



STAT 1350:

“Statistical thinking will one day be as necessary for efficient citizenship as the ability to read and write.” --H.G. Wells

Instructors	Lecture Times and Locations	Office Hours and Locations	Email
Dr. Michelle Everson (Course Coordinator)	TR 12:40-1:35 p.m. 250 Knowlton Hall	TR 11 a.m. to 12 p.m. (in 415 Cockins Hall) and by appointment	everson.50@osu.edu
Michelle Duda	TR 12:45-1:40 p.m. 180 Hagerty Hall	TR 3 p.m. to 4 p.m. (in 329 Cockins Hall)	duda.35@osu.edu
Sean O’Neill	MW 5:20-6:15 p.m. Room 160 in 209 West 18 th Ave. Building	MW 4:30 p.m. to 5:30 p.m. (in 329 Cockins Hall) and by appointment	oneill.90@osu.edu
Corey Smith	WF 8-8:55 a.m. 155 Jennings Hall	WF 9:10 a.m. to 10:10 a.m. (in 132 Cockins Hall)	smith.9785@osu.edu
Masha Soboleva	TR 8-8:55 a.m. 180 Hagerty Hall	TR 9:10 a.m. to 10:10 a.m. and 10:20 a.m. to 11:20 a.m. (in 132 Cockins Hall)	soboleva.2@osu.edu

Please fill in the following information about your recitation instructor so that you know how to contact him or her outside of class time!

Name of Recitation Instructor: _____

Day/Time/Location of Recitation: _____

Email address of Recitation Instructor: _____

Course Description and Course Goals

STAT 1350 is a 3-credit course. You will meet twice per week for lecture and one time per week for recitation. Each class meeting is 55 minutes in length. This is a statistical literacy course designed to help you become thoughtful and critical consumers of statistics in everyday life. You will learn in this course about how data is produced, organized, and summarized. You will also learn about how samples of data can be used to make inferences about populations.

This course satisfies the learning goals of the *GE Data Analysis requirement*, which are to develop an understanding of the basic ideas of statistical reasoning, to comprehend methods needed to analyze and critically evaluate statistical arguments, and recognize the importance of statistical ideas. The course seeks to encourage students to actively think about statistical issues arising in real problems and to understand the basic statistical techniques used to generate, summarize, and draw conclusions from data.

Email Correspondence

In order to protect your privacy, all course email correspondence *must* be done through a valid OSU name.number or Buckeyemail account, or through the course website (Carmen). If you have not activated your OSU email account, you can activate your account at <https://acctmgt.service.ohio-state.edu>. Note that it is your responsibility to make sure that any email messages you send (to a recitation instructor,

lecturer, or course coordinator) are received, and you need to carefully read through correspondence sent to you by your recitation instructor, lecturer, or course coordinator. If you send an email message and get no reply with 48 hours, please send that message again.

Tutor Room

The Math and Statistics Learning Center (MSLC) will be open beginning Week 2 of the semester (starting on Tuesday, January 17th), in 132 Cockins Hall. Hours are from 9:10 a.m. until 6:20 p.m. Monday through Thursday, and from 9:10 a.m. until 1:40 p.m. on Friday. STAT 1350 teaching assistants will be in this Tutor Room throughout the day if you need help, and we strongly encourage you to stop by with questions (note that you can get help with STAT 1350 even from teaching assistants who hold hours in the Tutor Room for other courses). For more details on the Tutor Room schedule, see the **Syllabus** section on our Carmen course site. The schedule will be posted on Carmen by January 13th.

Required Materials

Text: *Statistics Concepts and Controversies* 8th edition by David Moore and William Notz

Note: If you purchase the custom edition of this textbook, it will come with LaunchPad access. *This is **not** a required element for this course, but it can be useful.* LaunchPad is an online compilation of tools (e.g., practice problems, videos, self-tests, an electronic copy of the book, access to a student version of JMP, etc.) that we strongly encourage you to take advantage of during the semester, especially if you are in search of extra practice problems and opportunities to review material from the class and test yourself. Our STAT 1350 LaunchPad site (using the code you received from your custom book) can be accessed at: <http://www.macmillanhighered.com/launchpad/scc8e/3698022>. If you have any questions about using LaunchPad, please direct them to the Course Coordinator, Dr. Everson.

