

# STT 441: Prob and Stat I Probability, Section 001

Michigan State University, Fall 2021

**Instructor:** Shrijita Bhattacharya

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CLASS: Monday, Wednesday, Friday: 3:00-3:50 PM

<https://msu.zoom.us/j/94350731172>

OFFICE HOURS: Monday, Wednesday, Friday: 1:45-2:45 PM

<https://msu.zoom.us/j/95961445946>

**Help Room:** <https://stt.natsci.msu.edu/academics/statistics-learning-center/>

**Course Web Page:** All course materials and home-works will be posted on D2L.

**Course Information:** This is the first course in a two-course sequence of introductory probability and statistical inference for students with calculus background. STT 441 covers the introductory probability theory and probability models part of the sequence at an intermediate mathematical level. The course covers basic probability, conditional probability and independence; Random variables – discrete and continuous; Univariate and multivariate distributions; Expectation and its properties; Moment generating functions; Law of large numbers and central limit theorem.

**Recommended Background:** MTH 234 or MTH 254H or LB 220 or approval of college.

**Required Course Materials:**

**Textbook:** Introduction to Probability by David F. Anderson, Timo Seppäläinen, Benedek Valkó. ISBN: 9781108415859. **Publisher:** Cambridge University Press.

**Topics to be covered:** Chapters 1, 2, 3, 4, 5, 6, 8, 10 of the textbook.

**Grading:** Points are earned through:

Quizzes: 10%, Homeworks: 30%, Exam 1: 15%, Exam 2: 15%, Final exam: 30%

Your grades will be determined by the following grading scale:

4.0 : 90% $\leq$ Score < 100%	2.0 : 60% $\leq$ Score < 65%
3.5 : 80% $\leq$ Score < 90%	1.5 : 55% $\leq$ Score < 60%
3.0 : 70% $\leq$ Score < 80%	1.0 : 50% $\leq$ Score < 55%
2.5 : 65% $\leq$ Score < 70%	0.0 : 0% $\leq$ Score < 50%

**Quizzes and Homework:** There will be two quizzes 5% each. There will be 10 homework assignments for 3% each during the semester (total 11 homeworks of which 10 highest will be chosen). The due date for homework assignments and quizzes will be announced when they are assigned. Late homework will not be accepted and there will be no make-up for homework. Quizzes will be online.

**Exams:** There will be two midterm exams and one cumulative final exam. All exams will be closed notes. There will be multiple slots for the exam via zoom link on the scheduled day. Exams will be uploaded on D2L. Solutions also need to be uploaded on D2L. Please see the tentative dates for the exams on the schedule below.

Table 1: **Examination Schedule**

EXAM	DATE
Exam 1:	Friday, October 08
Exam 2:	Friday, November 12
Final:	Monday, December 13

**Academic Honesty:** The Department of Statistics and Probability adheres to the policies of academic honesty as specified in the General Student Regulations 1.0, Protection of Scholarships and Grades, and in the All-University of Integrity of Scholarships and Grades which are included in Spartan Life: Student Handbook and Resource Guide. Plagiarism or any other sort of fraudulent behavior in exam and/or homework assignment will result in an automatic zero in that exam and/or homework assignment.

**ADA:** To arrange for accommodation, a student with special need should contact the Resource Center for People with Disabilities [Phone: 353-9642, Web Site: <http://www.rcpd.msu.edu>].

**RVSM:** Michigan State University policies regarding sexual harassment will be enforced. As an university employee, the Instructor is a mandatory reporter. Please consult [www.oie.msu.edu](http://www.oie.msu.edu) for the University policy on Relationship Violence and Sexual Misconduct.

**Emergency Action Plans:** Please familiarize yourself with Emergency Classroom Guidelines posted in the Lecture Classroom. For more information, visit <http://police.msu.edu/field-services-bureau/support-services-division/emergencymanagement/emergency-action-plans/>

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**Tentative Class Schedule:**

WEEK OF	CHAPTER	HOMEWORK
Aug 30	<b>No class</b> , 1.1, 1.2	
Sep 06	<b>No class</b> , 1.3, 1.4	HW1 due
Sep 13	1.5, 1.5, 2.1	HW2 due
Sep 20	2.2, 2.3, 2.4	HW3 due
Sep 27	2.4, 3.1, 3.2	HW4 due <b>Quiz1 posted</b>
Oct 04	<b>3.2, Review, Exam1</b>	
Oct 11	3.3, 3.4, 3.5	HW5 due
Oct 18	3.5, 4.1, 4.2	HW6 due
Oct 25	4.3, 4.4, 4.5	HW7 due
Nov 01	4.5, 5.1, 5.2	HW8 due <b>Quiz2 posted</b>
Nov 08	<b>5.2, Review, Exam2</b>	
Nov 15	6.1, 6.2, 6.3,	HW9 due
Nov 22	<b>6.3, 10.1, No class</b>	HW10 due
Nov 29	10.2, 10.3, 10.3	HW11 due
Dec 06	<b>8.1, 8.2-8.3, Review for Final Exam</b>	

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**Important Dates:**

Sep 01	Classes begin; late enrollment fee begins.
Sep 06	Labor day (no classes).
Sep 08	Close of add period.
Sep 27	Last day for 100% refund.
Oct 08	Exam 1
Oct 20	Middle of semester; last day to drop with no grade.
Nov 12	Exam 2
Nov 25-26	Thanksgiving break.
Dec 10	Last day of classes.
Dec 13	Final exam.