

**SOCIOL 212: Elementary Statistics  
Fall 2020 Syllabus**

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**Student Hours (Zoom):**

Wednesdays, 3:00 pm – 4:30 pm EST

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**Teaching Assistant:** Katie Reynolds (she/her)

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**Student Hours (Zoom):**

Mondays, 10:30 am – 12:00 pm EST

**Teaching Assistant:** Tyler Walton (him/his)

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**Student Hours (Zoom):**

Thursdays, 10:00 am – 11:30 am EST

**COURSE DESCRIPTION AND OBJECTIVES**

Welcome! This course provides a social scientific introduction to probability and statistics. Our goal is to learn about quantitative (numerical) data and to learn how to use data, probability, and statistics appropriately to study our social world. Together, we will:

- Develop a statistical vocabulary and data literacy to become informed consumers and critical evaluators of numerical information
- Apply concepts and tools from statistics and probability and sampling theory to explore, evaluate, and describe numerical information about the social world
- Develop basic proficiency in statistical analytic software
- Learn to interpret and communicate statistical and numerical information to others

There are no formal prerequisites for this course, although you will need basic algebra (+, -, ÷, ×, √). This course satisfies the General Education Analytic Reasoning (R2) requirement.

**SPECIAL NOTE ABOUT LEARNING IN A PANDEMIC**

*None of us wanted this.* I share many of your frustrations and concerns. However, because of the ongoing global health crisis, the uniquely dangerous conditions of campus environments for virus transmission, and the heightened risk to which we would be exposing ourselves and others by traveling to campus, UMass Amherst *requires* that this class be taught in a fully remote format. I am proud of our community for putting health and safety first, but I also recognize that this is difficult for many of us.

I am committed to helping you succeed in this class. Please talk to me and check in with me regularly throughout the semester! I commit to being thoughtful and compassionate towards each of you as you navigate the current circumstances and your own personal situations. In turn, I ask that you exercise the same consideration and compassion towards your classmates, Teaching and Grading Assistants, UMass Amherst staff, and your professors. We are all moving through this differently, but together.

**COURSE STRUCTURE AND SCHEDULE**

In Fall 2020, this is a fully remote and “flipped” class. This means that all learning and class activities will occur physically (and safely) distanced. New content will be introduced *asynchronously* (through pre-recorded modules and guided self-study activities). *Synchronous*, or live, class meetings and lab/discussion sections will take place on Zoom. These will focus on key points, deep dives into complex topics, answering questions, small-group activities, learning how to do data analysis.

During the first week of class, the class will be split into 2 groups. Beginning in Week 2, Group 1 will have live class meetings on Mondays; Group 2 will have live class meetings on Wednesdays. On Fridays, all students will have discussion and lab sections with Katie or Tyler.

**Week 1: Introductory Week**

Mon.	Tue.	Wed.	Thu.	Fri.
All-class meeting 9:05 am – 9:55 am EST		All-class meeting 9:05 am – 9:55 am EST		Lab/Discussion Section <ul style="list-style-type: none"> <li>• 9:05 am – 9:55 am EST w/Katie</li> <li>• 10:10 am – 11:00 am EST w/Katie</li> <li>• 11:15 am – 12:05 pm EST w/Tyler</li> <li>• 12:20 pm – 1:10 pm EST w/Tyler</li> </ul>

**Week 2 – Week 13: Regular Week**

Mon.	Tue.	Wed.	Thu.	Fri.
Monday Group 9:05 am – 9:55 am EST		Wednesday Group 9:05 am – 9:55 am EST		Lab/Discussion Section <ul style="list-style-type: none"> <li>• 9:05 am – 9:55 am EST w/Katie</li> <li>• 10:10 am – 11:00 am EST w/Katie</li> <li>• 11:15 am – 12:05 pm EST w/Tyler</li> <li>• 12:20 pm – 1:10 pm EST w/Tyler</li> </ul>

**COURSE EXPECTATIONS AND GRADING CRITERIA**

The course expectations and activities are designed to help us meet our learning objectives.

**Class Participation (15%)**

Class participation includes two components Keep in mind: class participation will also be reflected in your understanding of the material.

**(1) Introductory Questionnaire (5 points)**

This questionnaire will provide me with some critical and helpful information about you.

**(2) Statistical Investigation Meeting (5 points)**

You must schedule and attend a group meeting with me and other students to discuss your final statistical investigation by November 20.

**(3) Discussion Posts (5 required posts, 1 point each)**

You must contribute at least 5 substantive posts to the discussion forum by November 20.

**Learning Activities (24%)**

Learning activities will help you structure your asynchronous learning and let me know if there are concepts or material that are challenging or unclear.

