

MAT 702, FUNCTIONAL ANALYSIS

Spring Semester 2015

Course Description: Norms, seminorms, and inner products on linear spaces. Standard theorems on linear functionals and operations. Dual spaces and weak topologies, classical spaces and their duals. Applications. Prerequisites: MAT 631, 661, 701.

Text: *A Course in Functional Analysis* (2nd ed.) by John B. Conway, ISBN 9780387972459.

Professor: Yuan Yuan (Carn 317A).

Office Hour: TBA.

Grading: The grades will be based on homework (20%), one midterm exam (40%), and final exam (40%).

Homework: In order to learn this material, it is absolutely vital that you do the problems. Time will be allotted at the beginning of most class periods to discussing the homework assignments.

Class Attendance and Participation: You are expected to attend and participate in class. If you must miss a class, you should ask me or your classmates to obtain notes for that class.

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.

Learning Goals and Expectations: Students are expected to master the basic notions of probability and to acquire the skills necessary for the application of these notions to the further study of probability and/or statistics.

Disabilities: 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 contact the Office of Disability Services.

Office of Disability Services: Office of Disability Services, 804 University Avenue Room 309, Syracuse, New York 13244-2330 (315) 443-4498 TDD: (315) 443-1371 e-mail: odssched@syr.edu

Religious Observances Policy. SU religious observances policy recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be 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 registration is available through MySlice (Student Services -> Enrollment -> My Religious Observances) from the first day of class until the end of the second week of classes.