MATHEMATICS PROGRAMS

Actuarial Mathematics – Mission Statement

The Bryant Actuarial Mathematics program is designed to prepare students for success in the actuarial field. Our student-centered curriculum promotes academic excellence with a rigorous course of study that emphasizes critical thinking, problem solving, statistical analysis skills, and strong business acumen.

MAJOR IN ACTUARIAL MATHEMATICS OBJECTIVES:
Students who complete the Actuarial Mathematics major will:
- Demonstrate competence in the fundamental probability tools for assessing risk quantitatively.
- Demonstrate a basic understanding of the theory of interest, pension and insurance systems.
- Demonstrate competence in relevant statistical software.
- Demonstrate effective consulting skills (problem solving, oral and written presentations).

This Actuarial Mathematics major provides a foundation of analytical and communication skills that enables graduates to seek a career as an actuary or in actuarial related fields such as insurance, pensions, banking, and other financial service organizations. The combination of a strong mathematical foundation and a strong business and liberal arts background provides students with the necessary skills to succeed in these fields. Courses include advanced topics such as Interest Theory, Actuarial Mathematics, Advanced Probability and Statistics, and Pension Fundamentals.

Applied Mathematics And Statistics - Mission Statement:

The Bryant Applied Mathematics and Statistics program is designed to prepare students for success in an analytics position, particularly a position in the fields of applied statistics or applied analysis. Our student-centered curriculum promotes academic excellence with a rigorous course study that emphasizes critical thinking, problem solving, statistical analysis skills, knowledge of computer statistical software packages, and strong business acumen.

MAJOR IN APPLIED MATHEMATICS AND STATISTICS OBJECTIVES:
Students who complete the Applied Mathematics and Statistics program will:
- Demonstrate a mastery of multivariate statistics and data mining.
- Demonstrate competence in relevant statistical software.
- Demonstrate effective statistical consulting skills (problem solving, oral and written presentations).

The Bachelor of Science in Applied Mathematics and Statistics requires 10 courses of in-depth study in the field of mathematics, to complement the business and liberal arts core courses. The program provides students with the reasoning and problem-solving skills necessary to be successful in an array of industries. Mathematics and statistics are part of daily life, but they are also the foundation for a wide range of careers. Whether you want to analyze marketing data, set up the experimental design for clinical trials of a new drug, or work in government, the Bachelor of Science in Applied Mathematics and Statistics provides students a range of skills and broad knowledge required to solve real-world problems through the application of mathematical principles.

Students who major in Applied Mathematics and Statistics may also earn SAS-Bryant University Academic **Specialization in Data Mining certification**. Four courses are required for the certification:

MATH 455	SAS Programming and Applied Statistics	3
MATH 460	Applied Data Mining	3
MATH 461	Applied Multivariate Statistics	3
MATH 475	Applied Analytics Using SAS	3
or MATH 470	Statistical Design and Analysis of Experiments	

Actuarial Mathematics Concentration

Students, who may want to pursue a career as an actuary while keeping their options open by choosing a major in a different subject, can obtain a concentration in Actuarial Mathematics. The concentration is based on a strong calculus foundation and requires the completion of a two-semester course sequence in preparation for at least one preliminary actuarial exam. In addition, students are required to choose two actuarial electives, which can include courses that prepare them for a second preliminary actuarial exam. This is an 18-credit concentration only. Students must have a primary concentration in the College of Business or a major in the College of Arts and Sciences.

Applied Statistics Concentration

With an additional six credits (two courses) an Applied Statistics minor can achieve a concentration. This option requires many of the same courses as our Actuarial Mathematics major for the first two years. The concentration can be taken with either a strong calculus foundation as in the major or in a more applied mode for students who choose not to follow the calculus and calculus-based statistics courses. There are several applied statistics courses for such students. This is an 18-credit concentration only. Students must have a primary concentration in the College of Business or a major in the College of Arts and Sciences.

SAS-Bryant University Academic Specialization In Data Mining

This is a Statistical Software Program. The four SAS courses can satisfy requirements in our Applied Mathematics and Statistics Major, our Applied Statistics concentration and our Applied Statistics Minor.

Applied Statistics Minor

Many disciplines are dependent on the information provided by statistics. Through this course of study, students can deepen and extend their knowledge and skills in statistics and enhance their ability to solve more complex quantitative problems.

Mathematics Minor

Employers often seek graduates with mathematical and analytical skills. Students who desire a more in-depth understanding of mathematics may select this minor. All of the courses in this minor focus on problem solving. Many of the courses emphasize the use of technology and include various computer software programs that may not be covered in other courses.

Actuarial Mathematics
Applied Mathematics and Statistics

- Actuarial Mathematics Concentration
- Applied Statistics Concentration

- Applied Statistics Minor
- Math Minor