MATH 3324: Enumerative Combinatorics

3 Credit Hours

Prerequisite: MATH 2345 or MATH 2390

This course is an introduction to classical combinatorics and the theory of counting. Topics include the twelvefold way, combinatorial proof, the principle of inclusion/exclusion, and generating functions.

MATH 3332: Probability Theory

3 Credit Hours

Prerequisite: MATH 2203

This course is an introduction to probability theory. Topics include counting techniques, discrete and continuous univariate and multivariate random variables, expectation, moment generating functions, and the Central Limit Theorem.
Notes: The MINITAB statistical software package is used.

MATH 3396: Cooperative Study

1-3 Credit Hours

Prerequisite: Approval of the coordinator of cooperative education/internship.

A supervised work experience program for a minimum of two academic semesters at a site in business, industry or government. For sophomore, junior or senior level students who wish to obtain successive on the job experience in conjunction with their academic training.

MATH 3398: Internship

1-9 Credit Hours

Prerequisite: Approval of major area committee and department chair.

This course is a supervised, credit-earning work experience of one academic semester with a previously approved business firm, private agency, or government agency.

MATH 3405: Probabilistic Foundations of Actuarial Science

3 Credit Hours

Prerequisite: MATH 2203 and MATH 3332

This course serves as a preparation for Exam P of the Society of Actuaries. Emphasis is on joint continuous distributions, moment generating function, transformations and probability tools to assess risk.