# **UNIVERSITY OF NEBRASKA AT OMAHA**

# MATH 4740/8746: Probability & Statistics I

MW 5:30 PM – 6:45 PM | Dr. Cong Wang TR 7:00 PM – 8:15 PM | Dr. Steve From

**Topic description:** This is the first part of a twopart course introducing probability and statistics. In this first half, key fundamental concepts of probability, random variables and their distributions, expectations, and conditional probabilities will be covered.

**Prerequisites**: MATH 1970 and either MATH 2230 or MATH 2030 or permission of instructor

**Textbooks**: John E Freund's Mathematical Statistics with Applications, 8th edition by Miller & Miller (Required); Statistical Inference, 2nd Edition by Casella & Berger (Optional)

**Grading**: Students will be graded based on homework, a midterm, and a final exam.



#### Learning Objectives:

- 1. You will recognize the important role that probability distributions play in the modelling of real processes.
- 2. You will learn basic, set-theoretic notions of probability, along with standard ideas of conditional probability, including Bayes' Rule.
- 3. You will learn the properties of standard "named" distributions.



#### For More Information:

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