**(1) Bi-weekly reading guides (6 guides, 3 points each)**

6 bi-weekly reading guides, which you will submit via Moodle, are note-taking outlines for your asynchronous learning. You are strongly encouraged to update your guides as your understanding of the material improves; you can use these as references. You will receive 1 point for an attempt, 2 points for ~50% completion, 3 points for 75% completion.

**Bi-weekly comprehension checks (6 checks, 1 point each)**

6 bi-weekly comprehension checks in the form of Moodle quizzes will test your handle on new content. There is no penalty for incorrect answers, but these must be completed to receive full points for each week’s learning activities. These will also help me track the class’ progress and adjust plans for synchronous meetings accordingly.

### Assignments (40%, 6 assignments)

Assignments will be posted on Friday afternoons (~3:00 pm) and due two weeks later on Fridays at 8:00 am on Moodle. There will be 6 assignments. Refer to the Learning Guide for guidelines for completing these assignments. Because assignments and due dates are shared in advance, students will be expected to adhere to these deadlines. Late assignments will receive 0 points except in extenuating circumstances as detailed in UMass Amherst's official policy:

<https://www.umass.edu/registrar/students/policies-and-practices/class-absence-policy>

We will do our best to grade and return assignments via Moodle in a week. You will have the option of having your lowest grade on an assignment dropped from the calculation of your final grade for this class. You will receive instructions on how to take this option later this semester. If no preference is expressed at that time, your final grade will include all assignments.

### Final Statistical Investigation (20%)

This class does not have a final examination. Instead, each student will conduct their own final statistical investigation to apply the skills and expertise developed over the course of the semester. This project will be due on the last day of finals period, Friday, December 4 at 5:00 pm EST. Group submissions are not permitted except in extenuating circumstances as defined by UMass Amherst's official policy. Additional details about this project are in the Learning Guide and will be made available later in the semester.

### Grading

This table describes the grading scheme for this class. There is no curve; your final grade will be a simple weighted total of your performance over the course of the semester. You can track your cumulative progress in the Moodle Gradebook. This semester, students are allowed to take up to 3 classes Pass/Fail. The deadline to declare Pass/Fail is Friday, November 20th.

Grade	Percent Total	Grade	Percent Total	Grade	Percent Total
A	93% - 100%	C+	77% - 79%	D-	60% - 62%
A -	90% - 92%	C	73% - 76%	F	59% or below
B +	87% - 89%	C-	70% - 72%	INC	Incomplete
B	83% - 86%	D+	67% - 69%		
B-	80% - 82%	D	63% - 66%		

### COURSE MATERIALS

As we will be learning about statistics and statistical concepts and *applying* them to our own investigations of the social world, this will draw upon a range of different course materials.

**Moodle:** The class Moodle page will serve as our "home base." All class materials will be posted or linked through this site. You can access this site by logging in using your NetID and password here: <https://moodle.umass.edu/>

If you are unfamiliar with or have questions about how to use Moodle, please refer to Information Technology's resources for students: <https://www.umass.edu/it/support/moodle/help-students>

**Class Meetings and Modules:** This class is structured around (1) asynchronous modules that introduce definitions and new topics in digestible chunks and (2) synchronous class meetings that will focus on review, clarification, and application of new skills and concepts.

- **Echo360:** Course modules will be available to you as Echo360 videos accessible through our Moodle page. All UMass Amherst students have access to Echo360 using their NetID and password. For detailed instructions for Echo360, please refer to: <https://bit.ly/33WxAzF>
- **Zoom:** Class meetings will take place over Zoom. All UMass Amherst students have free access to Zoom through our Moodle site using their NetID and password.

**Course Texts:** Our readings for class will draw primarily from two texts.

- **OpenIntro Statistics (OS):** This textbook by David M. Diez, Mine Çetinkaya-Rundel, and Christopher D. Barr is one of the main texts for this course. Assigned readings from this text are listed in the syllabus as (OS). This text is available free to download or read online at the textbook site: <https://www.openintro.org/book/os/> If you would like a hard copy, you can purchase one at the textbook site or through UMass Amherst’s eCampus online bookstore: <https://umass.ecampus.com/>
- **Naked Statistics (NS):** This book by Charles Wheelan is one of the main texts for this course and will provide “popular” applications of key concepts. Assigned readings from this book are listed in the syllabus as (NS). You will need to purchase or rent this book through UMass Amherst’s eCampus online bookstore at <https://umass.ecampus.com/> or through ISBNS, a book price comparison tool at <https://bit.ly/2DSNYpC>
- **Additional Readings:** Additional materials will be posted to the class Moodle page.

