

## **MAT 370: Probability**

**Instructor: Josh Stangle**

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Office hours: MW 10am-11am and 1-2pm, T 11am-12pm and 1-2pm, F 11am-12pm and 1-2pm

**COURSE MEETS** Monday, Wednesday, Friday 9:00am-9:50am in Swenson 3009

### **CATALOGUE DESCRIPTION OF THE COURSE**

This is an undergraduate course.

This course meets a requirement for the Mathematics major and/or Mathematics minor.

A first course in probability theory intended for students in mathematics, pre-engineering, and the sciences. Topics include: axioms of probability; combinatorial analysis; conditional probability; independence; discrete and continuous random variables; probability distributions; expectation; variance; Poisson processes; and limit theorems. Prerequisites: MAT 240, MAT 310.

### **MODE OF DELIVERY**

This is a face-to-face course.

### **LEARNING OUTCOMES**

This courses assesses for an undergraduate learning outcome.

List each outcome with the related assessment of student learning (add rows as needed).

<b>Outcome</b>	<b>Assessment (i.e. exam, paper, presentation, project)</b>
Creative and Critical Thinking: Students will analyze information to answer specific questions.	Exams and homework problems
Gain a thorough understanding of probability theory, expected values, and common distributions	Exams, homework, and discussions with instructor.

### **COURSE SCHEDULE AND OUTLINE**

See Attached.

### **COURSE MATERIALS**

Textbook: Introduction to Probability by Grinstead and Snell.

Available online: <https://math.dartmouth.edu/~prob/prob/prob.pdf>

Also available as hard copy: ISBN 13: 978-1616100469

### **ASSIGNMENTS, ASSESSMENTS AND GRADING**

The grade for this course is based on 2 in class midterm exams worth 20% each, one cumulative final exam worth 20%, and weekly homework worth 40%.

Graded assignments will be returned in a timely manner, and all grades will be maintained on Learn@UWSuper. You should be sure to keep a record of your grades to assess your performance in the course in real-time.

Homework which is submitted late is not guaranteed to be graded or counted.

There are no calculators allowed on quizzes or exams in this class. I encourage you to not rely on calculators for the homework, remember rounding a number when an exact answer is required is incorrect.

### **EXPECTATIONS OF STUDENTS IN REGARDS TO ATTENDANCE**

Attendance is not mandatory. However, any class content you miss while not in attendance is your sole responsibility. Not being in class is not an excuse for late homework nor missed quizzes.

Further, I will not post notes from class online. If you miss a day of class and want the notes, you should contact a fellow classmate.

### **MATH HELP**

Your textbook, classmates, and instructor should all be considered primary resources for this class. Office hours are available for your attendance without an appointment. You can also schedule appointments with me if you cannot attend any office hours or need some one-on-one help.

Additionally the Math Help Center in Swenson 1024/1025 can offer tutoring services.

### **GRADE RANGES**

<b>A</b>	<b>93-100</b>
<b>A-</b>	<b>90-92</b>
<b>B+</b>	<b>87-89</b>
<b>B</b>	<b>83-86</b>
<b>B-</b>	<b>80-82</b>
<b>C+</b>	<b>77-79</b>
<b>C</b>	<b>73-76</b>
<b>C-</b>	<b>70-72</b>
<b>D</b>	<b>60-69</b>
<b>F</b>	<b>0-59</b>

### **EXPECTATIONS OF STUDENTS IN REGARDS TO ATTENDANCE**

### **UNIVERSITY INFORMATION**

### **DIVERSITY AND INCLUSION AT UNIVERSITY OF WISCONSIN - SUPERIOR**

Diversity and inclusion is integral to the educational mission of the University of Wisconsin-Superior. As a community we commit to recognize, include and value inherent worth and dignity of each person; foster tolerance, sensitivity, understanding, mutual respect, and justice among its members; and encourages each individual to strive to reach their own potential. The institution recognizes these experiences are crucial for developing the requisite skills to thrive as a member of a pluralistic society and as a responsible global citizen.

In pursuit of its goal of inclusive excellence, the University actively seeks to attract students, faculty, and staff from diverse backgrounds and life experiences, including but are not limited to: race, ethnicity, sex, gender identity, gender expression, sexual orientation, age, socio-economic background, cognitive ability, physical ability, religion and spirituality, value system, national origin, immigration or refugee status, veteran status, and political beliefs.

The University believes that diversity among its members strengthens the institution, stimulates creativity, promotes the exchange of ideas, and enriches campus life. The University of Wisconsin-Superior views, evaluates, and treats all person in any University related activity or circumstance in which they may be involved, solely as individuals.

For more information about Equity, Diversity and Inclusion and/or to report bias, discrimination or harassment, please email [edi@uwsuper.edu](mailto:edi@uwsuper.edu) or call 715-394-8015.

### **POLICIES AND PRACTICES TO HELP YOUR LEARNING AND GROWTH**

The University of Wisconsin-Superior is dedicated to a safe, supportive and nondiscriminatory learning environment. It is the responsibility of all undergraduate and graduate students to familiarize themselves with University policies regarding special accommodations, academic misconduct, religious beliefs accommodation, discrimination and absence for University- sponsored events.

**Please review the Student Information Sheet and Syllabus Attachment which can be accessed at Learn@UWSuper.**

This includes policies related to:

- **Student characteristics**, including policies and services related to those who are active military/veterans, those who are pregnant or expecting new family members, and students seeking services for differing abilities and accommodations student services, and others.
- **Academic integrity**, including information on plagiarism and steps that an instructor can take.
- **Campus policies**, including how to sign up for Safe Alerts, information on course evaluations, process for submitting a formal grievance regarding academics and/or discrimination, and others.

WEEK	MONDAY	WEDNESDAY	FRIDAY
1 9/5-9/8	INTRODUCTION, START 1.2	CONTINUE 1.2	FINISH 1.2
2 9/11-9/15	START 2.2	CONTINUE 2.2	FINISH 2.2
3 9/18-9/22	3.1 (Last day to drop without W)	3.1	3.2
4 9/25-9/29	3.2	4.1	4.1
5 10/2-10/6	4.1, 4.2	4.2	REVIEW
6 10/9-10/14	EXAM 1	6.1	6.3
7 10/16-10/20	6.2	6.3	5.1
8 10/23-10/27	5.1	5.2	5.2
9 10/30-11/3	7.1	7.1,7.2	7.2
10 11/6-11/10	8.1	REVIEW	EXAM 2
11 11/13-11/17	8.1,8.2	8.2	9.1
12 11/20-11/24	9.1,9.2	9.2	NO CLASS THANKSGIVING
13 11/27-12/1	9.3	9.3,10.1	10.1
14 12/4-12/8	10.2	10.2,10.3	10.3
15 12/11-12/15	EXTRA	REVIEW	REVIEW