratory
- **Office hours:** Wednesdays 10:30-12:30 or by appointment
- **Preferred means of communication:**
 - My preferred method of communication for questions is **email**.
 - My class-wide communications will be sent through the Announcements tool in CarmenCanvas. Please check your [notification preferences](https://go.osu.edu/canvas-notifications) (go.osu.edu/canvas-notifications) to be sure you receive these messages.

Teaching Assistant

- **Name:** David Hibler
- **Email:** hibler.10@buckeyemail.osu.edu
- **Lab times:** Thursdays 11:30-12:25 (Pomerene Hall 280); Friday 8:00-8:55 (Jennings 124)



- **Name:** Cynthia Marroquin
- **Email:** marroquin.11@buckeyemail.osu.edu
- **Lab times:** Thursdays 8:00-8:55 (Jennings 60); Thursdays 11:30-12:25 (Jennings 160)

Course Prerequisites

Biology 1114 or 1114H, or permission of instructor

Course Description

The scientific study of animal behavior is a relatively young branch of science that engages researchers in both biology and psychology. Understanding animal behavior is of both basic and applied interest. Beyond the basic interest in trying to understand the natural world in a scientific manner, knowledge of animal behavior helps in conservation efforts and in efforts to improve the welfare of domesticated animals. We also interact with animals as companion animals and, in some cases, as food sources. Animals also serve as model systems for understanding the behavior and physiology of humans.

Learning Outcomes

By the end of this course, students should successfully be able to:

- appreciate the diversity of behaviors and recognize them as evolutionary strategies
- understand proximate and ultimate explanations for certain behaviors: communication, foraging, predation avoidance, habitat selection, sexual selection, mating systems, and parental care
- develop and test hypotheses about the proximate causes of behavior and the ultimate consequences/evolutionary implications of behavior
- understand how behavioral ecology principles are used to understand certain human behaviors
- understand the historical development of the study of animal behavior as a science
- be able to observe and quantify behaviors

How This Hybrid Course Works

Mode of delivery: Lectures for this course are 100% online. You are expected to attend lectures via CarmenZoom for a synchronous lecture once per week. For most weeks, this is Wednesdays 9:10-10:05. **For the week of Nov 9, the synchronous lecture will take place on Nov 9.** For the remaining 2 hours of lecture per week, you are not required to log on at any particular time.

Labs for this course include **1 hour per week of in-person** meetings and **2 hours per week of asynchronous behavioral observations**. For Week 1, in-person labs will be replaced by 1 hour of synchronous, online activities.

Pace of online and asynchronous activities: This course is divided into **weekly modules** that are released one week ahead of time. Students are expected to participate in synchronous lectures on Wednesdays and Monday, Nov 9. For other online and asynchronous material, students are expected to keep pace with weekly deadlines but may schedule their efforts freely within that time frame.

Credit hours and work expectations: This is a 4 credit-hour course. According to [Ohio State bylaws on instruction](https://www.ohio.edu/bylaws-on-instruction) (go.osu.edu/credithours), students should expect around 3 hours per week of time spent on direct lecture instruction (instructor content, Carmen activities, for example) and 3 hours per week on laboratory activities (in person and synchronous online activities, behavioral observations) in addition to 6 hours of homework (reading and assignment preparation, for example) to receive a grade of C.

Participation requirements: Because this a course with substantial online and other asynchronous components, part of your grade is based in part on your activity and participation. The following is a summary of students' expected participation:

- **Participating in synchronous online activities: once per week**
You are expected to participate in synchronous lectures via CarmenZoom on Wednesdays and on Nov 9. Participation will be assessed using Zoom polling and/or TopHat. If you have a situation that might cause you to miss a synchronous lecture, discuss it with me *as soon as possible*.
- **Participating in asynchronous online activities: once per week or more**
You are also expected to log on to Carmen to view online modules at least once per week. During most weeks you will probably log in many times. If you have a situation that might cause you to miss an entire week of asynchronous material, discuss it with me *as soon as possible*.
- **Participating in in-person laboratory activities: once per week**
Most lab sessions are in person, but **the lab in Week 1 is online only**. Any changes to mode of offering of subsequent labs will be announced via Carmen. Participation in labs will be assessed using activities completed during or after lab. **Face masks and 6' physical distancing are required at all times during in-person labs. Do not attend**

the laboratory in-person if you are feeling ill; you do not need to provide documentation. If you cannot attend an in-person lab, you will be expected to attend remotely or make up the lab at a later date. A CarmenZoom link will be available if you are unable to attend in person.

