

SOC202H1S (LEC5101): Introduction to Quantitative Research Methods Winter 2024 University of Toronto

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Quercus:

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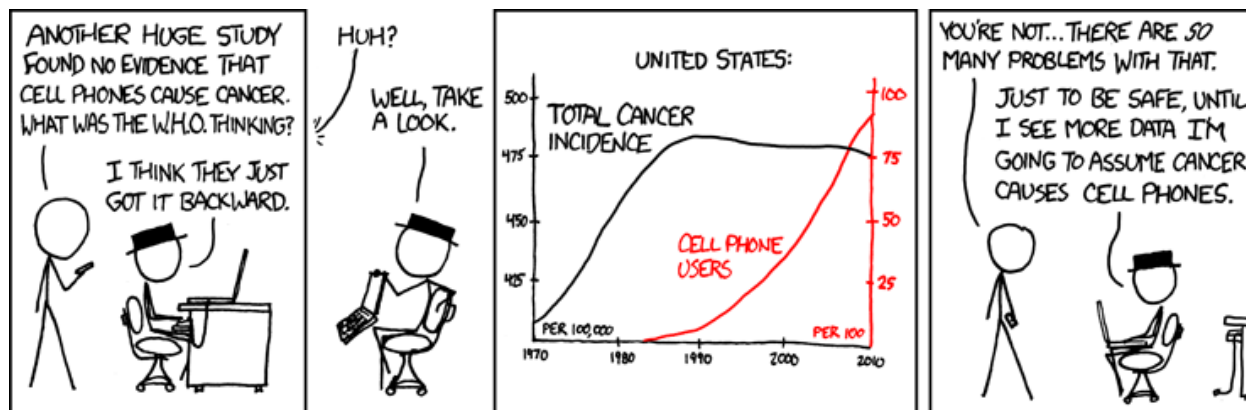
Office: 700 University Ave, 17th Flr.

Office Hours: Tuesdays 4-5pm

Lecture: Mon 5:10-7pm,

Tutorials: Wed 11am-12:30pm, 3-4:30pm, 5-6:30pm

Prerequisites: SOC100H1+ SOC150H1



Source: XKCD

WELCOME!

Welcome to Sociology 202, Introduction to Quantitative Research Methods. This course presents an introduction to statistical techniques used in evaluating data in Sociology. It's also a "flipped" class, which I'm very excited to be able to offer. This means that I'll make lecture videos available before class and you'll be able to review them as much as you like. When we meet, we'll review the lecture content briefly and the rest of our time together will be spent working hands-on through problems and learning in the most embodied and practically applicable ways possible.

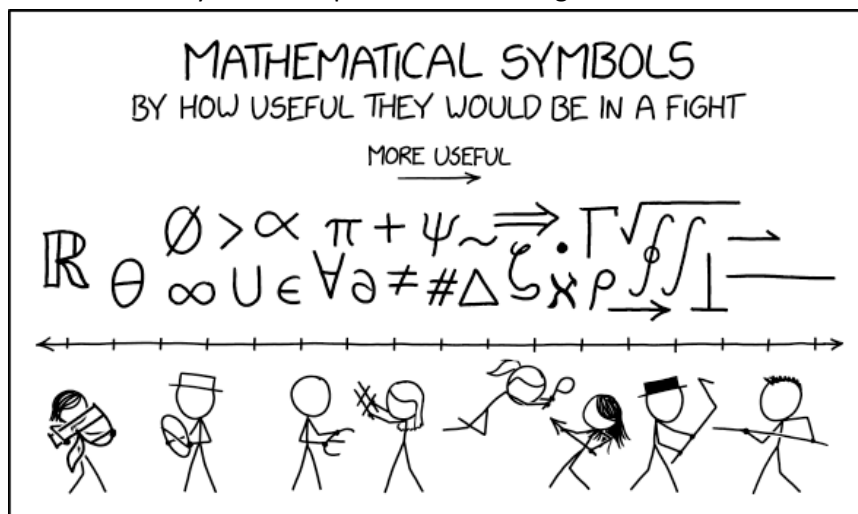
While it's important that you gain an understanding of the mathematical concepts behind the statistical analyses, it is of even greater importance that you leave this course with a conceptual understanding of where quantitative information comes from and how it is produced. This course is designed to teach you to think critically about data and methods. You will learn to use quantitative data to answer sociological

research questions and evaluate your results for error, bias, validity, reliability, generalizability, and significance. In other words, you will be doing your own sociological research and, in the process, learning how to use, analyze and evaluate data in the world beyond. Throughout the course we will examine the underlying assumptions, strengths, and limitations of these techniques and focus on how they can help us better understand the social world.

