STT 200 – Statistical Methods
Fall 2018

Instructor Information
John Keane
Academic Specialist – Teacher
Department of Statistics and Probability
Office Location: C427 Wells Hall
Email: keanejoh@stt.msu.edu
Pronouns: him/his
Office Hours: W 2:00 pm – 3:30 pm and by appt.
Course Website: https://d2l.msu.edu

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 class is to give you experience with statistical processes 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 procedures.

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

Course Meeting Times
This class meets from 5:20 pm – 6:10 pm. On Mondays and Wednesdays class will be held in B115 Wells Hall. On Thursdays class will be held in 1281 Anthony Hall. You must also attend your scheduled recitation section on Tuesdays.

Required Materials
  o A pdf file of the textbook can be accessed for free from the textbook website. A printed copy can be purchased for $8.49 on Amazon.
• Graphing calculator capable of calculating probability distributions
  o TI-83/84, TI-89, TI-Nspire, or similar
  o NOTE: The TI-85 and TI-86 do NOT have the functions you will need for your work in this class.
• WeBWorK
We will use WeBWorK for online homework. There is a $50 fee you must pay to use WeBWorK.

- Top Hat
  - We will use Top Hat as a classroom response system. You must register and pay a subscription fee to use Top Hat. Details at https://tophat.com/.

Course Components

WeBWorK and other Homework
This course will use the online homework system WeBWorK. You will access the WeBWorK homework from the website: https://math.msu.edu/Student/ and login using your usual MSU credentials. There will be a $50 fee you must pay to use WeBWorK.

There will be approximately 10 WeBWorK assignments given throughout the semester. Each assignment is worth approximately 40-60 points. All assignments together will count as 25% of your final grade.

In-class Top Hat Assessments
Top Hat exercises will be used both in- and between lectures to help you get quick feedback regarding your understanding of recently covered content. Although many Top Hat questions will have correct and incorrect answers, students are evaluated only on completion of exercises. At the end of the semester, your total Top Hat participation will be incorporated into your final grade.

Recitation Activities
Each recitation meeting will include small group activities and/or worksheets. Each of these will be graded out of 10 points, with half of the points granted for participation and half for correct answers.

Exams
There will be two midterm exams and one comprehensive final exam. All exams will be closed book. Calculator use will be allowed and encouraged on each exam. You must bring your own calculator to the exams. You may not use the calculator on your phone or any other device that connects to the internet during an exam.

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

Exam materials
No review/cheat sheets or any other outside materials are allowed on exams. A copy of the STT 200 formula sheet will be attached to each exam and will be posted to D2L with the study materials for the exams.

You MUST BRING your MSU student ID, pencils (no pens please), and a graphing calculator (any type except one that can connect to the Internet) to each exam.

Question policy during exams
I will not answer questions during the exams. Questions during exams cause distraction for others. It can also create a situation where one student can get an unfair edge over the other students by asking certain questions in certain ways. To that end, exam questions are written very clearly, to avoid misunderstanding.

Every attempt is made to avoid errors. However, if you believe there is an error on the exam, write a note to the instructor on the exam.

If you’re 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 may receive a zero. 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.
Make up Exams
If you have an emergency and are going to miss an exam please notify the instructor 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.

No early final exams (with the possible exception of graduating students). Plan your schedule in advance, including the purchase of plane tickets, so you leave AFTER our final is over.

Midterm regrade requests
If you would like us to reconsider how we graded a problem on your exam, you may submit a regrade request within one week of when the exams were returned to students. We have a formal process that must be followed in order for us to consider a regrade request:

1. Check the solutions to the exam and compare to your exam and how it was graded. We will not regrade problems that were graded in accordance with the solutions.
2. If you still have a question, use a separate sheet of paper and write down which problem(s) you want to be regraded and why. **Do not write anything on your exam.**
3. **Your reason has to be very brief-no more than a few words. In fairness to all students, problems will be regraded based on what was originally written on the exam, not what is written on your regrade request. Long, drawn out arguments will NOT be considered.**
4. Attach your request to your exam and turn it in to the instructor within one week after exams were returned to students.
5. Once the deadline passes decisions will be made all at once. Decisions are final. No requests will be considered once the deadline passes.
6. If you submit several questions for regrades, we reserve the right to regrade your entire exam. Do not request regrades for every point missed.
7. Regrade requests submitted after the deadline will not be considered. The deadline for regrades is always one week after the exams were returned in recitation.