**Technology:** You will need access to a stable internet connection and a computer to participate fully in this class. *If any of these requirements presents a challenge, please contact me and/or the Office of the Dean of Students as early as possible so we can work together to address these needs.*

**R and RStudio:** These are free open-source statistical software for data analysis (and more). R is available on the CRAN R Project website and RStudio is available on the RStudio website; you will need both. You should download and install these programs on your own before classes begin, following the step-by-step instructions detailed in the start-up manual.

**Calculator:** We will be doing some calculations by hand. You might find it useful to have access a calculator that can conduct basic algebra. A cell phone or computer calculator will suffice.

## COURSE COMMUNICATION

Sociologists are careful to distinguish between physical and social distance, and for good reason! We may be physically apart, but a number of tools and resources can help us build a learning community:

**Discussion Forum:** The class Discussion Forum on Moodle is an open, informal space where students, TAs, and the professor can ask questions, post comments, or share information. In addition to posting as part of your class participation, I strongly encourage students to use this space as a resource. Instructors will check this forum regularly to answer questions and expand on the discussion. Remember: there are no stupid questions.

**Student Hours:** Student hours are dedicated time during which you are encouraged to “stop by” using Zoom (through Moodle) to ask questions, discuss your progress, and share ideas.

**Professor Yi**  
Wednesdays  
3:00 pm – 4:30 pm EST

**Katie**  
Mondays  
10:30 am – 12:00 pm EST

**Tyler**  
Thursdays  
10:00 am – 11:30 am EST

**Email:** Because we have a robust learning environment on Moodle and structured opportunities for discussion and questions, direct email should be used sparingly and only after other resources have been referenced or considered. Please send all emails using your @umass.edu email address.

**Appointments:** To schedule an appointment outside of student hours, please email Professor Yi, Katie, or Tyler directly using your @umass.edu email address.

## **COURSE OUTLINE**

The schedule below lists the semester's topical outline. Please see the Detailed Course Schedule for required readings and exam and due dates for the semester.

**Week 1 (August 24 – August 28):** Welcome and Introductions

**Week 2 (Aug. 31 – Sept. 4):** Nuts and Bolts: Data, Samples, and Populations

**Week 3 (Sept. 7 – Sept. 11):** Describing Data

**Week 4 (Sept. 14 – Sept. 18):** Describing Bivariate and Multivariate Relationships

**Week 5 (Sept. 21 – Sept. 25):** Probabilities

**Week 6 (Sept. 28 – Oct. 2):** Rest Stop/Review (no lab/discussion section this week)

**Week 7 (Oct. 5 – Oct. 9):** Foundations of Inference

**Week 8 (Oct. 12 – Oct. 16):** Point Estimates and Confidence Intervals

**Week 9 (Oct. 19 – Oct. 23):** Testing Hypotheses and Differences

**Week 10 (Oct. 26 – Oct. 30):** Bivariate Relationships

**Week 11 (Nov. 2 – Nov. 6):** Election Week/Review (no lab/discussion section this week)

**Week 12 (Nov. 9 – Nov. 13):** Linear Regression

**Week 13 (Nov. 16 – Nov. 20):** Wrap-Up

**Reading and Finals Period (Nov. 27 – Dec. 4)**

## **COURSE POLICIES**

### **Land Acknowledgment**

The land on which UMass Amherst sits is occupied Nipmuc, Pocumtuc, and Wabanaki Confederacy land. This land belonged to and was stewarded by those Nations' people until its occupation by Lord Jeffrey Amherst and the British military in the mid-18<sup>th</sup> century.

### **Commitment to Inclusion**

The university recognizes and values the wide range of voices and perspectives in all spheres of the academic enterprise. The University of Massachusetts Amherst is committed to policies that promote inclusiveness, social justice, and respect for all, regardless of race, color, religion, creed, gender, sexual orientation, age, national or ethnic origin, physical or mental disability, political belief or affiliation, marital status, veteran status, immigration status, gender identity and expression, genetic information, or any other characteristic or status protected by state or federal laws.

We commit to maintaining an environment that supports our and others' participation and pursuit of the class objectives. There will be no tolerance of behavior that marginalizes or harasses others in this class or persons outside our class community.

### **Commitment to Academic Integrity**

We commit to honest representation of our work. This supports our learning and enables fair assessment of student understanding and effort. Students acknowledge that all assignments may be subject to submission for textual similarity review to Turnitin for (and solely for) the detection of plagiarism.

