Instructor: Bernard Omolo
Office: HC 239
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Email: bomolo@uscupstate.edu (best way of messaging me!)
Course info: http://faculty.uscupstate.edu/bomolo/Teaching.html and/or Blackboard.
Office hours: 8:00 - 10:00 MWF or by appointment.
Text: Probability and Statistical Inference (7th ed.) by Hogg / Tanis.

About Course: This course provides an introduction to fundamental concepts of probability and statistics to students with a background of calculus (SMTH 244). Schaum’s Probability and Statistics (2nd ed.) by Spiegel et al will be used as supplementary text. Topics covered will range from basic probability theory to estimation theory and will include:

- **Probability**: sample spaces; events; laws of probability; conditional probability; independence; Bayes’ theorem.
- **Discrete distributions**: discrete random variables; binomial, negative binomial, geometric and Poisson distributions; moment generating functions.
- **Continuous distributions**: continuous random variables; uniform, normal, exponential and gamma distributions.
- **Bivariate distributions**: bivariate normal; conditional distribution; correlation coefficient.
- **Sampling distributions and approximations**: distributions of sums of random variables; Central Limit Theorem; Chebyshev’s inequality; law of large numbers; convergence in probability.
- **Estimation**: point estimation; confidence intervals.
- **Order statistics**: if time allows.

You will be required to review class notes and read texts before and after class. Class attendance and participation will earn extra credit. Make-up quizzes and tests must be taken within a week to avoid penalty. Only documented excuses will be accepted, where applicable. At most there will be one quiz every week, based on homework problems.

**Critical Dates:**
Jan 10-12: Add / drop period.
Jan 17: MLK Jr holiday.
Feb 1: Test 1
Feb 22: Test 2
Mar 7-11: Spring Break.
Mar 22: Test 3
Mar 30: Last day to withdraw / change from credit to audit.
Apr 25: Last day of class.
Apr 28: Final Exam 11:30 - 2:30 HC 256 (cumulative).

Grading Policy:
Quizzes: 50%
Tests: 30%
Final Exam: 20%
Grades: 85-100: A; 75-84: B; 65-74: C; 55-64: D; 0-54: F.

Accommodation. Any student who, because of a disabling condition, may require special arrangements in order to meet course requirements should contact the instructor as soon as possible.

Note: The instructor reserves the right to change this syllabus at any time.