Grading
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:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>25%</td>
</tr>
<tr>
<td>Top Hat</td>
<td>5%</td>
</tr>
<tr>
<td>Recitations</td>
<td>5%</td>
</tr>
<tr>
<td>Midterm 1</td>
<td>20%</td>
</tr>
<tr>
<td>Midterm 2</td>
<td>20%</td>
</tr>
<tr>
<td>Final exam</td>
<td>35%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>100% - 90%</td>
</tr>
<tr>
<td>3.5</td>
<td>85% - 89.99%</td>
</tr>
<tr>
<td>3.0</td>
<td>80% - 84.99%</td>
</tr>
<tr>
<td>2.5</td>
<td>75% - 79.99%</td>
</tr>
<tr>
<td>2.0</td>
<td>70% - 74.99%</td>
</tr>
<tr>
<td>Grade</td>
<td>Range</td>
</tr>
<tr>
<td>-------</td>
<td>----------------</td>
</tr>
<tr>
<td>1.5</td>
<td>65% - 69.99%</td>
</tr>
<tr>
<td>1.0</td>
<td>60% - 64.99%</td>
</tr>
<tr>
<td>0</td>
<td>0% - 59.99%</td>
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</tbody>
</table>

I 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 instructor through email or during office hours.

There will be no extra credit.

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.

**Course Resources**

**Desire2Learn (D2L)**
Desire2Learn or D2L is MSU’s Learning Management System which we will use for our course. You will use D2L to access course content, turn in some assignments, check your grades, and communicate with the instructor and other students in the class. Make sure that all your contributions are civil, respectful of other students and the instructor, and on topic.

**Software**
Documents in this course will be presented in .pdf format where possible. You will need Adobe Reader to view these files, which you can obtain for free online.

Written assignments need to be turned in as .doc, .docx, or .pdf files.

**Help Room**
A statistics help room exists and is designed to supplement a student’s learning and comprehension of classroom material. The statistics help room is located in A102 Wells Hall. Note that the help room is a supplement and not a substitute. The Help Room Schedule can be accessed online.

**Course Policies**

**Classroom Civility**
I make every effort to start and end on time. Please respect class time; do not pack up early. If you know you have to leave early, please sit near the doors. Please do not talk to others during class. It disturbs those around you. Please silence cell phones and other electronic equipment.

**Instructor Feedback/Communication**
I am happy to answer your questions and address your concerns and will make every effort to respond to your emails within one business day. If you email the instructor after 5 pm on a Friday, do not expect your email to be answered until Monday.

All important course announcements will be made in class and using D2L email. It is your responsibility to check it regularly.
Commit to Integrity: Academic Honesty
Michigan State University affirms the principle that all individuals associated with the academic community have a responsibility for establishing, maintaining, and fostering an understanding and appreciation for academic integrity. Academic integrity is the foundation for university success. Learning how to express original ideas, cite works, work independently, and report results accurately and honestly are skills that carry students beyond their academic career. In addition, the Statistics and Probability department adheres to the policies on academic honesty as specified in General Student Regulations 1.0, Protection of Scholarship and Grades; the all-University Policy on Integrity of Scholarship and Grades; and Ordinance 17.00, Examinations. (See Spartan Life: Student Handbook and Resource Guide and/or the MSU Web site.)

Therefore, unless authorized by your instructor, you are expected to complete all course assignments, including homework, projects, and exams, without assistance from any source. You are expected to develop original work for this course; therefore, you may not submit course work you completed for another course to satisfy the requirements for this course. Also, you are not authorized to use the www.allmsu.com Web site to complete any course work in this course. 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 Academic Integrity 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 instructor, I must report the following information to other University offices (including the Department of Police and Public Safety) if you share it with me:

- 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.

Inform Your Instructor of Any Accommodations Needed
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 Resource Center for Persons with Disabilities 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 present this form to the instructor at the start of the term and/or two weeks prior to the accommodation date (test, project, etc.). Requests received after this date may not be honored.

Commercialized Lecture Notes
Commercialization of lecture notes and university-provided course materials is not permitted in this course.

Disruptive Behavior
Article 2.III.B.4 of the Academic Freedom Report (AFR) for students at Michigan State University states: "The student's behavior in the classroom shall be conducive to the teaching and learning process for all concerned." Article 2.III.B.10 of the AFR states that "The student has a right to scholarly relationships with faculty based on mutual trust and civility." General Student Regulation 5.02 states: "No student shall . . . interfere with the functions and services of
the University (for example, but not limited to, classes . . .) such that the function or service is obstructed or disrupted. Students whose conduct adversely affects the learning environment in this classroom may be subject to disciplinary action through the Student Judicial Affairs office.

**Attendance**
Students whose names do not appear on the official class list for this course may not attend this class. Students who fail to attend the first four class sessions or class by the fifth day of the semester, whichever occurs first, may be dropped from the course.

**Build Rapport**
If you find that you have any trouble keeping up with assignments or other aspects of the course, make sure you let your instructor know as early as possible. As you will find, building rapport and effective relationships are key to becoming an effective professional. Make sure that you are proactive in informing your instructor when difficulties arise during the semester so that we can help you find a solution.