

BRYANT UNIVERSITY

APPLIED MATHEMATICS AND STATISTICS



WWW.BRYANT.EDU/AREASOFSTUDY

Mathematics and statistics are 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 with a major in Applied Mathematics and Statistics provides students with a range of skills and broad knowledge required to solve real-world problems through the application of mathematical principles. Students who have a primary concentration in the College of Business or a major in the College of Arts and Sciences may earn a second 18-credit concentration in Applied Statistics.

Ten courses of in-depth study in the field of mathematics complement business and liberal arts core courses. Students who major in Applied Mathematics and Statistics or earn a second concentration in Applied Statistics are also eligible to receive SAS® certification by taking four specific courses from their list of six electives (see back for details).

ENGAGED LEARNING + APPLIED SCHOLARSHIP

The College of Arts and Sciences and the College of Business at Bryant offer a rigorous academic curriculum, and a depth and breadth of study that encourages students to explore new fields and expand their thinking. In fact, the unique integration of business and liberal arts is a hallmark of a Bryant education – business students study liberal arts and liberal arts students study business. This foundation educates the *whole* student and enhances communication skills; leads to a more comprehensive understanding of global, cultural, and ethical issues; and develops critical thinking and decision-making skills.

Bryant’s comprehensive curriculum allows you to develop your intellectual passions and define a clear path for success.

DISTINGUISHED FACULTY

Bryant’s faculty are accomplished, passionate educators who are dedicated to helping you develop your intellectual potential. They continually enhance their capabilities through research, publishing, consulting, and community service, and bring this knowledge into the classroom. Our full-time tenured and tenure-track faculty come from prestigious academic programs and have demonstrated a deep commitment to your academic growth. Faculty and staff deliver an extraordinary level of personal guidance that has benefited generations of Bryant students.

FOR MORE INFORMATION

Learn more at www.bryant.edu/areasofstudy, or contact Mathematics Professor Alan Olinsky, Ph.D., program coordinator, at aolinsky@bryant.edu.

PRACTICAL EXPERIENCE

You will become fluent in several statistical software packages throughout your studies at Bryant. You will also build a strong background in mathematics, statistics, business, and the liberal arts and have access to many opportunities for internships at prestigious banking, insurance, and investment firms.

“Mathematics and statistics are essential for the proper running of government, central to decision making in industry, and an important component of modern educational curricula.”

Alan Olinsky, Ph.D., Professor, Department of Mathematics

PROFESSIONAL SUCCESS

Upon graduating, you will be equipped to enter careers in government agencies and consulting firms, or you could work as a financial analyst, statistical analyst, or financial consultant. You will also be well prepared to pursue a graduate degree in mathematics, statistics, or economics. A sampling of companies that recruit Bryant graduates include:

- Amica
- Bank of America
- Brown Brothers Harriman
- Ernst & Young
- Fidelity
- ING Financial Services
- PricewaterhouseCoopers
- State Street

DEGREE AND MAJOR REQUIREMENTS

APPLIED MATHEMATICS AND STATISTICS

BACHELOR OF SCIENCE WITH A MAJOR IN APPLIED MATHEMATICS AND STATISTICS

LIBERAL ARTS CORE REQUIREMENTS

Microeconomic Principles (ECO113)

Macroeconomic Principles (ECO114)

Liberal Arts Seminar (LCS151)

Introduction to Literary Studies (LCS121)

Calculus and Analytic Geometry I (MATH121)

Calculus and Analytic Geometry II (MATH122)

Linear Algebra (MATH226)

Two (2) Humanities Survey Courses

LIBERAL ARTS DISTRIBUTION – MODES OF THOUGHT*

Two (2) Social Science Modes of Thought

Historical Mode of Thought (Upper Division)

Literary Mode of Thought (Upper Division)

Cultural Mode of Thought

Two (2) Scientific Modes of Thought (Include one lab science)
(One science course must be taken at the 300 or 400 level)

FOUNDATIONS FOR LEARNING (FFL101)

BUSINESS ADMINISTRATION MINOR REQUIREMENTS

Introduction to Business (BUS101)

Principles of Financial Accounting (ACG203)

Fundamentals of Computer Information Systems (CIS201)

Financial Management (FIN201)

Management Principles and Practice (MGT200)

Foundations of Marketing Management (MKT201)

ELECTIVES – Subject to programmatic constraints, students may elect up to 12 additional credits from the College of Business.

APPLIED STATISTICS CONCENTRATION

The Applied Statistics concentration is an 18-credit concentration that is available only to students with a primary concentration in the College of Business or a major in the College of Arts and Sciences. 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.

REQUIRED APPLIED STATISTICS CONCENTRATION COURSES

Statistics II (MATH350) or Actuarial Statistics III (AM332)

Applied Data Mining (MATH360)

Applied Multivariate Statistics (MATH461)

Statistical Design and Analysis of Experiments (MATH470)

APPLIED MATHEMATICS AND STATISTICS MAJOR REQUIREMENTS

Actuarial Statistics I (AM230)

Actuarial Statistics II (AM231)

Capstone Seminar in Applied Mathematics and Statistics (MATH490)

MAJOR ELECTIVES

[Choose seven (7) of the following electives]

Discrete Structures (MATH228)

Actuarial Statistics III (AM332) or Statistics II (MATH350)

SAS Programming and Applied Statistics (MATH355)

Advanced Probability (AM333)

Mathematics of Finance, Insurance, and Pensions (AM341)

Software Applications in Mathematics (MATH354)

Applied Data Mining (MATH360)

Applied Analytics Using SAS (MATH370)

Elementary Number Theory (MATH409)

Statistical Design and Analysis of Experiments (MATH470)

Statistical and Mathematical Decision Making (MATH456)

Multivariate Statistics (MATH461)

Special Topics in Mathematics (MATH485)

Directed Study in Mathematics (MATH497)

Econometrics (ECO315)

*Modes of Thought requirements can be met by appropriate courses in the Applied Mathematics and Statistics major.

Students who major in Applied Mathematics and Statistics may also earn SAS certification in data mining by taking MATH355, MATH360, MATH461, and ONE of the following: MATH370 or MATH470.

APPLIED MATHEMATICS AND STATISTICS MAJORS WILL COMPLETE 122 CREDIT HOURS FOR GRADUATION

APPLIED STATISTICS CONCENTRATION ELECTIVES

[Choose two (2) of the following electives]

Econometrics (ECO315)

SAS Programming (MATH355)

Applied Analytics Using SAS (MATH370)

Advanced Probability (AM333)

Statistics and Decision Making (MATH456)

Special Topics in Mathematics (MATH485)

Directed Study in Mathematics (MATH497)

Students who concentrate in Applied Mathematics and Statistics may also earn SAS certification in data mining by taking MATH355, MATH360, MATH461, and ONE of the following: MATH370 or MATH470.