MAT 493: Independent Research II In Mathematics

I. Basic Course Information

Independent research, MAT 493, is an upper level course for majors in their Senior year, with at least a 3.5 GPA, who have already taken the two required 400-level mathematics courses and are interested in studying topics that are not covered in the regularly offered courses. Independent Research experiences are expected to produce new knowledge by the student in collaboration with a faculty member and/or with fellow student researchers and a faculty mentor. The student will be expected at the end of the semester to write a paper which will be presented to the department or to a state or national conference.

A student may enroll in no more than two course units of independent study/guided study/independent research in a given semester.

To register for the course a student must contact a faculty member of the department who will serve as a mentor of the independent study.

The faculty mentor and the student will write a proposal explaining the subject matter that will be studied as well as the way the student’s work will be assessed. An independent research contract/enrollment form must be prepared by the student, approved by the faculty mentor and the department chairperson, and submitted to the Office of Records and Registration at the time the student registers for the course. Registration for independent research will be accepted only through the first week of the semester.

II. Learning Goals

1. A deep understanding of some selected topics in mathematics
2. To enhance a student’s ability to solve difficult problems in a certain area in mathematics
3. To improve a student’s ability to read and write mathematics
4. To improve a student’s ability to conduct literature searches in the discipline.
5. To improve a student’s ability to communicate orally their results.

III. Students Assessment

Students will meet with their faculty mentor on a weekly basis. They will be continuously assessed, by the faculty mentor, based on their weekly progress. At the end of the semester students must submit their results in a paper that they will present to the department or to a national conference.

IV. Learning Activities

The learning activities will be decided by the faculty mentor. They will be specified in the original proposal submitted to the department chairperson for approval.