# STT 200 Syllabus – The FAQ Version

### What is this class about?

#### **Course Description**

STT 200 is a three-credit first course in statistical methods. Topics include data analysis, informal probability, randomization-based inference, estimation, tests of hypotheses, confidence intervals, and simple linear regression.

#### Prerequisite

MTH 101 or MTH 102 or MTH 103 or MTH 110 or MTH 116 or MTH 124 or MTH 132 or LB 118 or designated score on Mathematics Placement test.

#### **Course Objectives**

The purpose of this course is to give you experience with statistical procedures in personal and professional spheres, including where they are used, how they are used, the advantages they provide, and their limitations. The course requires the TI-84 (or similar calculator) for most calculations and uses real-life data and situations wherever possible. This course will also provide you with a foundation for future Statistics courses.

Along the way you will learn some basic techniques that statisticians (and many non-statisticians) use to visualize and summarize data, some methods for determining what can be due to chance and what cannot, and the limitations as well as the value of these methods.

This course will strive to add to your progress towards meeting the MSU Undergraduate Learning Goals of

- Analytical Thinking
- Cultural Understanding
- Effective Citizenship
- Effective Communication
- Integrated Reasoning

A detailed list of learning objectives is included in the course notes for each module.

### What is the class format?

STT 200 is an asynchronous, online class. This means that you DO NOT have to attend any class meeting or exam at a fixed specified time throughout the course. This also means that you are responsible to set aside time each day to work on the course and meet the due dates and deadlines set for the assignments and exams.

To be successful in this compressed, summer course, we recommend you spend between 15 and 20 hours per week learning course material and completing assignments. You should spend 2-3 hours each day throughout the module week. Start work on the weekly tasks early so you have enough time to complete them all.

There are 6 weekly modules which you will access in the Content area in the course management system, D2L. During these weeks you will:

- watch a series of video lectures.
- complete "learning checks," which are short quizzes after the video lectures where you can check your understanding.
- complete an online homework assignment using WeBWorK.
- participate in an online discussion with other students in your section via the D2L discussion boards.

There will be 3 of the 6 weeks during the semester where you will also prepare for an exam. During these weeks you will:

- work through a printed study guide.
- complete a practice exam on WeBWorK.
- take the exam on WeBWorK.

Each of these course components is explained in detail in the "What are the assignments?" and "When are the exams and what format will they take?" sections.

### Who are the instructors and how do I contact them?

There are seven instructors this session who are teaching all sections of STT 200 together this semester. **Camille Fairbourn** (she/her) is a Senior Academic Specialist and is the course coordinator. Six PhD students in the STT department are also teaching this summer. They are:

- Arnold Muchatibaya
- Jianrui Zhang
- Junoh Heo
- Nian Liu
- Pratim Guhaniyogi
- Seongwon Yun
- Steve Tchoneteck

We will be sharing an email inbox at <u>STT200Team@msu.edu</u>. All emails must be sent to this shared instructional team email. You should use your MSU email and include your section number in all communications.

You can address us in your emails as "Dear Professors," or "Hello Professors," and one of us or one of our graduate teaching assistants will respond to you within one business day. Emails received after 5:00 pm on Friday will be addressed the following Monday morning.

#### Please do not send emails to the instructors via D2L email.

Each of the instructors will hold office hours each week. Links to the meeting room and the schedule are on the D2L homepage.

# How will the instructors contact me?

Course-wide announcements will be made on the **course homepage in D2L** and the **D2L announcements** tool. You may also occasionally receive emails from <u>STT200Team@msu.edu</u>. It is your responsibility to check the D2L homepage and email regularly.

We will also be communicating more informally using **Microsoft Teams chat**. You can expect frequent information about how to proceed through the course and upcoming course deadlines. It is also an informal place to ask questions about course content. We recommend you download the Teams app to your computer and/or cell phone so you can receive and respond to these messages. Access Teams at <u>spartan365.msu.edu</u>.