Course Web Site: Additional materials such as lab (or recitation activity) handouts, homework assignments, and review materials and problems, will be available on Carmen (also sometimes referred to as Canvas), and you can also keep up with your grade in the course through Carmen. Students are expected to check Carmen on a regular basis (<https://carmen.osu.edu/>). Please visit the following site if you encounter difficulties with Carmen: <https://resourcecenter.odde.osu.edu/canvas/>

Please note the structure of the Carmen course site (and take some time to explore the site during the first week of the semester). We have buttons on the homepage (see below) that take you to certain sections where we will post lots of resources for you, and we will routinely refer you to the course website.



- **Syllabus:** Here you'll find the syllabus, Tutor Room hours, and other information about course logistics.
- **Meet Your Instructors:** Learn more here about your lecturer and your recitation instructor.
- **Lecture Materials:** Your lecture instructor will post outlines of lecture notes for you to download before lecture and use for note-taking. It's up to you to get notes from a peer if you miss lecture.

- **Homework:** Links to homework assignments can be found here, in addition to PDF files that include homework questions.
- **Lab Activities:** Materials needed for recitation will be placed here, including answer keys to lab activities.
- **Other Resources:** Exam review materials, a Mathematics Review Guide, links to tutorials, etc. will be placed in this section.

Software: Students in this course will use the JMP software. JMP will not be required outside of class time, but students who wish to use it outside of recitation can find JMP on the computers in the Thompson and 18th Avenue libraries, and JMP is also available in our Tutor Room. All lab activities that involve the use of JMP will include detailed instructions about how you can use this software program.

Calculator: A simple calculator (with a square root key) will be necessary for STAT 1350. Please bring this calculator to class, recitation, and to each exam.

Top Hat: This semester, some of the lecturers may be using the *Top Hat* software during lecture, as a way of keeping track of your attendance, encouraging class participation, and awarding extra credit points. *Top Hat* is a system that allows you to answer questions and participate during lecture by using your computer or smart phone.

During Week 1, please go to <https://resourcecenter.odee.osu.edu/top-hat/using-top-hat-students> in order to learn more about *Top Hat* and to make sure you are registered to begin using *Top Hat*. You will also find out information about how you can download a *Top Hat* app to your phone to make it easier for you to use *Top Hat* during class. If you have any difficulties with the registration process, let your instructor know. Each lecturer who chooses to use Top Hat will set up his or her own Top Hat site, and we will make sure to share information with you (either via email or in lecture) about how you can join the site for your lecture section.

Adding or Changing Sections

All add and section time changes are handled by our department staff. The instructor and TAs do not sign paperwork associated with course registration. Students should go to 408A Cockins Hall and speak with Jean Scott (scott.961@osu.edu) about this as early as possible in the semester. The Department will begin to give students permission to add classes or do sections changes (provided that there are openings) on a first-come first-serve basis beginning at 7:00 am on **Tuesday, January 17th** in 408A Cockins Hall. Cockins Hall opens by 6am. You may attend the class the first week of the semester provided that you do not take a seat from someone already scheduled into the course. We cannot add students to courses if you have a hold on your record or you do not meet the prerequisites. *It is extremely important that you attend the recitation you are officially scheduled for so that we can keep track of your work and progress in the course.*

Grading

Final grades in the course will be determined based on the following scale, and based on the percentage of total points that you earn during the semester. **There is no grading curve in STAT 1350.**

Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	E
Min %	93%	90%	87%	83%	80%	77%	73%	70%	67%	60%	≤59%

Your final grade in this course will depend on the following.