Truth claims made with statistics are abundant and often have the quality of facts in social and political life. Unfortunately, because many people do not understand the statistics undergirding these claims, they receive less scrutiny than they deserve. It is my primary goal to ensure that you learn the basic statistical literacy that you need to be a smart consumer of information. Our increasing reliance on statistics to understand the social world means that statistical and analytic skills are marketable skills. I believe that teaching statistical tools and techniques is a way of democratizing knowledge and its production.

COURSE GOALS

1. To demystify statistics so you can be a smart consumer of quantitative information.
2. To provide a solid foundation of quantitative skills that could serve as assets in the future.
3. To give you practical computer skills for data analysis.
4. Provide you with experience in working with real world data



Source: XKCD

MIXED FEELINGS ABOUT TAKING STATS?

If you do, you are not alone. Statistics seems like a daunting subject to many students. Lots of students who never felt at home with math find they really enjoy statistics (including me!—more on that later).

For this class you are only expected to be familiar with basic algebraic operations. We will not use derivations and advanced mathematical concepts. Statistics is not just about numbers! It includes more generally problem-solving, logic, and developing skills to communicate findings of statistical analyses to a broader audience.

HOW TO SUCCEED

Practice is key for developing your ability to solve problems and getting information out of a group of numbers. Mere memorization of the techniques is not a successful strategy for learning statistical skills.

The weekly homework, the lab assignments, and the examples we will be tackling during class will provide many opportunities for you to practice: on your own, together with other students, and with the help of the teaching team.

Learning and mastering statistics (and getting a good grade in the class) requires spending a considerable amount of time outside of class **on a regular basis** working through the material and practicing the techniques. The material from every week builds on the content of previous weeks. It is crucial to **seek help proactively and as soon as possible** should you need clarification (see Communication & Getting Help).

LATE ENROLMENT

If you enrolled late in the class, please get in touch with me as soon as possible so we can make sure that you have all the necessary information.

LEARNING COMPONENTS

Each week, you will find all the materials for the week packaged together on Quercus. This may include lecture videos, tutorial demonstrations, reading either in the text or available online, homework on Mindtap, surveys to complete, outside videos, interactive activities, assignments, or other content. Unless otherwise indicated, all materials assigned are required.

TEXT

Healey, Joseph F. & Steven G. Prus. 2019. Statistics: A Tool for Social Research, 5th Canadian Edition. Nelson Education Ltd.

Acquiring the Book:

The digital version of the textbook is fully integrated within Quercus. All you need to do is log in to Quercus, go to Modules, and click on the textbook link in the module at the top, and purchase access. The cost is \$64.95 and includes both the digital book and access to the homework platform.

Visit <https://willolabs.zendesk.com/hc/en-us/articles/4416137717645-Purchasing-Access-to-Course-Materials-in-Quercus-at-University-of-Toronto> for more information on accessing the digital book through Quercus.

If you would like a hard copy of the text, those are available at the bookstore. You will still need access to the homework platform. There should be an access code bundled with the physical book from the bookstore.

All other required readings, videos, and required content will be available on Quercus.

LAB/TUTORIAL SESSIONS

Lab/tutorial sessions will be used to provide demonstrations and support on the statistical analysis software package SPSS, which we will be using to analyze data from two high quality data sets. Lab computers are fully equipped with the required software. While not required, students who miss in-person lab for any reason may want to purchase a personal license for SPSS to complete the work at home.

In each lab you will receive guidance to help you complete that week's activity. Lab assignments will be due by 11:59pm the date specified.

HOMEWORK ASSIGNMENTS

To reinforce course material, students will be required to complete seven homework assignments. These assignments will be available at 8pm Mondays on the weeks they are assigned and can be completed until 11:59pm the following Sunday.

You will need to access MindTap for Healey/Statistics in order to complete the homework.