### What materials do I need?

- **Required WeBWork subscription:** The WeBWork platform will be used for most homework assignments and exams. Students will be required to purchase a subscription via CashNet at a cost of \$50.00.
  - The payment window opens on May 28, 2021. The fee must be paid before June 4, 2021. Instructions for payment and payment due date are available on the WeBWorK website.
  - You will have 3 weeks of free access to WeBWorK before the fee must be paid. There is a strict no-refund policy for WeBWorK fees, which is why the payment window does not open until after the last day to drop the course with a refund (May 27).
- **Required Stable, high-speed internet:** Information about how students can access internet connections, including those companies offering students free or reduced cost internet can be found at <a href="https://remote.msu.edu/learning/internet.html">https://remote.msu.edu/learning/internet.html</a>.
- Strongly recommended Graphing calculator capable of calculating probability distributions
  - TI-83/84, TI-89, TI-Nspire, or similar
  - For the online class it is possible to use other graphing calculators or online calculators, but they may not use the same inputs nor give output in the same format as shown in video lectures. You will be responsible to learn how to use alternate calculators on your own.
- **Recommended STT 200 Lecture Notes:** Course notes for each module will be posted on D2L to download for free and print yourself.
  - For your convenience, you can purchase a bound, printed copy of all the course notes for the semester (STT 200 COURSE PACKET) from <u>The Student Bookstore</u> at a cost of \$16.03. You can also order the course notes online at this link: <u>STT 200 Course Packet</u>.
- **Recommended A deck of regular playing cards.** You will need this for a learning activity in Module 4.
- **Optional Textbook:** *Introductory Statistics with Randomization and Simulation*, First Edition, by David M. Diez, Christopher D. Barr, and Mine Cetinkaya-Rundel.
  - A pdf file of the textbook can be accessed for free from the <u>textbook website</u>. A printed copy can be purchased for around \$10 <u>on Amazon</u> or from The Student Bookstore.

# When are assignments due?

All module learning checks, discussion assignments, homework assignments, and practice exams in this course are due **at 10:00 PM US Eastern Time**. If you reside in a different time zone, you will need to adjust accordingly. For example, if you live in the US Pacific time zone, you will need to complete your work by 7:00 PM.

Exams will be open from 10:00 PM on Wednesday to 10:00 PM on Thursday on the dates indicated below.

#### Course schedule

The following table contains the planned due dates for this semester. Due dates may be extended at the discretion of the instructional team in the event of university-wide technology disruptions or other emergencies. All such extensions will be announced on the D2L course homepage and via D2L announcements.

Course Component	Due Date (10:00PM Eastern Time)
Module 1 Learning Checks, HW01, Discussion 1 Task 1	Tuesday 5/25/2021
Discussion 1 Task 2	Thursday 5/27/2021
Module 2 Learning Checks, HW02, Discussion 2 Task 1	Tuesday 6/1/2021
Discussion 2 Task 2, Practice Exam 1	Wednesday 6/2/2021
Exam 1	Thursday 6/3/2021
Module 3 Learning Checks, HW03, Discussion 3 Task 1	Wednesday 6/9/2021
Discussion 3 Task 2	Thursday 6/10/2021
Module 4 Learning Checks, HW04, Discussion 4 Task 1	Tuesday 6/15/2021
Discussion 4 Task 2, Practice Exam 2	Wednesday 6/16/2021
Exam 2	Thursday 6/17/2021
Module 5 Learning Checks, HW05, Discussion 5 Task 1	Wednesday 6/23/2021
Discussion 5 Task 2	Thursday 6/24/2021
Module 6 Learning Checks, HW06, Discussion 6 Task 1	Tuesday 6/29/2021
Practice Exam 3	Wednesday 6/30/2021
Exam 3 and All extra credit Practice Homework assignments	Thursday 7/1/2021

# What are the assignments?

### Lectures and Learning Checks (15% of grade)

There will be a set of online lecture videos included in each of the six modules in this course. To help you determine if you are understanding the lecture material, short learning comprehension checks will be available after most lecture videos. These learning checks will be delivered using the quiz tool in D2L.

You will have unlimited attempts on these questions and must **complete them by the due date for the module**.

Each module's learning checks as a group will count towards 2.5% of your grade. All learning checks count towards your final grade and none will be dropped.

### WeBWorK Homework and Practice Exams (36% of total grade)

WeBWorK Homework Assignments, Practice Homework Assignments, Practice Exams, and Exams will be done online using WeBWorK at https://math.msu.edu/Student.