Assignment	Points
Lab Activities (14 Lab Activities for a total of 140 points; lowest score is dropped)	130 points
Homework Assignments (12 Homework Assignments for a total of 120 points; lowest two scores dropped)	100 points
Midterm Exam (Tuesday, February 28th, 5:20-6:15 p.m.)	100 points
Final Exam (Wednesday, April 26th, 6-7:45 p.m.)	100 points
Total	430 points

More Details about Required Course Assignments

Lab Activities and Homework Assignments

Please keep in mind that in this course, we automatically drop your lowest lab activity grade and your two lowest homework assignment grades. **If you have to miss a recitation, or if you forget to complete a homework assignment by the deadline (or miss the deadline), we will automatically take your first missed lab activity and your first two missed homework assignments to be your lowest grades (in that you will receive 0 for not completing these assignments), no matter what your reason for missing these assignments. For this reason, please do not ask us to make up this work.** If you have to miss additional work after these dropped assignments, we will work with you to help you make up that additional missed work. We allow for these assignment grades to be dropped because we recognize that sometimes, unavoidable things happen that might affect your ability to complete your work and we do not want you to worry about having to make up work in these situations.

Lab Activities: During recitation sessions, you will participate in activities to supplement and extend the lecture material. These activities will be handed out in recitation, and the answer keys will be posted on Carmen (in the Lab Activities section) by Fridays at 5 p.m. Lab activities will include opportunities for you to work with your peers and take an active role in the learning process. You will complete and submit most lab activities during recitation. The exception to this is the first and the final activity, both of which will be submitted online (and worked on outside of recitation time). Information about Lab Activity #1 can be found below, and information about the final online lab (Lab Activity #14) will be shared with the entire class closer to the end of the semester. Note that for the lab activities you complete and submit during recitation (Labs 2 through 13), we will choose some questions at random from each activity to grade for correctness. Half of your recitation grade (5 points) will be based on the questions we choose to grade for correctness, and half (5 points) will be based on completeness. Thus, even if you attend recitation and complete the lab activity, you will not get full credit if you have not followed directions, or if some of your answers are incorrect. It is for this reason that you need to ask questions when you are in recitation so that you can earn as much credit as possible! **The lowest lab activity score will be dropped from your grade.** *Note that if you add the course late and miss the first graded lab activity as a result, this is the lab activity that will automatically be dropped from your grade WITHOUT EXCEPTION.*

Recitation is a big part of this course. You will attend recitation every week (with the exception of Week 8, when you complete the Midterm Exam). We expect that you show up to recitation on time and do not leave recitation early. If you cannot be on time or have to leave early, please talk to your recitation instructor about this. **Further, we require that cell phones be put away during recitation.**

IMPORTANT clarification about Lab Activity #1:

Lab Activity #1 is a multiple-choice quiz about the syllabus. You can find the syllabus quiz by clicking on the Lab Activities link on the course homepage, or by clicking on the **Quizzes** link on the left side of the course page. You will have just one attempt at taking the syllabus quiz, and you will get credit for each question you get right on the this quiz. You can take as much time as you need to complete the syllabus quiz, provided that you submit your quiz no later than Friday, January 20th, at 11:55 p.m. We strongly encourage you to carefully read through this syllabus (or have it handy) before taking the syllabus quiz to ensure that you get the highest grade possible. We also encourage you to complete the syllabus quiz as early as you can during the semester, especially since you will have another lab activity (Lab Activity #2) and a homework assignment that will also be due during Week 2.

Please note that in addition to completing a syllabus quiz, we will also be asking you to complete a **Pre-course Assessment** during Week 1. We do not anticipate this will take a lot of time, but it's important for you to complete this since it will help us better tailor our instructor in the course. We will share more information about this assessment during recitation and through email correspondence.