- **Asynchronous laboratory activities: once per week or more**

You are expected to conduct 2 hours of behavioral observations each week on an animal species of your choice. Observations occur outside of regularly scheduled class time. Participation will be assessed through weekly submission of copies of your field notes along with summaries of field observation sessions. If you have a situation that will cause you to miss an entire week of field observations, discuss it with me *as soon as possible*.

- **Office hours: optional**

Attendance at my office hours and your TA's office hours are optional.

Course Materials, Fees and Technologies

Required Materials

- **Field Notebook (paper):** You will need a paper notebook to take your behavioral observations. Use this notebook for field observations **only**.
- **Pens:** Notes for field observations should be taken in pen. Make sure that you have spare pens every time you go out to the field.
- **Stopwatch:** You will need a stopwatch for behavioral observations. The stopwatch on your phone is sufficient
- **Camera:** You will need a camera as part of your behavioral observations. The camera on your phone is sufficient

Recommended Materials and Technologies

- **Laptop or Tablet:** Bringing a laptop or tablet to in-person labs will be useful for running simulations and facilitating small-group interactions without the use of physical worksheets
- **Textbook:** *Animal Behavior, 11th Ed.* Rubenstein, D.R. & J. Alcock, Sinauer & Assoc., Sunderland, MA.



Additional Requirements

- You are required to conduct 2 hours of behavioral observations per week, outside of synchronous or in-person class time. During this time, you will observe the behavior of an animal species of your choosing. In order of preference, your species can be:
 - a. Wild animals in their natural habitat (e.g., a park, campus, your backyard)
 - b. Free-ranging domestic animals (e.g., a ranch)
 - c. Wild animals in large enclosures (e.g., the Columbus Zoo). Note that most species in zoos will not be appropriate for the assignment, because of limitations of sample sizes or environmental contexts.

You will need to be able to travel to and access these locations for 2 hours of behavioral observations each week. Travel time does not contribute to the 2 hours/week requirement. *If travel will not be possible, please discuss with me as soon as possible.*

Required Equipment

- **Computer:** current Mac (MacOS) or PC (Windows 10) with high-speed internet connection
- **Webcam:** built-in or external webcam, fully installed and tested
- **Microphone:** built-in laptop or tablet mic or external microphone
- **Other:** a mobile device (smartphone or tablet) to use for BuckeyePass authentication

Required Software

Microsoft Office 365: All Ohio State students are now eligible for free Microsoft Office 365. Visit the [installing Office 365](https://go.osu.edu/office365help) (go.osu.edu/office365help) help article for full instructions.

Top Hat: All Ohio State students are eligible for free access to Top Hat. Visit <https://resourcecenter.odee.osu.edu/top-hat/using-top-hat-students> for instructions.

PDF viewing software: Preview (Mac) or Adobe Acrobat (PC and Mac)

CarmenCanvas Access

You will need to use [BuckeyePass](https://buckeyepass.osu.edu) (buckeyepass.osu.edu) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you do each of the following:

- Register multiple devices in case something happens to your primary device. Visit the [BuckeyePass - Adding a Device](https://go.osu.edu/add-device) (go.osu.edu/add-device) help article for step-by-step instructions.
- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click **Enter a Passcode** and then click the **Text me new**



codes button that appears. This will text you ten passcodes good for 365 days that can each be used once.

- [Install the Duo Mobile application](https://go.osu.edu/install-duo) (go.osu.edu/install-duo) on all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service.

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at [614-688-4357 \(HELP\)](tel:614-688-4357) and IT support staff will work out a solution with you.

Technology Skills Needed for This Course

- Basic computer and web-browsing skills
- Literature searching using [Google Scholar](#) or [Web of Science](#) and [off-campus library access](#).
- [Navigating CarmenCanvas](https://go.osu.edu/canvasstudent) (go.osu.edu/canvasstudent)
- [CarmenZoom virtual meetings](https://go.osu.edu/zoom-meetings) (go.osu.edu/zoom-meetings)
- Top Hat (<https://resourcecenter.odee.osu.edu/top-hat/using-top-hat-students>)

Technology Support

For help with your password, university email, CarmenCanvas, or any other technology issues, questions or requests, contact the IT Service Desk, which offers 24-hour support, seven days a week.

