BACHELOR OF SCIENCE WITH A MAJOR IN APPLIED MATHEMATICS AND STATISTICS

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.

APPLIED MATHEMATICS AND STATISTICS LEARNING GOALS:

The Applied Mathematics and Statistics program prepares students for success in an analytics position, particularly a position in the fields of applied statistics or applied analytics by promoting the following learning goals:

- Coursework that prepares students with a strong foundation in theoretical calculus and statistics
- Coursework that allows the students a wide range of applied mathematical courses along with applied statistical courses
- Coursework that allows the student to study advanced statistical topics and complete the SAS Certification program
- Coursework that emphasizes strong computer skills for business applications.
- 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:

Bachelor of Science with an Applied Mathematics and Statistics Major Requirements:

General Education Requirements **** Applied Mathematics and Statistics Majors will take Math 121 instead of Math 11o and AM 230 instead of Math 201 to meet the General Education requirements.**

University Minor Requirements

Applied Mathematics and Statistics Major Requirements:

Required Courses:		
MATH 226	Linear Algebra	3
AM 230	Actuarial Statistics I ((Course can be used in place of MATH 201 in Gen Ed))	3
AM 231	Actuarial Statistics II	3
AM 332	Actuarial Statistics III	3
MATH 460	Applied Data Mining	3
MATH 461	Applied Multivariate Statistics	3
Programming Elective (2 of the following):		
MATH 354	Software Application for Mathematics	3
MATH 421	Statistical Analysis With R	3
MATH 455	SAS Programming and Applied Statistics	3
ISA 330	Programming for Data Science	3
Advanced Electives (3 of the following):		
MATH 228	Discrete Structures	3
MATH 409	Elementary Number Theory	3
MATH 470	Statistical Design and Analysis of Experiments	3
MATH 475	Applied Analytics Using SAS	3
MATH 488	Sports Statistics	3
MATH 490	Applied Mathematics and Statistics Capstone Seminar	3
MATH 497	Directed Study in Mathematics	3
At most only 1 of the following Advanced Electives:		
ECO 315	Econometrics	3
ECO 440	Machine Learning Applied to Economics	3
FIN 466	Data Analysis for Finance	3

A minimum of 33 credit hours is required for the major.

A minimum 122 credit hours required for graduation.

[1] Students who choose MATH 455, MATH 460, MATH 461, and either MATH 475 or MATH 470 may earn SAS® certification in data mining. To earn certification, a student must achieve at least a 'B' average in all of these courses with no grade lower than a 'C' in any one course.

[2] Include one Lab Science. One science course must be taken at the 300 or 400 level.