#### Homework Assignments

There will be 6 online homework assignments spread throughout the semester. Each assignment will count towards 4% of your final grade. All homework assignments will be due at 10:00 pm Eastern Time. See each homework assignment on the WeBWorK website for its actual due date.

- No WeBWorK homework assignments will be dropped.
- It is your responsibility to complete homework assignments as early as possible to avoid potential incidents.
- You may request an extension for **one** of WeBWorK homework assignments HW01-HW05 for any reason during the semester by emailing the instructional team. HW06 cannot be extended as the course ends on July 1.
  - Assignments that have been extended will be due on the Friday following the due date at 10:00 PM Eastern time.
  - Email requests for an extension MUST be received **before** the homework assignment due date and time.
  - Extension requests received after the due date will not be considered except under extreme situations as outlined in the "What should I do if I get sick or have another emergency?" section.

#### Practice Exams

The week prior to each exam you will need to complete a practice exam on WeBWorK. Practice Exams will be timed. You will have multiple attempts, but each version of the practice exam may have different numbers for you to use in your calculations. Each Practice Exam will count 4% toward your final grade, the same as a weekly homework assignment.

### Online Discussions (10% of grade)

Throughout the semester there will be six discussion assignments. **Detailed instructions and due dates for each discussion assignment will be given in D2L.** Discussion assignments will be weighted equally. Your lowest-scoring discussion assignment will be dropped before final grades are calculated.

### When are the exams and what format will they take?

There will be three, non-comprehensive exams on the following dates. All times listed are US Eastern Time.

Exam	Content	Exam	Exam	Exam Opens	Exam Closes
	Covered on	Weight	Length	(Wednesday night)	(Thursday night)
	Exam				
Exam 1	Modules 1-2	13%	90 min	6/2/2021at 10:00 PM	6/3/2021 at 10:00 PM
Exam 2	Modules 3-4	13%	90 min	6/16/2021 at 10:00 PM	6/17/2021 at 10:00 PM
Exam 3	Modules 5-6	13%	90 min	6/30/2021 at 10:00 PM	7/1/2021 at 10:00 PM

Exams in this course will be timed assignments delivered through WeBWorK. The exams will stay open for a 24-hour period as specified in the table above. On the day of the exam, you will need to set aside the length of the exam time where you will be uninterrupted. Once you start the exam, you will need to finish within the time limit.

Exams are **not** cumulative and only cover the content specified, however, there will be some fundamentals from earlier modules that will carry through to future exams.

We expect and require you to do the work on your exams independently. You will be allowed access to your notes and your graphing calculator, but you should not communicate with any other human, including non-course resources on the internet, during the exam time.

Exam questions may be multiple choice, true/false, numeric calculations, and short answer problems with interpretation. Computer output may appear on exam questions and you will be expected to use the output to answer various questions.

#### Make-up exams

Typically, a missed exam will be counted as a 0. Make-up exams may be given on a case-by-case basis in consultation with your section instructor and the course coordinator. Valid reasons to take the make-up include:

- medical reasons
- university sanctioned event
- religious holidays
- military obligation

If you begin the exam too late, 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 may receive a zero. In such cases, if you are allowed to take a make-up, you will receive a penalty of 25% of the total points possible on the exam. Any missed exams with no communication to the instructor within 24 hours (except for extreme emergencies) may receive a 0.

### How will my grade be calculated?

Your grade will be based on a weighted scale. Your percentage score on each component of the course will contribute to your grade according to the breakdown below:

Component	Details	Percentage
A set of learning checks for each of the	2.5% for each module	15%
6 modules		
6 Discussion assignments	2% each, lowest dropped	10%
6 WeBWorK HW assignments and	4% each	36%
3 Practice Exams		
3 Exams	13% each	39%
Total		100%
Extra Credit	6 Extra Credit assignments	Up to 2.5%

We fully expect final course grades to be assigned based on the grading scale below. We do not curve the class unless there is a major problem (which is rare.) Don't expect a curve.

Grade	Range	
4.0	90% and above	
3.5	85% - 89.99%	
3.0	80% - 84.99%	
2.5	75% - 79.99%	
2.0	70% - 74.99%	
1.5	65% - 69.99%	
1.0	60% - 64.99%	
0	0% - 59.99%	

<u>Final grades are rounded to two decimal places.</u> We don't move cutoffs. Many people end up close to cutoffs, but moving cutoffs only creates more people being close to the new cutoffs, etc. **Email requests to round grades or change the cutoffs at the end of the semester will not receive a response.** 

Any questions about the grading policy or your standing in the class can be directed to the instructional team through email or during office hours.