- **Self Service and Chat:** go.osu.edu/it
- **Phone:** [614-688-4357 \(HELP\)](tel:614-688-4357)
- **Email:** servicedesk@osu.edu

Digital Flagship

Digital Flagship is a student success initiative aimed at helping you build digital skills for both college and career. This includes offering an engaging collection of digital tools and supportive learning experiences, university-wide opportunities to learn to code, and a Design Lab to explore digital design and app development. Digital Flagship resources available to help Ohio State students include on-demand tutorials, The Digital Flagship Handbook (your guide for all things tech-related), workshops and events, one-on-one tech consultations with a peer or Digital Flagship staff member, and more. To learn more about how Digital Flagship can help you use technology in your courses and grow your digital skills, visit go.osu.edu/dfresources.

Grading and Faculty Response

How Your Grade is Calculated

Assignment Category	Points
Quizzes and Exams	
Quizzes (Nine total, drop 2 lowest)	350
Midterm Exam	100
Final Exam	100
Participation and Activities	
Laboratory activities/reading assignments (12 labs x 5 points, drop 2 lowest)	50
Synchronous in-class activities (13 lectures x 4 points, drop 2 lowest)	44
Asynchronous participation (15 weeks x 1 point)	15
Weekly reflection (14 weeks x 2 points, drop lowest)	26
Behavioral Observation Project	
Field notes (11 weeks x 2 points, drop 2 lowest)	18
Species approval	6
Catalog of behaviors	30
Time budget assignment	36
Hypothesis assignment	40
Introduction draft	10
Peer review	10
Final dataset	15
Final paper	150
Total	1000

See [Course Schedule](#) for due dates.

Descriptions of Major Course Assignments

Behavioral Observation Assignment

Description: Basic questions about animal behavior come initially from observations. Observation leads to questions, which lead to hypotheses, which lead to predictions, which lead to experimentation. At some point, someone actually must watch animals in their natural habitat. You will do this as part of your experience in this course, as a semester-long behavioral observation assignment, which comprises multiple smaller components.

For this assignment, you will **select a species for observation**. You will spend **2 hours per week observing and taking field notes** on individuals of this species. You will build a **catalog of behaviors** for an animal species of your choice. Then, you will quantify behavior of that species using **time budgets** and other methods. Finally, you will then use the skills you learned while constructing your catalog and time budget to **develop one hypothesis** about your study animal, which you will then test. You will submit a **draft of your introduction** for review, and conduct **peer review** on other students' drafts. For the final project for this class, you will submit your **complete dataset** and a written **final paper** describing the results of your hypothesis test.

All materials will be submitted via Carmen. The due dates for these components of the project can be found on the Course Schedule. For large written components of this assignment, **Turn It In** will be used to help ensure academic integrity.

Laboratory Activities

Description: Labs will involve discussion of your field observation project, behavioral observation, analysis of data, discussion of literature and working with mathematical and computational models. For each lab, you will write up and submit on Carmen answers to questions posed during the lab.

For some labs (see Course Schedule), you will be reading original research papers that illustrate concepts from the course. The papers will be posted on Carmen a week or more in advance. **You are expected to complete a reading quiz on the paper before coming to lab.** The quiz will contribute to your points for that week's lab.

Synchronous Lecture Activities

Description: Graded synchronous lecture activities consist of responses to Top Hat and/or Zoom polling questions. Participation in synchronous lecture discussion is strongly encouraged, but will not be graded.

Weekly Reflections

Description: As the course includes a large amount of asynchronous content, it can be difficult to keep up with activities. For your weekly reflections, you will discuss upcoming activities and reflect upon your goals for the course.

Exams and Quizzes

Description: All exams and quizzes will be conducted on Carmen. There are nine quizzes and two exams. The two lowest scores on quizzes will be dropped. The material covered on each quiz will be outlined in lecture and via Carmen announcement; you can expect that each quiz after the first will include one or two questions relating to material from the previous quiz. Exams are non-cumulative.

Academic integrity and collaboration

Your written assignments, including laboratory writeups, should be your own original work. Some laboratory assignments may involve writing a group document using real-time editing in Office 365. If so, that will be clearly stated by the lab instructor. In that case, all group members are expected to contribute to the document.

For all components of your behavioral observation assignment, you should follow APA style to cite the ideas and words of your research sources.

You are encouraged to ask a trusted person to proofread your assignments before you turn them in but no one else should revise or rewrite your work.

