Math 601 MATHEMATICAL STATISTICS

INSTRUCTOR: Dr. Kosgallana Gunawardena

OFFICE: Swart 205 **PHONE:** 424-1056 **E-MAIL:** gunaward@uwosh.edu

OFFICE HOURS: 10:20 – 11:20 am M W F: 1:50 – 2:50 pm M W, and other times by appointment

TEXT: *Mathematical Statistics with Applications*, Seventh Edition, Wackerly, Mendenhall and Scheaffer

COURSE DESCRIPTION: The course will cover selected sections from Chapters 2 - 7 of the text. The primary focus of the course is on mathematical development of Probability and Statistics. The course will include traditional topics in probability theory, particularly those aspects most relevant to statistics.

EXAMS: There will be 2 proctored exams. Proctored exams are administered by approved testing centers. You are responsible for identifying a testing center, and you must do this during the first two weeks of the semester. Use the testing center approval form provided in Canvass. A listing of approved testing centers is available in Canvass.

If you decide to take the exams at the UW Oshkosh Testing Center http://www.uwosh.edu/testing/ then no need to complete the form. Send me an e-mail stating that you will be taking the exams at the UWO Testing Center.

You can send the completed testing center approval form by:
regular mail: Kosgallana Gunawardena, Department of Mathematics, University of Wisconsin Oshkosh, Oshkosh, WI 54901
fax: 920-424-1812
e-mail attachment: gunaward@uwosh.edu.

Exam Schedule:

Exam 1	Chapters 2 – 4	March 16 – 20, 2020
Exam 2	Chapters 4 – 7	May 11 – 15, 2020

You will have **two hours** for each exam.

HOMEWORK: Problems from the text will be assigned on Monday. The solutions to the assigned problems are due by Monday of the following week. Late solutions **WILL NOT** be accepted.

GRADING SCALE:

POINTS	GRADE	POINTS	GRADE
90 – 100	A	70 – 75	B-
86 – 89	A-	66 – 69	C+
80 – 85	B+	60 – 65	C
76 – 79	B	0 - 59	F

POINTS TOWARDS GRADE:

Exams 1-2	30%
Homework	40%

LEARNING OUTCOMES:

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

- Prove identities and inequalities involving probabilities of arbitrary events.
- Recognize several well-known discrete and continuous probability distributions and calculate corresponding probabilities.
- Use moment generating functions and probability generating functions.
- Work with multivariate probability distributions.
- Find conditional expectations.
- Find probability distribution of a function of random variables by using distribution functions, transformations and moment generating functions.
- Find joint probability distribution of functions of random variables using bivariate transformation method.
- Understand the proof of the Central Limit Theorem.