

STA 493: Independent Research II in Statistics

I. Basic Course Information

STA 493: “Independent Research II in Statistics” is an upper level course for majors in their Senior year who have at least a 3.5 GPA. Its prerequisites are MAT 316 and at least one 300-level Statistics course. It also has STA 410 as a prerequisite or corequisite course. The student should develop the topic for the research with a faculty member. Although it is typical that this topic would be in the area of research for the faculty member, this is not required.

Independent research experiences are expected to produce new knowledge by the student in collaboration with the faculty member and/or with fellow student researchers and the faculty mentor. The student will be expected to write a paper and present it to the department or at a national meeting. This must take place prior to graduation and no later than within the semester following the independent research course.

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 mentor for the independent research. The faculty mentor and the student must write a proposal explaining the research project and the method of assessment. **The independent research project enrollment form must be prepared by the student, approved by the faculty mentor and department chair, and submitted to the Office of Records and Registration at the time the student registers for the course. Registration for independent research will only be accepted through the first week of the semester.**

STA 493 differs from STA 393: “Independent Research I in Statistics” in a higher expectation level for student independence and maturity, and the difficulty of subject matter.

II. Learning Goals

1. A deep understanding of the methods of statistical research
2. The development of novel results in applied or theoretical statistics
3. An ability to search and interpret the primary literature in statistics
4. The development of writing and presentation skills suitable to professional level research in statistics

III. Student Assessment

Students will meet at least weekly with their faculty mentor. There will be continuous assessment of the progress the student is making and the faculty mentor will provide feedback concerning this progress. The final paper, together with an oral presentation of its contents, will provide the primary concrete evidence for student assessment.

IV. Learning Activities

Learning activities will be specific to the topic of the research. They will include reading of the primary literature, maintaining of detailed notes preferably in a bound notebook, and high level discussions of statistics with the faculty mentor.