Late Assignments

Late assignments will be penalized 25% on the first 24 hours after the deadline, and a further 25% for each additional 24-hour period late. It is your responsibility to ensure that submissions are readable and that you have submitted the correct version. Any unreadable or corrupt files will not count as an on-time submission.

Instructor Feedback and Response Time

I am providing the following list to give you an idea of my intended availability throughout the course. Remember that you can call [614-688-4357 \(HELP\)](tel:614-688-4357) at any time if you have a technical problem.

- **Preferred contact method:** If you have a question, please contact me through my Ohio State email address. I will reply to emails within 24 hours **on days when class is in session at the university (M-F, excluding holidays)**.
- **Class announcements:** I will send all important class-wide messages through the Announcements tool in CarmenCanvas. Please check [your notification preferences](https://go.osu.edu/canvas-notifications) (go.osu.edu/canvas-notifications) to ensure you receive these messages.

- **Grading and feedback:** For assignments, you can generally expect feedback within **seven days**. If, after seven days, we are unable to provide feedback within this time, we will send a message to inform you when feedback will be provided.

Grading Scale

93–100: A

90–92.9: A-

87–89.9: B+

83–86.9: B

80–82.9: B-

77–79.9: C+

73–76.9: C

70–72.9: C-

67–69.9: D+

60–66.9: D

Below 60: E



Other Course Policies

Health and safety requirements

All students, faculty and staff are required to comply with and stay up to date on all university safety and health guidance (<https://safeandhealthy.osu.edu>), which includes wearing a face *mask* in any indoor space and maintaining a safe physical distance at all times. Non-compliance will result in a warning first, and disciplinary actions will be taken for repeated offenses.

Video and Audio

Video and audio recordings of class lectures will be part of the classroom activity. The video and audio recording is used for educational use/purposes and may be made available to all students presently enrolled in the course.

Sharing of video or audio recordings of course material with anyone not presently enrolled in the class is not allowed.

Although I expect you to have an operational webcam and microphone so that you can participate via video and audio, you are allowed to turn these off at any time, including for the entire synchronous lecture session. You are encouraged to use OSU-approved virtual backgrounds for your Zoom sessions. A “How to set a virtual background in Zoom” video and official OSU Zoom backgrounds can be found at <https://www.osu.edu/downloads/zoom-backgrounds.html>.

Discussion and Communication Guidelines

Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn't always come across online.

Academic Integrity Policy

See [Descriptions of Major Course Assignments](#) for specific guidelines about collaboration and academic integrity in the context of this online class.

Ohio State's Academic Integrity Policy

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the university's [Code of Student Conduct](http://studentconduct.osu.edu) (studentconduct.osu.edu), and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in

the university's *Code of Student Conduct* and this syllabus may constitute "Academic Misconduct."

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the university or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the university's *Code of Student Conduct* is never considered an excuse for academic misconduct, so I recommend that you review the *Code of Student Conduct* and, specifically, the sections dealing with academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by university rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the university's Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the university. If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- [Committee on Academic Misconduct](http://go.osu.edu/coam) (go.osu.edu/coam)
- [Ten Suggestions for Preserving Academic Integrity](http://go.osu.edu/ten-suggestions) (go.osu.edu/ten-suggestions)
- [Eight Cardinal Rules of Academic Integrity](http://go.osu.edu/cardinal-rules) (go.osu.edu/cardinal-rules)

Copyright for Instructional Materials

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Statement on Title IX

All students and employees at Ohio State have the right to work and learn in an environment free from harassment and discrimination based on sex or gender, and the university can arrange interim measures, provide support resources, and explain investigation options, including referral to confidential resources.

If you or someone you know has been harassed or discriminated against based on your sex or gender, including sexual harassment, sexual assault, relationship violence, stalking, or sexual exploitation, you may find information about your rights and options on [Ohio State's Title IX website](http://titleix.osu.edu) (titleix.osu.edu) or by contacting the Ohio State Title IX Coordinator at titleix@osu.edu.

Title IX is part of the Office of Institutional Equity (OIE) at Ohio State, which responds to all bias-motivated incidents of harassment and discrimination, such as race, religion, national origin and disability. For more information, visit the [OIE website](http://equity.osu.edu) (equity.osu.edu) or email equity@osu.edu.

