

**Math 411B Winter 2015**  
**Introduction to Mathematical Statistics**

**Instructor:** Dr. Kathy Temple

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**Office Hours:** MTF 1:30 - 2:30 PM, W 12:30 - 1:30 PM, and by appointment.

**Course Goals:** At the end of this course, students should understand some further topics in basic probability theory and beginning topics in mathematical statistics. Specifically, we will cover:

- Correlations, conditional distributions, and bivariate normal distributions.
- Distributions of functions of random variables, using the distribution function technique, transformation technique, and moment generating function technique.
- Limiting theorems and sampling distributions.
- Properties of point estimators and methods of choosing point estimators.

**Prerequisite:** Math 411A or permission.

**Required Text:** Hogg, Tanis, and Zimmerman, *Probability and Statistical Inference*, 9th Edition. This quarter we are planning to cover the remainder of chapter 4 and chapters 5 and 6.

**Evaluation:**

- Two in-class exams (20% each); tentative dates: Friday, Jan. 30 and Wednesday, Feb. 25.
- Comprehensive final exam (30%); given Tuesday, Mar. 17, from 8 - 10AM.
- Homework (30%).

**Course Conduct:**

- **Required Materials:** The textbook is required. You will also want at least a scientific calculator. For those planning to take Exam P, I strongly recommend the TI-30X MultiView or TI-30XII.
- **Homework:** Homework will be assigned often in class and due dates will be announced at the time of the assignment. Homework must be done neatly, *stapled*, and written on clean-edged paper (no notebook fringes). Your work should be clear, in a logical order, and provide sufficient explanation. What's sufficient explanation? A good guide is to think about whether another student in the class who didn't know how to do this particular problem could understand your solution. This will also help you understand your solution later! Credit will not be given for late homework.
- **Problem Sessions:** Optional "problem session" sheets will be distributed weekly. If there is interest in the class, a group time to work on these problems outside of class time could be scheduled. While these problems are optional, you are strongly encouraged to do them!

- **Exams:** Any changes to the tentative exam schedule will be announced in advance. Make-up arrangements must be made prior to an exam unless you can document an unexpected circumstance beyond your control that prevented you from taking the exam.
- **Other Information:** Students with disabilities who wish to set up academic adjustments in this class should give me a copy of their "Confirmation of Eligibility for Academic Adjustments" from the Center for Disability Services as soon as possible so we can discuss how the approved adjustments will be implemented in class. Students without this form should contact the Center for Disability Services, Bouillon 140 or [dssreceipt@cwu.edu](mailto:dssreceipt@cwu.edu) or 963-2171.