Course Syllabus
STAT 575: Mathematical Statistics III
Department of Mathematical Sciences
Central Connecticut State University
New Britain, CT 06050
Fall 2018

Class Meeting Times: Tuesday and Thursday: 4:30 – 5:45 PM; Maria Sanford 321

READ THIS SYLLABUS CAREFULLY. YOU ARE RESPONSIBLE FOR KNOWING THIS INFORMATION!

Prerequisite: STAT 416, Mathematical Statistics II

Instructor: Dr. K.K. Saha
Office: Marcus White Hall 109
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Office Hours: Tuesday & Thursday: 1:30 PM – 2:30 PM; Wednesday 1:00 PM – 4:00 PM.

Textbook: Introduction to Mathematical Statistics (7th edition) by Hogg, McKean, and Craig

Course Description: The course will cover advanced topics in mathematical statistics including topics in estimation and hypothesis testing.

Topics Covered: The following topics will be covered in this course. This material can be found in Sections 4.4, 5.1-5.3, 6.1-6.2, 7.1-7.4, 8.1-8.4 and 11.2 in the text.
- Order Statistics
- Limiting Distributions including convergence in probability
- Properties of Estimators including consistency, mean square error, and asymptotic results for MLE
- Bayesian Estimation
- Minimum Variance Unbiased Estimators including sufficiency
- Best Tests, Neyman-Pearson Lemma, UMP tests, and Likelihood Ratio Tests
- Distributions of Quadratic Forms

Important Dates: See the academic calendar at http://www.ccsu.edu/calendar/

Withdrawal Policy: After Nov 19, withdrawals are allowed only under extenuating circumstances and require approval of the course instructor, department chair, and dean of the School of Arts and Sciences.
**Evaluation:** Minimum averages have been established for each of these grades:

- A 93% A– 90% B+ 87% B 83% B– 80% C+ 77% C 73% C– 70% D+ 67% D 63% D– 60%

**Grading Assessment:** The final grade for this course will be calculated based on the following weights.

- Homework Problems 25%
- Midterm 35%
- Final Exam (comprehensive) 40%
- Total 100%

**Homework Problems:** Weekly homework assignments will be assigned from the textbook. Photocopies or e-mail copies are not acceptable. Loose pages will not be accepted. You must use a staple. Actively solving these assignments is strongly recommended and the best way to learn the course material. Randomly selected 2 problems will be graded from each homework.

**Midterm Exam:** The midterm exam will be given based on the material covered in Sections 4.4, 5.1-5.3, 6.1-6.2, and 7.1 in the text. I will announce in advance for any changes in the exam material and exam date. The schedule for the midterm exam will be announced during the class period of Section 7.1.

**Final Exam:** The final exam will be given at the end of the semester as follows: Dec 10th, 10:00 AM - 5:00 PM. More detailed about the final exam will be discussed at the last week of the semester.

**NO MAKE UPS WILL BE GIVEN:** If you miss the midterm exam, contact me immediately (preferably in advance). If you have a good reason for not being able to take the test as scheduled, I will substitute your final exam score for that test when computing your final grade. Otherwise a grade of zero will be recorded for the missed exam.

**Incomplete Grade:** An “I” will be assigned if and only if (all must apply) (i) the student is not currently failing the class; (ii) there is no substantial quantity of work yet to be completed; (ii) there is no extra work required of the instructor beyond the normal duties of grading the paper/exam; and (iv) there is no need for the student to attend the class in subsequent terms. An “I” grade must be made up according to the university guidelines.