Commitment to a Diverse and Inclusive Learning Environment

The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

Your Mental Health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. No matter where you are engaged in distance learning, The Ohio State University's Student Life Counseling and Consultation Service (CCS) is here to support you. If you find yourself feeling isolated, anxious or overwhelmed, [on-demand mental health resources](http://go.osu.edu/ccsondemand) (go.osu.edu/ccsondemand) are available. You can reach an on-call counselor when CCS is closed at [614- 292-5766](tel:614-292-5766). **24-hour emergency help** is available through the [National Suicide Prevention Lifeline website](http://suicidepreventionlifeline.org) (suicidepreventionlifeline.org) or by calling [1-800-273-8255\(TALK\)](tel:1-800-273-8255). [The Ohio State Wellness app](http://go.osu.edu/wellnessapp) (go.osu.edu/wellnessapp) is also a great resource.

Accessibility Accommodations for Students with Disabilities

Requesting Accommodations

The university strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability including mental health, chronic or temporary medical conditions, please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with [Student Life Disability Services \(SLDS\)](#). After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

Disability Services Contact Information

- Phone: [614-292-3307](tel:614-292-3307)
- Website: slds.osu.edu
- Email: slds@osu.edu
- In person: [Baker Hall 098, 113 W. 12th Avenue](#)

Accessibility of Course Technology

This online course requires use of CarmenCanvas (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor.

- [CarmenCanvas accessibility](http://go.osu.edu/canvas-accessibility) (go.osu.edu/canvas-accessibility)
- Streaming audio and video
- [CarmenZoom accessibility](http://go.osu.edu/zoom-accessibility) (go.osu.edu/zoom-accessibility)
- Collaborative course tools

Letters of Recommendation

We are sometimes asked to write letters of reference for graduate or professional schools. We are more than happy to do so, provided that the student has: (i) earned an A or A- in the course overall, or has earned an A or A- on the final paper and the midterm or final exam, and (ii) made it a point to visit us during online office hours. These requirements ensure that we will write a good letter that will help you achieve your goals.

Course Schedule

Refer to the CarmenCanvas course for up-to-date due dates.

Week	Synchronous meeting date (online)	Modules assigned (subject to change)	Reading	Laboratory (Th or F) (in person unless otherwise indicated)	Other Assignments
1	Aug 26	History; Proximate & ultimate explanations	Ch 1	Project introduction (online)	
2	Sept 2	Social behavior	Ch 12	Observing Behavior	Weekly reflection (T) Study species (F)
3	Sept 9	Social behavior	Ch 12	Data analysis	Weekly reflection (T) Field notes (F)
4	Sept 16	Social behavior	Ch 13	Hypotheses	Carmen quiz (M-T) Weekly reflection (T) Catalog of behaviors (F) Field notes (F)
5	Sept 23	Foraging	Ch 6	Game Theory	Carmen quiz (M-T) Weekly reflection (T) Field notes (F) Hypothesis assignment (F)
6	Sept 30	Habitat Use	Ch 7	Optimality modeling I: Diet	Carmen quiz (M-T) Weekly reflection (T) Field notes (F)
7	Oct 7	Reproduction	Ch 9	Optimality modeling II: patch choice	Carmen quiz (M-T) Weekly reflection (T) Field notes (F)
8	Oct 14	Sexual selection	Ch 9	No in-person lab	Midterm (M-T) Weekly reflection (T) Field notes (F)



					Last day for revised hypothesis assignment - optional (F)
9	Oct 21	Sexual selection	Ch 10	Honest Signaling	Weekly reflection (T) Field notes (F) Time budget (F)
10	Oct 28	Mating systems	Ch 10	Writing Papers	Carmen quiz (M-T) Weekly reflection (T) Field notes (F)
11	Nov 4	Parental care	Ch 11; paper for lab	Literature discussion*	Carmen quiz (M-T) Weekly reflection (T) Field notes (F) Introduction draft due (F)
12	Monday Nov 9	Genes, environment, & development	Ch 3; paper for lab	Literature discussion*	Carmen quiz (M-T) Weekly reflection (T) Field notes (F) Peer review of introduction (F)
13	Nov 18	Neuroethology	Ch 4; paper for lab	Literature discussion*	Carmen quiz (M-T) Weekly reflection (T) Field notes (F)
14	No meeting	Proximate causes; Domestication	No reading	Thanksgiving (no lab)	Carmen quiz (M-T) Weekly reflection (T) Final dataset (W)
15	Dec 2		No reading	No lab	Weekly reflection (T) Project paper due 4 Dec (F)
Finals Week					Final Exam (online)