Homework: Homework assignments are posted on the Carmen course site, in the **Homework** section (or you can get to each homework assignment by clicking on the **Quizzes** link on the left). Each homework assignment consists of 10 multiple-choice questions, and there are weekly homework assignments in the course in order to help you stay on top of course material. Each homework question is worth 1 point, and you will complete these assignments through Carmen by the appropriate deadline. The homework assignments are meant to give you practice applying what you have been learning, and they are also meant to give you practice with the types of multiple-choice questions you will see on exams. Although the assignments are set up using the Quiz tool in Carmen, they are not technically quizzes. You can have as much time as you need to complete assignments before the deadline (i.e., you can start answering questions and then return later to finish or change your answers), but once you submit your work to be graded, you cannot change any of your answers, and you only get one attempt to submit each homework assignment. Please refer to the document "**Completing Homework Assignments and Reviewing Feedback**" in the **Homework** section of the Carmen course for details on how you can see feedback on your homework assignment. If you do not open and attempt to complete a homework quiz, you will not have any access to assignment feedback or to the correct answers for each homework question. For this reason, it's strongly encouraged that you at least open and attempt every single homework assignment. Once the deadline has passed, the assignment will be automatically graded and you will receive feedback. Homework assignments will always be due on **Sundays by 11:55 p.m. The lowest two homework scores will automatically be dropped from your grade.** *Note that if you add the course late and miss the first homework assignment as a result, this is the homework score that will be dropped from your grade WITHOUT EXCEPTION.*

IMPORTANT: We have learned it is not easy to re-set a homework assignment in Carmen if you make a mistake and submit the assignment before you are ready. If this ever happens, please

contact the Course Coordinator, Dr. Everson, so we can work with you in order to help you successfully submit your answers.

Exams

This course has one midterm exam and a non-comprehensive (or non-cumulative) final exam.

The **Midterm Exam** will take place on **Tuesday, February 28th**, at **5:20 p.m.**, and you will have 55 minutes to complete that exam. More details about the exact location of the exam will be sent out via email and shared in lecture and recitation as we get closer to exam time. The **Final Exam** will take place on **Wednesday, April 26th**, at **6 p.m.**, and you will have one hour and 45 minutes to complete that exam. It is important that you make preparations to be available during these exam times and that you attempt to take these exams on campus with all other STAT 1350 students.

You should bring a photo ID with you to each exam and be prepared to share that ID when submitting your exam. Students who have an unavoidable conflict with an exam time should email the course coordinator (Dr. Everson) at least one week prior to each exam to make appropriate arrangements for taking an alternate or make-up exam. We always have alternate and make-up exam times that coincide with each exam date, and we'll share that information with the class as we get closer to each exam date. Please note, however, that space is limited in our alternate and make-up locations, so, ideally, we would like for most of you to be able to take the exams at the regularly scheduled times.

- If you will be unable to take the exam with other STAT 1350 students at the times we have designated on campus or during our scheduled make-up times, we can attempt to make other arrangements for you to take the exams, either in Dr. Everson's office or at the campus testing center. The Ohio State University (OSU) Testing Center (<http://registrar.osu.edu/testing/>) is an acceptable proctoring site, and offers appointments Monday-Friday 8a.m. to 5 p.m. **If you need to take the exam in a different location away from the OSU campus, there may be proctoring fees. Please contact Dr. Everson immediately to begin making preparations for exams if this will be an issue.**
- All exams are closed book. For each exam, students may use one 8.5 inch x 11inch page of notes (front and back, typed or handwritten). You will also need a calculator for the exams. Each exam will consist predominantly of multiple-choice questions similar to the types of questions you will work through as part of homework assignments; there will also be a few short-answer questions similar to the types of examples and problems that appear in lectures or lab activities.
- Devices such as cell phones and/or watches with calculator *and* communication capabilities are not allowed. Devices such as iPods, iPads, and laptops are also prohibited at the exam. **You should only have access to writing tools, a calculator, and your notes during each exam!**
- If you are late to an exam, had the wrong day on your schedule, or missed the exam for any unexcused reason, you might not be allowed to make it up and will receive a zero. Any missed exams with no communication to us within 24 hours (except for extreme emergencies) will receive a 0. If you have an emergency and are going to miss an exam, please notify Dr. Everson as soon as possible so arrangements can be made. Please also have documentation (doctor's note, etc.) as to why you missed the exam. Your documentation must be approved prior to your being allowed to take a make-up exam.
- Although fewer chapters are covered on the final exam, the final exam is often much more challenging for our students than the midterm exam, largely because the material gets more challenging as we go along in the course. Please keep this in mind as you prepare for the final exam.

