STATISTICAL SCIENCES AND **OPERATIONS RESEARCH (SSOR)**

SSOR 480. Consulting Using Advanced Analytics. 3 Hours.

Semester course: 3 lecture hours. 3 credits. Prerequisites: UNIV 200 or HONB 200; either OPER 427 and OPER 428, or STAT 321 and either STAT 305 or STAT 314. Enrollment is restricted to senior mathematical sciences majors with concentrations in general mathematical sciences, statistics or operations research. Capstone course designed to help students apply analysis techniques and attain proficiency in professional communication, both written and oral, in the context of statistics and operations research. Focuses on applying statistical and analytical concepts to real-world scenarios, working with messy data and communicating conclusions to audiences with varying degrees of mathematical expertise.

SSOR 485. Career Planning and Professional Development for Statistics and Operations Research. 1 Hour.

Semester course; 1 lecture hour. 1 credit. Enrollment is restricted to junior or senior mathematical sciences majors in the general mathematical sciences, statistics or operations research concentrations. Designed to help students in statistics and operations research concentrations explore and evaluate career plans and prepare for entrance into graduate school or the workforce. Focuses on résumé preparation, interviewing skills, personal statements and evaluating ethical dilemmas.

SSOR 492. Independent Study. 2-4 Hours.

Semester course; variable hours. 2-4 credits. Maximum 4 credits per semester; maximum total of 6 credits. Generally open only to students of junior or senior standing who have acquired at least 12 credits in the departmental discipline. Determination of the amount of credit and permission of instructor and department chair must be procured prior to registration in the course. The student must submit a proposal for investigating some area or problem not contained in the regular curriculum. The results of the student's study will be presented in a report.

SSOR 493. Internship. 3 Hours.

Semester course; the equivalent of at least 15 work hours per week for a 15-week semester. 3 credits. Enrollment restricted to mathematical sciences/statistics and mathematical sciences/operations research majors only with junior or senior standing. Admission by permission from the department chair. Through placement in a position in business, industry, government or the university, the student will serve as an intern in order to obtain a broader knowledge of statistics or operations research techniques and their applications.

SSOR 681. Data Science Capstone Project I. 3 Hours.

Semester course: 3 lecture hours. 3 credits. Enrollment is restricted to students pursuing the M.S. in Data Science. This course will allow students to apply the concepts, theories and skills learned in other courses to a real data science problem. Student teams, in collaboration with a faculty mentor, will formulate a problem, query databases for appropriate data, perform appropriate analyses, discuss ethical considerations and present results in both written and oral presentations. Crosslisted as: CMSC 681.

SSOR 682. Data Science Capstone Project II. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisites: CMSC/ SSOR 681. Enrollment is restricted to students in the M.S. in Data Science program. Continuation of project from prerequisite course. Continues an emphasis on collaboration, analysis planning and effective communication of results. Crosslisted as: CMSC 682.

SSOR 690. Research and Communications Seminar. 3 Hours.

Semester course: 3 lecture hours. 3 credits. Enrollment restricted to students with nine graduate credits in OPER and/or STAT courses and with permission of the instructor. Designed to help students attain proficiency in professional and academic communication and research in the context of statistics and operations research. The course focuses on the discipline-specific communication and research skills necessary to excel in careers or graduate studies in these disciplines.

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