The website will contain short assignments that correspond with the textbook reading. After answering most questions, you will receive immediate feedback on your performance—i.e., you will know which questions were correct and which ones were incorrect. Most questions allow a total of three takes (please be aware some questions only allow 1 attempt). Your mark for the assignment will be based on the average of your attempts.

Because there is such a large window of time during which assignments can be taken and because assignments can be taken anywhere where an internet connection is available, there are no opportunities for make-up assignments.

RESEARCH POSTER PROJECT

The research poster project will be your opportunity to get your hands dirty doing original sociological research. It should reflect your interest in and understanding of the social world, as much as possible in this limited form. You will use real data and tested social science techniques to answer a research question and share the results in a well-designed poster containing visual displays of data and text describing research findings and analysis. For some of you, this project may serve as a stepping-stone to an independent study. If nothing else, I hope it will make you excited to come to class and to talk to your classmates and share ideas. Social Science research is not done in isolation; therefore, you will be expected to help each other throughout the process of data analysis and evaluation. Peer collaboration is a cornerstone of knowledge production, and you will be expected to engage in this process with each other throughout the semester. This may sound intimidating, but I believe you will find it highly rewarding. You will have the option to work with one or two partners on this project, and we hope you will do so.

IN-CLASS ACTIVITIES

We'll focus our in-class time on hands-on learning activities and problem solving. You will get the most out of this class by attending regularly and fully participating. To incentivize you to take the active learning part of this seriously you will generally submit something for participation credit at the end of class. The actual submission may be a Quercus quiz with an obvious answer for students who attended class or a lab sheet that you turn in at the end of class. You'll need to attend to find out. There will be 10 class meetings with submissions, and you can make up to 7 submissions for credit. In other words, you can miss up to three classes with no formal penalty.

MIDTERM TEST

There will be a midterm test for this class. The midterm will cover content from the first part of the semester up until reading week.

EXTRA CREDIT OPPORTUNITY

Perform, draw, sing, or otherwise dramatize or depict a concept from the class in a medium that can be shared with your classmates (I will not share these without permission). This project may be done individually or in small groups. Projects must be submitted in a shareable format before **April 2nd**. Past projects include songs, videos, poems, and joke books. Up to 1 points may be added to your final grade. All projects accurately conveying a class concept will receive at least .5 point. An additional .5 point may be awarded for extraordinarily creative engagement with course material. In other words, even if you are not a creative type you can still take advantage of this extra credit opportunity.

EVALUATION COMPONENTS

Assignment	Number of occasions	Due Date(s)	Total percent of Final Mark
Homework Assignments	7	Jan 21, 28, Feb 4, 11, March 10, 17, 24	10
Lab Assignments	3	Feb 1, March 7, March 21	35
Mid-term Test	1	Feb 26	20
In Class Activities	10 (7 required)	Most regular class meetings	5
Research Poster	1	April 5	30

Percentage grades will translate to letter grades as follows (standard university grade scale):

Percentage	Letter Grade	Grade Point Value	Percentage	Letter Grade	Grade Point Value
90-100	A+	4.0	67-69	C+	2.3
85-89	A	4.0	63-66	C	2.0
80-84	A-	3.7	60-62	C-	1.7
77-79	B+	3.3	57-59	D+	1.3
73-76	B	3.0	53-56	D	1.0
70-72	B-	2.7	50-52	D-	0.7
			0-49	F	0.0

COURSE POLICIES

LATE WORK AND MISSED DEADLINES

Homework assignments can be completed from anywhere with an internet connection and anytime between 8pm on Mondays and 11:59p on the following Sunday, so there are no make-ups offered or late work accepted for these assignments.

All other assignments are due by 11:59pm on the due date specified. The only exception for either deadline is a legitimate, documented reason beyond your control (e.g., illness, family emergency). In cases where there is no legitimate reason for being late, a 5% penalty will be added for each 24-hour period. Penalties are automated within Quercus and begin the minute after the assignment is due—a paper submitted and 5:01pm for a 5:00pm deadline will be subject to penalty. Plan ahead to avoid late submissions due to technical issues or slow internet. Extensions will not be provided to remove

penalties accrued for minor technical delays. Begin the submission process early. Late work will not be accepted more than 2 weeks after the original due date.