An I-Incomplete may be given only when: the student (a) has completed at least 6/7 of the term of instruction, but is unable to complete the class work and/or take the final examination because of illness or other compelling reason; and (b) has done satisfactory work in the course; and (c) in the instructor's judgment can complete the required work without repeating the course.

# Where can I go for tutoring?

#### Statistics Learning Center

The statistics learning center (SLC) will be available via Zoom.

This service exists and is designed to *supplement* a student's learning and comprehension of classroom material. It is not a substitute for watching online lectures and completing learning checks and active learning assignments.

Please be respectful of the tutors and other students in the SLC. Come with specific questions after you have done your best to find the answers in the course lectures and other learning materials. Also be aware that the SLC tends to be crowded in the hours just before assignments are due. You will get more attention and have more time to ask questions if you go early.

Instructions, links and the SLC schedule can be accessed from the course homepage on D2L and at <u>https://stt.natsci.msu.edu/academics/statistics-learning-center/</u>.

# Is there any Extra Credit?

Yes.

#### Extra Credit WeBWorK Assignments

Associated with each homework assignment in WeBWorK is an extra credit assignment you can do for practice. These contain problems similar to those in the actual homework assignment. Each problem in an extra credit assignment is worth one point if all parts of the problem are answered correctly. Partial credit for each problem will be awarded. For example, if a practice problem has 4 parts and you complete 3 of the 4 parts correctly, you would earn 0.75 points for that problem.

There are unlimited attempts for each extra credit problem and the extra credit assignments will remain open all semester until Exam 3 closes. The percentage of the extra credit problems you complete correctly will be multiplied by 2.5 and will be added on top of your overall course grade before final grades are calculated at the end of the semester. This means that completing all extra credit problems will contribute an extra 2.5% to your overall course grade.

This is the only extra credit that will be offered in the course. We **<u>strongly recommend</u>** that you work on it throughout the semester as part of your coursework each week or as you prepare for exams. It takes many hours to complete all the extra credit problems.

# What should I do if I get sick or have another emergency?

We have anticipated that some students may encounter interruptions to their studies for any number of reasons (e.g., illness, need to provide medical or childcare, sustained loss of internet, etc.) and have plans in place accordingly.

If you encounter a prolonged period where you are unable to engage in course content and complete assignments you should send an email to the instructors **as soon as you are able** via <u>STT200Team@msu.edu</u> so that individualized accommodations can be made. If you will be unable to do class work **and can provide documentation of the obstacle you face**, we intend to work hard to accommodate your situation with empathy.

Because of the team-teaching approach implemented in STT 200, we do not anticipate any issues arising if one or more instructors are absent for an extended period. Many assignments are graded automatically, and those that are graded by hand are evaluated by a team of individuals. Thus, students can expect most grades to be posted to their D2L gradebook within a week of the due date passing. If there are any changes to our teaching roster, students will be notified via email and D2L announcement.

#### **Grief Absence Policy**

The Statistics faculty and staff work hard to be sensitive and to accommodate the bereavement process of a student who has lost a family member or who is experiencing emotional distress from a similar tragedy so that the student is not academically disadvantaged in their class. The Statistics Department relies on the University's Grief Absence Policy to alert us of when it is appropriate to grant additional accommodations. According to the University's Grief Absence Policy it is the responsibility of the student to: a) notify the Associate Dean or designee of their college of the need for a grief absence in a timely manner, but no later than one week from the student's initial knowledge of the situation, b) provide appropriate verification of the grief absence as specified by the Associate Dean, and c) complete all missed work as determined in consultation with the instructor. It is the responsibility of the Associate Dean or designee to: a) determine with the student the expected period of absence – it is expected that some bereavement processes may be more extensive than others depending on individual circumstances, b) notify the faculty that the student will be absent, and c) receive verification of the authenticity of a grief absence request upon the student's return. <u>https://reg.msu.edu/ROInfo/Notices/GriefAbsence.aspx</u>

### What should I do if I need disability accommodations?

The STT 200 Instructional Team is committed to making this course accessible to persons with disabilities.

