MAT 651 : Probability and Statistics I (Fall 2015)

Course Description:

A review of basic probability theory, transformations and moments, common families of distributions, multiple random variables and multivariate transformations, conditional probability and hierarchical distributions, sampling from the normal distributions, convergence concepts, order statistics.

Instructor

Professor Pinyuen Chen, Carnegie Building 316 B, 443-1577, pinchen@syr.edu.
Office Hours: To be announced in class.

Text : *Statistical Inference*, by George Casella and Roger L. Berger, 2nd edition, Duxbury

Grading Policy:

Exam I: Chapters 1 and 2	20%
Exam II: Chapter 3 and Sections 4.1 and 4.2	20%
Exam III: Sections 4.3 to 5.4	20%
Homework	40%

- The exams will be given on weekends. The exact dates and time will be determined in class so all students can attend.
- Homework will be graded. You should work on all homework problems yourself and be ready to present your solutions in class.
- Students who fail to present their "correct" solutions will receive a "0" for that homework set. Any student who receives "0"s in two homework sets will receive an F for the class.

Prerequisite: Calculus I, II, and III up to multivariate calculus.

Course Schedule : Chapters 1-4 and Sections 5.1 – 5.4.

References

Bickel and Doksum (2001) Mathematical Statistics, Vol. 1, 2nd edition, Prentice Hall.
Cox and Hinkley (1974) Theoretical Statistics, Chapman and Hall.
Dudewicz and Mishra (1988) Modern Mathematical Statistics, Wiley.
Gnedenko (1989) Theory of Probability.
DeGroot and Schervish (2010) Probability and Statistics, 4th edition or any earlier edition.

Learning Goals
Students will be expected to
1) use and understand basic mathematical notation;
2) select and apply an appropriate mathematical model for certain elementary probabilistic problems;
3) do basic hand calculations with accuracy;
4) use appropriate hardware and/or software related to certain probability distributions.

Academic Integrity
The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort.
For more information and the complete policy, see http://academicintegrity.syr.edu.

Disability
Students who may need academic accommodations due to a disability are encouraged to discuss their needs with the instructor at the beginning of the semester. In order to obtain authorized accommodations, students should be registered with the Office of Disability Services (ODS), 804 University Avenue, Room 309, 315-443-4498 and have an updated accommodation letter for the instructor. Accommodations and related support services such as exam administration are not provided retroactively and must be requested in advance."
For more information about services and policy, see Office of Disability Services:
Office of Disability Services
804 University Avenue Room 309
Syracuse, New York 13244-2330
Phone: Voice: (315) 443-4498
TDD: (315) 443-1371
E-Mail: odssched@syr.edu

Religious Observances Policy:
Syracuse University's religious observances policy, found
at http://supolicies.syr.edu/emp_ben/religious_observance.htm, recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holy days according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that maybe missed due to a religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice/Student Services/Enrollment/My Religious Observances from the first day of class until the end of the second week of class.