Since the integrity of the academic enterprise of any institution of higher education requires honesty in scholarship and research, academic honesty is required of all students at the University of Massachusetts Amherst. Academic dishonesty is prohibited in all programs of the University. Academic dishonesty includes but is not limited to: cheating, fabrication, plagiarism, and facilitating dishonesty. Appropriate sanctions may be imposed on any student who has committed an act of academic dishonesty. Instructors should take reasonable steps to address academic misconduct. Any person who has reason to believe that a student has committed academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible. Instances of academic dishonesty not related to a specific course should be brought to the attention of the appropriate department Head or Chair. Since students are expected to be familiar with this policy and the commonly accepted standards of academic integrity, ignorance of such standards is not normally sufficient evidence of lack of intent ([http://www.umass.edu/dean\\_students/codeofconduct/acadhonesty](http://www.umass.edu/dean_students/codeofconduct/acadhonesty)).

### **Student Services, Special Circumstances, and Needs**

Support and reasonable accommodations are available to students experiencing circumstances and conditions that impact their participation. These may include temporary and permanent disabilities, illness, immigration laws, mental health, learning needs, and other considerations. Please contact Professor Yi to discuss any such concerns and needs.

University of Massachusetts Amherst is committed to providing an equal educational opportunity for all students. If you have a documented learning disability on file with Disability Services (DS), you may be eligible for reasonable academic accommodations to help you succeed in this course. If you have a documented disability that requires an accommodation, please notify Professor Yi as soon as possible after registering with DS (by the end of Week 2 of the semester) so that we may make appropriate arrangements in a timely manner. For more information, consult the Disability Services website at <http://www.umass.edu/disability>.

### **Attendance Policy**

There is no formal attendance policy for this class. However, students are expected to participate fully in all components of the class as their circumstances allow. By registering for this class, all students are committing to the course objectives and are therefore expected to take responsibility for their own learning. Depending on your circumstances, this may mean developing a modified plan for success, on your own or in collaboration with Professor Yi.

Please do not expect or ask Professor Yi, Katie, or Tyler to summarize missed lectures for you. Students are encouraged to use the discussion forum, student hours, and, if needed, one-on-one appointments and emails to ask follow-up questions or ask for clarification.

**Sharing Policy**

Transfer, duplication, and sharing of course material with people outside of our class community beyond that which is publicly available on Professor Yi's website is expressly prohibited unless unequivocal written consent has been obtained from the instructors and students involved. This includes, but is not restricted to, screenshots, audio/video recordings, Zoom chats, lecture transcripts, assignments, class documents, and posts from the discussion forum. Violation of this policy is a violation of the privacy, rights, and safety of our class and learning community and will be treated formally as such.

**Support in Response to Harassment, Assault, and Violence in the UMass Amherst Community**

As a faculty member, I am required to report any sexual assault, sexual harassment, relationship violence, or stalking of which I become aware to the Title IX Coordinator in the Dean of Students Office. This includes any experiences or concerns that you disclose to me. Students can contact the Office of Equal Opportunity & Diversity or the Dean of Students Office directly to make a report, file a complaint, or learn about available resources and accommodations. If you would like support or further guidance in doing so, please know that I am here to support you in that process. Students can find additional information on the University's IX website at <http://www.umass.edu/titleix> and in the Sexual and Relationship Violence Resource Guide at <https://bit.ly/2Xw3Zcp>.

## **ADDITIONAL CAMPUS RESOURCES**

Here are some links to other UMass Amherst resources available to support your learning and wellbeing.

### **Anonymous Witness Form**

<https://www.umass.edu/umpd/anonymous-witness-form>

### **Assistive Technologies Center**

<http://www.oit.umass.edu/atc>

### **Bias Reporting (Non-Emergency)**

<https://www.umass.edu/diversity/reporting-options>

\*For emergencies, please call 911 or (413) 545-3111

### **Center for Counseling and Psychological Health (Crisis: 877-831-7421)**

<https://www.umass.edu/counseling/>

### **Center for Multicultural Advancement & Student Success**

<https://www.umass.edu/multiculturalaffairs>

### **Disability Services**

<https://www.umass.edu/disability/>

### **English as a Second Language**

<https://www.umass.edu/esl/>

### **International Programs Office**

<https://www.umass.edu/ipo/>

### **Learning Resource Center**

<https://www.umass.edu/lrc/>

### **Office of Equal Opportunity & Diversity (413-545-3464)**

<https://www.umass.edu/eod/>

### **Ombuds Office**

<https://www.umass.edu/ombuds>

### **Sexual Assault Services (Hotline: 413-545-0800 or 888-337-0800)**

<https://bit.ly/2XWGdXe>

### **University Health Services (413-577-5000, Triage Advice Nurse 413-577-5229)**

<https://www.umass.edu/uhs>

### **Veteran Services Office**

<https://www.umass.edu/veterans/>

### **Writing Center**

<https://www.umass.edu/writingcenter>