Extra Credit

You will each have the opportunity to earn up to 15 extra credit points this semester. Each lecturer has 10 extra points to give out in any way he or she likes, and this will be explained to you in lecture. Each recitation instructor will also be able to decide how to award you with 5 extra credit points. Your recitation instructor will explain, during recitation, how you can earn extra credit points. Extra credit points may not be entered into the grade book until close to the end of the semester, but we will definitely post them before you take the final exam.

Policy on Late and Missed Assignments

You should allow sufficient time to complete all required assignments so that you can get help if you need it. You should also plan to be in recitation every week so you can complete lab activities. Computer failures, lost files and other technical difficulties are not valid excuses for submitting an assignment late. It is for this reason that we allow you to drop two homework assignments and one lab activity from your grade. **No matter what the reason, the first lab activity and the first two homework assignments you miss will be considered your dropped assignments, so please do not ask to make up these assignments.** If you have to miss subsequent work beyond the lab and homework assignments that are dropped from your grade, and you have documented reasons for missing this work, we will consider allowing you to make up that work. You will need to contact Dr. Everson as soon as possible to discuss making up missed work.

As noted above, a student who is unable to attend an exam for a legitimate unavoidable reason may take a make-up exam only if the student provides suitable documentation of the absence and takes the make-up in a timely manner. It is serious if you fail to show up to an exam without contacting us ahead of time. We will only allow you to make up the missed exam if you communicate with us immediately and provide appropriate documentation.

Disputes about Grades

If you feel that any course assignment has been graded incorrectly or unfairly, you must speak with your recitation instructor or the course coordinator within one week of getting your grade on that assignment. We will not re-grade assignments at the end of the semester if you are not satisfied at that time with your final course grade. It's your responsibility to keep up with your grades in the course on a regular basis, and you can do this in Carmen by clicking on the **Grades** option on the left side of the course homepage.

Addressing Issues of Differing Abilities

Students with disabilities (including mental health, chronic or temporary medical conditions) that have been certified by the Office for Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 098 Baker Hall; telephone 614-292-3307, TDD 614-292-0901; <http://www.ods.ohio-state.edu/>.

Course Outline

The following is a general outline of the course, and it is subject to change at the discretion of the course coordinator. Any changes will be announced in lecture and recitation, and on the Carmen site. Ideally, you should attempt to complete readings before the start of a new week so you can bring questions to class. Some topics will be supplemented with course handouts.

Date	Week	Topic	Readings	Assignments due*
1/9-1/15	1	Data/Samples	Chapters 1 and 2	
1/16-1/22	2	More on Sampling/Surveys	Chapters 3 and 4	Lab 1 (online)/Lab 2/Homework 1 (1/22)
1/23-1/29	3	Experiments	Chapters 5 and 6	Lab 3/Homework 2 (1/29)
1/30-2/5	4	Graphs	Chapters 10 and 11	Lab 4/Homework 3 (2/5)
2/6-2/12	5	Summary Statistics	Chapter 12	Lab 5/Homework 4 (2/12)
2/13-2/19	6	Normal Distributions	Chapter 13	Lab 6/Homework 5 (2/19)
2/20-2/26	7	Normal Distributions/Review	Chapter 13	Lab 7/Homework 6 (2/26)
2/27-3/5	8	Midterm Exam** (Tuesday, February 28 th , 5:20-6:15 p.m.)/Probability	Chapter 17	
3/6-3/12	9	Sampling distributions/Confidence Intervals	Chapter 18/Chapter 21	Lab 8/Homework 7(3/12)
HAPPY SPRING BREAK!!!! (3/13-3/19)				
3/20-3/26	10	Confidence Intervals	Chapter 21	Lab 9/Homework 8 (3/26)
3/27-4/2	11	Hypothesis Testing	Chapter 22	Lab 10/Homework 9 (4/2)
4/3-4/9	12	More Hypothesis Testing	Chapter 23	Lab 11/Homework 10 (4/9)
4/10-4/16	13	Correlation and Regression	Chapters 14 and 15	Lab 12/ Homework 11 (4/16)
4/17-4/23	14	Review		Lab 13/Homework 12 (4/23)
4/24-4/30	15	More Review: Last day of instruction is April 24 th / Final Exam (Wednesday, April 26 th , 6-7:45 p.m.)	Review	Lab 14 (online; due 4/24)