Make-up tests will only be given for legitimate, documented absences.

Please notify me promptly if you must miss a deadline and provide official documentation as soon as possible. Under university regulations I am not required to give make-up tests or provide extensions if the student informs me of her/his circumstance more than 7 days after the missed test or assignment due date.

Three types of documentation are considered “official” when it comes to late work and missed assignments:

- 1) Acorn Absence Declaration of Verification of Illness Form: *Use this for short, temporary illness or other short but acute circumstances.* If you are unable to turn in an assignment/or miss the test for medical reasons, you will need to **email me** the instructor, not the TA, declare your absence on ACORN, and provide me with your absence declaration.

Students who are or will be temporarily absent from their studies and need academic consideration for a missed academic obligation (e.g., test, quiz, paper), may be able to formally declare their absence on the Absence Declaration Tool in ACORN. Students enrolled in an academic division (faculty or campus) that participates, can access the tool in ACORN, under the Profile and Settings menu. The Absence Declaration Tool helps students create an official record of their absence that can be used to support a request for academic consideration in their courses, without the need to present further documentation. Read more about the ACORN Absence Declaration Tool process [here](#).

- 2) Registrar’s Letter: *Use this for longer illness, other personal or family circumstances, or work missed over 7 days past.*

For other reasons, such as family or other personal reasons, please contact your college registrar and have them email me.

- 3) A letter from Accessibility Services. This documentation is useful for ongoing medical issues that require special accommodation.

ACADEMIC INTEGRITY

Academic integrity is fundamental to learning and scholarship at the University of Toronto. Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that the U of T degree that you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

Familiarize yourself with the University of Toronto’s Code of Behaviour on Academic Matters. This is the rule book for academic behaviour at the U of T, and it is your responsibility to read this material and comply fully with it: <http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>

The University of Toronto treats academic integrity and academic misconduct very seriously. Academic misconduct includes, but is not limited to:

- Sharing answers to assignments, including on social media, email, or in person
- Copying material word-for-word from a source (including, but not limited to the textbook, lectures, or study group notes), not placing the words within quotation marks and citing the source
- Submitting your own work in more than one course without the permission of the instructor
- Making up sources or facts
- Obtaining or providing unauthorized assistance on any assignment including having someone re/write or add material to your work
- Lending your work to another student who submits it as his/her own
- Letting someone else look at your answers on a test
- Falsifying or altering any documentation required by the University, including doctor's notes
- Submitting an altered assignment/test for re-grading

USE OF GENERATIVE AI

Students may use artificial intelligence tools, including generative AI, in this course as learning aids, for help outlining or getting started on assignment. The actual text you submit must be your own writing. ChatGPT and other generative AI systems are often overly vague or simply incorrect when asked to generate the kind highly specialized text required for a sociology class. If you do choose to use these technologies, you will do better to check them for “inspiration” only. Keeping up with the assignments and studying the material will make you better at completing the work than ChatGPT. Regardless of what references or resources you might choose to use, students are ultimately accountable for the work they submit and for ensuring that they do so in accordance with UofT policies on academic integrity.

OURIGINAL

Original plagiarism detection software is integrated within Quercus. It uses text matching technology as a method to uphold the University's high academic integrity standards to detect any potential plagiarism. For the assignments set up to use Ouriginal, the software will review your paper when you upload it to Quercus. To learn more about Ouriginal's privacy policy please review its Privacy Policy.

Assignments reviewed by Ouriginal will be included in the software database to be used as references, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of this tool are described on the Centre for Teaching Support & Innovation web site (<https://uoft.me/pdt-faq>).

We may use this tool to review assignments submitted through Quercus. Students not wishing their assignment to be submitted through Ouriginal will not be assessed unless a student instead provides, along with their work, sufficient secondary material (e.g., reading notes, outlines of the paper, rough drafts of the final draft, etc.) to establish that the paper they submit is truly their own.

GRADE APPEALS

Students who commit an academic offense face serious penalties. University policy requires cases of academic dishonesty to be reported to the department chair and the university.

