

**Math 301 INTRODUCTION TO PROBABILITY AND STATISTICS
SPRING 2020**

SECTION	TIME	DAYS	ROOM
001	9:10 – 10:10 am	M W F	Swart 13

INSTRUCTOR: Dr. Kosgallana Gunawardena

OFFICE: Swart 205

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OFFICE HOURS: 10:20 – 11:20 am M W F and other times by appointment

TEXT: *Probability and Statistics for Engineering and the Sciences*, 8th edition, Jay L. Devore

CALCULATOR: TI 83 or TI 84 calculator is required.

COURSE DESCRIPTION: Elementary probability models, discrete and continuous random variables, sampling and sampling distributions, estimation, and hypothesis testing.

PREREQUISITE: Mathematics 171 with a grade of C or better.

COURSE COVERAGE: The course will cover Chapters 1 - 5, 7, 8 of the text. The primary focus of the course is an introduction to probability models and statistical methods most likely to be encountered by students in natural sciences.

EXAMS: There will be three examinations as scheduled below. Exams will be at the Testing Center with a time limit of 2 hours.

EXAM	TOPICS	DATE
Exam 1	Chapters 1, 2, 3	March 5 - 6, 2020
Exam 2	Chapters 3, 4, 5	April 9 – 10, 2020
Exam 3	Chapters 5, 7, 8	May 13 - 14, 2020

Each student is expected to attend classes regularly and **make-up tests will not be given except when the student has a valid reason for the absence.**

HOMEWORK: The solutions to the assigned homework problems are due at the beginning of the class on Friday. I encourage you to work together in small groups on the homework problems. However, if you work in groups, you should write up your solution to the problems independently of those you work with. Late solutions **WILL NOT** be accepted.

POINTS TOWARDS GRADE:

Exams 1-3	25%
Homework	25%

GRADING SCALE:

POINTS	GRADE	POINTS	GRADE
90 – 100	A	66 – 69	C
86 – 89	A-	62 – 65	C-
82 – 85	B+	58 – 61	D+
78 – 81	B	54 – 57	D
74 – 77	B-	50 – 53	D-
70 – 73	C+	0 – 49	F

LEARNING OUTCOMES:

Upon successful completion of the course, students are expected to have the ability to:

- Describe and understand graphical displays of data.
- Describe and understand numerical summaries of data.
- Describe and calculate probabilities using the basic rules.
- Understand and create elaborate probability calculations using trees and Venn diagrams.
- Count elements in sample spaces using permutations and combinations.
- Describe and understand random variables.
- Develop the basic facts for various discrete probability distributions, including the binomial, hypergeometric, and negative binomial distributions.
- Develop the basic facts for various continuous probability distributions, including uniform and the normal distribution.
- Evaluate and understand expectation formulas for the distributions studied.
- Describe expectation formulas for linear combinations of random variables.
- Calculate areas under continuous curves, specifically the normal curve.
- Develop and explain the reasoning behind sampling distributions, including the Central Limit Theorem.
- Calculate and interpret confidence intervals based on a single sample.
- Conduct hypothesis tests and interpret results based on a single sample.

HOME WORK SUBMISSION GUIDELINES

- use standard size paper. **DO NOT** use paper with jagged edges, torn from spiral note books
- staple the pages
- **DO NOT** use colored papers
- show all the steps for solving the problem
- write legibly
- write complete sentences

ACADEMIC INTEGRITY POLICY:

Integrity is one of the Core Values of UW Oshkosh. All students share with the faculty the responsibility for academic honesty and integrity. The University expects its students to do their own academic work. In addition, it expects active participation and equitable contributions of students involved in group assignments. The following acts of academic dishonesty are not acceptable:

- Cheating: using or attempting to use unauthorized materials, information, or study aids in any academic exercise (e.g. an exam).
- Facilitating Academic Dishonesty: helping or attempting to help another to commit academic dishonesty (e.g. allowing another to copy from your test or use your work).
- Plagiarism: representing the words or ideas of another as one's own in any academic exercise (e.g. failing to cite references appropriately or taking verbatim from another source), whether it is done with the intention of being dishonest or not.
- Fabrication: unauthorized falsification or invention of any information or citation in an academic exercise (e.g. a paper reference).

Cheating on an exam, plagiarizing or any other form of academic dishonesty will be dealt with in accordance with the current UW Oshkosh Student Discipline Code. The instructor reserves the right to assign a grade of **F** for the course should circumstances warrant.

ACCESSIBILITY RESOURCES

The University of Wisconsin Oshkosh supports the right of all enrolled students to a full and equal educational opportunity. It is the University's policy to provide reasonable accommodations to students who have documented disabilities that may affect their ability to participate in course activities or to meet course requirements.

Students are expected to inform Instructors of the need for accommodations as soon as possible by presenting an Accommodation Plan from either the Accessibility Center, Project Success, or both. Reasonable accommodations for students with disabilities is a shared Instructor and student responsibility.

The Accessibility Center is part of the Dean of Students Office and is located in 125 Dempsey Hall. For more information, email accessibilitycenter@uwosh.edu, call 920-424-3100, or visit the [Accessibility Center Website](#).

Students are advised to see the following URL for disclosures about essential consumer protection items required by the Students Right to Know Act of 1990: <https://uwosh.edu/financialaid/consumer-information/>.