* Lab activities (with the exception of Lab 1 and Lab 14) will be submitted during recitation. Homework assignments are always due Sunday at 11:55 p.m. and will be completed through Carmen.

**During Week 8, there will be NO recitations. There will also be no lectures taking place on Monday, February 27th or Tuesday, February 28th. Lectures will resume that week on Wednesday, March 1st.

Academic Misconduct

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

We take academic misconduct very seriously in this course. If you are suspected of behaving dishonestly during an exam (e.g., copying from another student’s exam, allowing another student to copy from your exam, using materials or devices that are prohibited) or when completing any other required course

assignment, this is grounds for us to file a report with the Committee on Academic Misconduct (COAM), and this may result in a failing grade in this course or an even more severe penalty.

Creating a Respectful and Safe Class Environment

We want STAT 1350 to be an environment where you can feel safe to express your thoughts and ideas about what you are learning about. You can expect fair, consistent, and respectful treatment from the entire STAT 1350 teaching team. We expect all students to treat fellow students, recitation instructors, and lecturers, with respect in your behavior, attitude and communications, be they in-person discussions or email. Again, please see the OSU Code of Student Conduct at <http://studentlife.osu.edu/csc/>

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.

Other Student Resources

Students can find information about academic services available at OSU on this website:

<http://artsandsciences.osu.edu/academics/current-students/resources>, and about general student services on this website: <http://ssc.osu.edu>.

Tips for Success in the Course

- Material will get more challenging as we go through the semester. Because of this, you may need to spend more time studying material that is covered later in the semester versus material covered earlier in the semester.
- A good portion of your grade depends on being present during lecture and during recitation. Please do not skip lecture or recitation! Do not assume the recitation instructors will re-teach the material that is covered during lecture. The recitation instructors assume you have attended lecture, and if you have to miss a lecture, it is up to you to get notes from a classmate, or to talk with your lecture instructor about what you missed. Recitation is a time for you to apply what you have learned in lecture and to ask questions about material that is confusing or unclear.
- Please take advantage of opportunities to participate in class discussion, in both lecture and recitation, and to ask questions. If you find that you do not feel comfortable asking questions in front of your peers, please contact us via email, or come to see us during our office hours or Tutor Room hours.
- This is NOT a math class, but some math will be used in the course, and we have a **Mathematics Review Guide** posted on our Carmen course site (see the **Other Resources** section) if you are concerned about your math skills. This is a critical thinking class. Our goal is to help you make wise and educated decisions at work and in life. We definitely recognize that some of you might be nervous about the course, but we want you to know that we are here to help you. Please take advantage of opportunities to meet with the recitation instructors and lecturers outside of class time if you need extra help.

- Your peers can be an excellent source of information. We encourage you to collaborate with your peers on certain course assignments (e.g., homework and lab activities) and to help each other, but keep in mind that you must submit your own individual work, and you must work independently on all exams. Collaboration on exams is NOT allowed!
- We strongly encourage you to avoid working on assignments until the very last minute. We want to help you if you run into problems, but it can be challenging for us to help if you do not ask questions in a timely manner. Note a **General Questions** discussion forum has been set up on Carmen (see a link by clicking on **Discussions** on the left-hand side of the page) for you to post questions outside of class time if you need extra help.