From the Resource Center for Persons with Disabilities (RCPD): Michigan State University is committed to providing equal opportunity for participation in all programs, services and activities. Requests for accommodations by persons with disabilities may be made by contacting the <u>Resource Center for</u> <u>Persons with Disabilities</u> at 517-884-RCPD or online. Once your eligibility for an accommodation has been determined, you will be issued a Verified Individual Services Accommodation ("VISA") form.

Please email your VISA form to the Instructors at <u>STT200Team@msu.edu</u> at the start of the term and/or two weeks prior to the accommodation date (exam, homework, etc.). While we will do our best, we may not be able to honor requests received after this date.

### Is there an Honors option for STT 200?

Not at this time.

### What are other course policies I should be aware of?

#### Academic Honesty

All participants in this class are held to the standard set by MSU's Policy on Integrity of Scholarship and Grades. The policy can be read in full at the <u>MSU Ombudsperson's website</u>

#### Spartan Code of Honor:

On March 22, 2016, The Associated Students of Michigan State University (ASMSU) adopted the following Spartan Code of Honor:

"As a Spartan, I will strive to uphold values of the highest ethical standard. I will practice honesty in my work, foster honesty in my peers, and take pride in knowing that honor is worth more than grades. I will carry these values beyond my time as a student at Michigan State University, continuing the endeavor to build personal integrity in all that I do."

All course assignments, including homework, discussions, and exams, should represent your own work. You may receive tutoring assistance from the Statistics Learning Center or other tutors on your homework and practice exams. You may not receive assistance on exams. Students who violate MSU academic integrity rules may receive a penalty grade, including a failing grade on the assignment or in the course. Contact your instructor if you are unsure about the appropriateness of your course work. (See also the <u>Academic Integrity</u> webpage.)

#### Limits to Confidentiality

All conversations and course materials submitted for this class are generally considered confidential pursuant to the University's student record policies. However, students should be aware that University employees, including instructors and TAs, may not be able to maintain confidentiality when it conflicts with their responsibility to report certain issues to protect the health and safety of MSU community

members and others. As the instructors, we must report the following information to other University offices (including the Department of Police and Public Safety) if you share it with us:

- Suspected child abuse/neglect, even if this maltreatment happened when you were a child,
- Allegations of sexual assault or sexual harassment when they involve MSU students, faculty, or staff, and
- Credible threats of harm to oneself or to others.

These reports may trigger contact from a campus official who will want to talk with you about the incident that you have shared. In almost all cases, it will be your decision whether you wish to speak with that individual. If you would like to talk about these events in a more confidential setting you are encouraged to make an appointment with the MSU Counseling Center.

#### Commercialization of Course Materials

As members of a learning community, students are expected to respect the intellectual property of course instructors. All course materials presented to students are the copyrighted property of the course instructors and are subject to the following conditions of use:

- 1. Students may not share the course materials with individuals not enrolled in the class without the advance written permission of the course instructor and, if applicable, any students whose voice, image, or course work is included in the materials. Course materials include but are not limited to:
  - a. Lecture videos
  - b. Learning check questions
  - c. Homework problems
  - d. Discussion prompts and responses
  - e. Exam problems
- 2. Any student violating the conditions described above may face academic disciplinary sanctions.

### Changes to Syllabus

The instructional team reserves the right to make changes to this syllabus as the semester progresses. Substantial changes will be announced on D2L.

#### Tolerance and Civility

In this online class you will be interacting with course instructors and other students online. Make sure that all your contributions are civil, respectful of other students and the instructors, and on topic.

The following statement was endorsed by the University Committee on Faculty Affairs and the University Committee on Student Affairs and approved by the Academic Council on April 20, 2010.

MSU strives to build an academic community with living and learning environments that expects tolerance of viewpoints and civility toward others, whether at public forums, athletic events, in residential communities, classrooms or laboratories.

We call upon all who participate in university events to promote tolerance and civil behavior and to hold themselves to high standards that reflect the university's commitment to respect viewpoints that may

be different from their own. Only by respecting individuals with diverse perspectives and ideas can we build an environment of civility that is conducive to advancing knowledge and transforming lives.