You find additional information on the university's rules and expectations about academic integrity here: <http://www.artsci.utoronto.ca/osai/students>

We do our very best to grade work fairly, consistently, and accurately. Nevertheless, one of us may unintentionally err in our grading duties. If you believe that your assignment or test has been mismarked, please adhere to the following rules:

- For simple mathematical errors, simply alert your TA of the mistake.
- All requests for re-grading tests or course assignments should be made to the person who graded your work. Please **wait for 24 hours** after the assignment has been returned to the class and submit your request **within two weeks of that date**. Requests submitted at a later date will not be considered.
- A **short memo** that clearly states specific reasons to justify the request and backs up these reasons with evidence from your assignment must be submitted to the person who graded your work.

If your appeal is deemed appropriate, the entirety of your test/assignment will be re-graded. Please note that upon re-grade your mark may go down, stay the same, or go up.

ELECTRONIC COMMUNICATIONS AND QUERCUS

The University of Toronto Quercus system will contain the course syllabus, assignments, discussion board, and course announcements. Students are responsible for the content of all course materials and for checking their official utoronto.ca email address regularly. Emails sent to the utoronto.ca email address on file are deemed to have been received.

STUDENT RESPONSIBILITY

You are expected to know the contents of the syllabus. Please consult the syllabus before emailing the TA and the instructor. And you are responsible for all the material covered each week, as well as announcements posted on the course website (make sure to turn on the notifications of your choice on Quercus).

All written work must be typed, double-spaced, with normal (approximately 1-inch) margins using 11pt Calibri or 12 point Times New Roman font. When you submit files, they should be in PDF, doc(x), txt, xls(x) files or another format that can be read by a text editor or word processing program unless otherwise noted. Written work will be submitted via the course website. Online submission makes any formatting abnormalities painfully obvious.

All assignments should be submitted on Quercus or Mindtap according to the deadlines outlined for each assignment (see Course Schedule).

Students can expect work to be returned within two weeks unless extenuating circumstances dictate otherwise. Please consider that TAs, who grade much of the work, are unionized workers with rights, lives, and other demands on their time. Protecting their rights as workers requires giving them the longest reasonable grading windows practical within the confines of the semester.

ACCESSIBILITY

The University of Toronto is committed to accessibility. If you require accommodations or have any accessibility concerns, please visit <http://studentlife.utoronto.ca/as> as soon as possible. If you are registered with Accessibility Services, please forward your accommodations paperwork to the instructor within the first two weeks of the course so that arrangements can be made.

For help with accommodated testing, please use this link <https://lsm.utoronto.ca/ats/>

EMAIL

Please use your University of Toronto email to communicate with me with regard to personal matters. Please feel free and encouraged to contact the instructor and TAs using the contact information provided on the syllabus. Please also include “SOC 202” and a brief description in the subject line. I will typically answer emails within 24 hours, during the workweek (i.e., Monday through Friday, between 9 a.m. – 5 p.m.). Keep in mind that for simple questions, email is the preferred method of communication. However, for longer questions, students should come to office hours.

OFFICE HOURS

Office hours will be held on Tuesdays from 1-2pm. You are welcome to attend office hours either in person or on Zoom—but please let me know in advance if you plan to attend in person. Please reserve an appointment using the calendar tool on Quercus. Click on the “Calendar” in the menu on the left-hand side, then go to “Find Appointments” on the right-hand side. Each slot is 10 minutes. If you need more time, you can book more than one adjacent slot and you may also book appointments as small groups. You can also leave a note about what you would like to talk about in the “comments” box. Please use the comment box to let me know if you plan to attend in person or on Zoom.

Should all the slots for a given week be taken, please email me (sharla.alegria@utoronto.ca). Please include details about the nature of your meeting request and a list of dates/times when you are available in your message.

TECHNOLOGY REQUIREMENTS

SOFTWARE

IBM SPSS: Base Edition

SPSS is the statistical software package you will need to use to complete lab assignments. You can purchase an SPSS license through the UofT’s Licensed Software office (<https://onesearch.library.utoronto.ca/ic/spss-students>). UofT has negotiated a special student price for a 12-month SPSS license, if you purchase through the link above. An SPSS license on your own computer is the easiest and most reliable way to access SPSS. You have **two alternatives**, however, if you choose not to purchase a license.

