MAT 812, Topics in Complex Analysis

Fall Semester 2018

Course Description: We will introduce Hormander's L2 estimates of d-bar equation on the bounded pseudoconvex domain in Cn as well as many analytic and geometric applications and recent developments. We will try to make the course self-contained by explaining all the details. In this sense, some backgrounds of complex analysis are enough. It helps but is not necessary to know real analysis and some differential geometry, functional analysis, partial differential equations. L2 method is extremely powerful in the applications of complex and algebraic geometry, but we restrict ourselves to the bounded domains in Cn for this course.

Textbook: We will not follow any particular textbooks directly. The following books are important references:
T. Ohsawa: Analysis of several complex variables;
T. Ohsawa: L2 approaches in several complex variables.

The following books will also be helpful.
S. Chen and M. Shaw: Partial differential equations in several complex variables;
J. P. Demailly: Complex analytic and differential geometry;
J. E. Fornaess: Several complex Variables, arXiv: 150700562.

Professor: Yuan Yuan (Carn 317A).

Office Hour: Monday, Wednesday 10:30-11:30.

Grading: The grades will be based on the participation of the 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.

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.