After Graduation

The analytical skills gained through the Mathematics and the Statistics program teach students a dynamic yet systematic way of thinking that opens the door to a wide range of career opportunities within various fields.

Students can enter different professions such as economics and investment banking, risk management and finance with actuarial firms or analysis and planning with statistical firms.

Many students also decide to continue their education in mathematics.

To learn more about the Mathematics & Statistics Department:

Web www.aub.edu.lb/fas/math
Email math@aub.edu.lb
**Sample Courses**

**MATH 210**  
*Introduction to Analysis*  
Examines the real numbers, completeness, sequences and series, basic topology of the real line, and compact sets.

**MATH 218**  
*Elementary Linear Algebra with Application*  
An introduction to linear algebra at a less theoretical level. The course examines systems of linear equations, Gaussian elimination, and subspaces and dimension.

**STAT 210**  
*Elementary Statistics for the Sciences*  
Populations, samples and sampling error, types of data, frequency distributions, and graphical displays of data.

Within the Mathematics department students have the option of choosing between six majors depending on their interests and their future goals. The program guides students in their training of quantitative reasoning, dealing with abstraction, and enhancing their sense of formalism.

**Curriculum**

Through the different fields of Algebra, Analysis, Geometry, Number Theory, Statistics and Applied Mathematics, students will acquire a sound balance between abstract generality and colorful individuality, and between qualitative and quantitative aspects of Mathematics.

Although there is no intrinsic difference between the BA and BS degrees, they help offer options and future career direction. The BS degree prepares students for graduate school in mathematics, while the BA prepares you for a second track close to mathematical sciences.

**Degrees in Pure and Applied Mathematics**

All students follow a mathematical analysis sequence. This begins through introductory courses in calculus and then advances to multivariable calculus. These courses form the building blocks to real analysis that is usually offered at later stages, such as a well-designed course on complex analysis. Analysis courses help students build a full theoretical understanding of the bigger mathematical picture.

Students also study the Algebra sequence. These courses progress from linear algebra to abstract algebra and number theory. The algebra sequence usually covers groups, rings, fields and Galois theory. Advanced topics are also offered in our graduate algebra courses.

Other courses offered to math majors include advanced courses in topology, geometry, number theory, partial differential equations, Fourier analysis, and numerical computing.

**Degrees in Statistics**

Students pursuing a degree in Statistics and Probability can follow a sequence of courses in statistical inference, regression, survey sampling, non-parametric statistics, probability and applied probability in addition to a course in simulation and Monte Carlo methods.

**Student Activities**

With the help of our graduate students, the Math Clinic serves as a tutoring center to our students. Students have the opportunity to prepare for their courses through guided tutoring.

“Mathematics as an expression of the human mind reflects the active will, the contemplative reason, and the desire for aesthetic perfection.” –Richard Courant