First, you can work on campus computers in the library or Sociology lab. It is possible, though not guaranteed, that you will be able to complete the necessary work in SPSS during our tutorial meetings. Second, you can access SPSS through the University of Toronto Libraries Remote Lab (<https://cafstatus.icle.utoronto.ca/remotelab/>). This lab allows for up to 17 users at a time to connect to remote desktops using the U of T VPN. While this resource will provide access it can support only a limited number of simultaneous users. I’ve never logged in and found all computers occupied, but it is a possibility.

IMPORTANT: If you choose not to purchase an SPSS license and instead rely on remote access alternatives, be sure to start your assignments early. Remote resources may be busy and technical issues can arise. Ultimately, **you are responsible for completing your assignment on time.**

CALCULATOR

You may find it helpful to have a simple calculator for this class, though you will have access to a computer during all assignments. I like the TI-30Xa, personally. It's available for \$13.29 on Amazon.

COURSE SCHEDULE AND ASSIGNED READINGS

**Please note that the course schedule may be subject to change at the discretion of the instructor and as necessary to meet public health and safety recommendations. Please be flexible and attentive to course announcements.*

Week	Class Meeting Date	Topic	Activities	Notes
Week 1	Jan 8	Introduction, level of measurement, basic descriptive statistics pt. 1	Read: Healey et al. reading: Chapter 1 and Chapter 2 up to (not including) section 2.6 (pg. 52) Complete: <ul style="list-style-type: none">In class activity #1	First lab meeting will be Jan 10.
Week 2	Jan 15	Basic descriptive statistics, pt. 2; central tendency and dispersion	Read: et al. reading: Chapter 2 (section 2.6 and onward) and Chapter 3 Complete: <ul style="list-style-type: none">In Class activity #2[Optional] Chapter 1 Homework (practice working in Mindtap)	HW0 due Jan 14 (OPTIONAL)
Week 3	Jan 22	The normal curve, z-scores, and probability	Read: Healey et al. reading: Chapter 4 Complete: <ul style="list-style-type: none">In class activity #3Homework 1	HW1: Due Jan 21
Week 4	Jan 29	From Description to Inference	Read: Healey et al. reading: Chapters 5 Complete: <ul style="list-style-type: none">In Class activity #4Homework 2Lab 1 Due	HW2: Due Sun, Jan 28 Lab 1: Due Thurs, Feb 1
Week 5	Feb 5	Sample distributions, and confidence intervals	Read: Healey et al. reading: Chapters 6 Complete: <ul style="list-style-type: none">In Class Activity #5Homework 3	HW3: Due Sun, Feb 4
Week 6	Feb 12	Introduction to hypothesis testing	Read: Healey et al. reading: Chapter 7 up to (not including) section 7.5, section 7.10, and Chapter 10 Complete:	HW4: Due Sun, Feb 11

			<ul style="list-style-type: none"> In Class Activity #6 Homework 4 	
Feb 19 Reading Week: No Class or Tutorial Meetings				
Week 7	Feb 26	Mid-Term Test	Complete: Midterm Test	
Week 8	March 4	Two sample hypothesis tests for means and proportions	Read: Healey et al. reading: Chapter 11 Complete: <ul style="list-style-type: none"> In Class Activity #7 Lab 2 Due 	Lab2: Due Thurs, March 7
Week 9	March 11	Measures of association and hypothesis-testing at the nominal level	Read: Healey et al. reading: Chapter 7 (section 7.5 and onward) and Chapter 8 (up to 8.10) Healey et al. reading: Chapter 7 (section 7.5 and onward, but not 7.10) and Chapter 8 Complete: <ul style="list-style-type: none"> In Class Activity #8 Homework 5 	HW5: Due Sun, March 10
Week 10	March 18	Hypotheses and measures of association at the interval/ratio level	Read: Healey et al. reading: Chapter 13 Complete: <ul style="list-style-type: none"> In Class Activity #9 Homework 6 Lab 3 Due 	HW6: Due Sun, March 17 Lab3: Due Thurs, March 21
Week 11	March 25	Testing hypotheses with multiple regression	Read: Healey et al. reading: Chapter 14 Complete: <ul style="list-style-type: none"> In Class Activity #10 Homework 7 Extra Credit Due 	HW7: Due Sun March 24
Week 12	April 1	No Class Meeting	Final Poster support available <ul style="list-style-type: none"> Submit posters by 11:59pm April 5 	