

# APPLIED STATISTICS

## MS IN APPLIED STATISTICS

Applied statisticians, biostatisticians, and data analysts are in high demand, both in the Chicago area and nationwide. Currently, more jobs exist than do qualified individuals. With only a small number of qualified candidates in the field, graduates of Loyola's MS in Applied Statistics program enjoy a wide array of career options. Also, whereas other statistics programs in the Chicago area tend to focus more on theoretical statistics, Loyola's emphasis on applied statistics gives students an advantage in many evidence-based fields such as the industrial, biomedical, marketing, educational, financial, and contract (CRO) sectors.

### MS IN APPLIED STATISTICS

Students choose between four specializations—Biostatistics, Environmental Statistics, General Applied Statistics, or Predictive Analytics/ Modeling—and generally complete the program in just three semesters of full-time study. The Biostatistics specialization covers non- and pre-clinical statistical methods, bioassay, statistical genetics, clinical trials, and bioinformatics. The Environmental Statistics specialization addresses Geographic Information Systems (GIS), spatial statistics, and environmetrics. The specialization in General Applied Statistics includes non-medical applications such as actuarial, commercial, data-mining, industrial, marketing, and national defense. The Predictive Modeling specialization focuses on big data analytics and modeling.

#### PROGRAM STRUCTURE

The degree offers part- and full-time enrollment  
*Average time to completion: 3 semesters (full time), 3–5 years (part time)*

#### INTERNSHIPS/RESEARCH OPPORTUNITIES

- Internships and research opportunities are offered as part of the program.
- A capstone experience is included in the curriculum.  
*Through the hands-on two-credit capstone Statistical Consulting course, cohorts of students work with academic, corporate, and/or research clients on issues of data-preparation, data-visualization and data-mining, statistical analysis, and communication, project write-up, and presentation. This practicum helps synthesize students' coursework in a real-world setting and prepares our graduates for the job search and performance on the job.*

#### ACADEMIC & STUDENT LIFE

Organizations and service opportunities are associated with the program.  
*Our students have the opportunity to provide pro-bono statistical assistance around campus through the Graduate Studies Advisory Council.*

## EXPECTATIONS AFTER GRADUATION

Although approximately 2-3 students per year do go on to pursue PhD studies, the majority (about 90%) find good-paying jobs in the fields of actuary and insurance, applied statistics, banking, bioinformatics, biostatistics, data science, predictive analytics, environmental statistics, financial analytics, market research and statistics, medical analytics, quantitative risk analysis, social and policy research, and statistical programming.

- Recent graduates are now employed at organizations such as AC Nielsen, Allstate, BCBS, Global Economics, Price Waterhouse, and Trustmark.
- Career services are available—learn more at [LUC.edu/career](http://LUC.edu/career).

## PROGRAM DISTINCTIONS

The program is ideally suited for students with an undergraduate degree in the quantitative and biological sciences, psychology, business, or education, as well as professionals working in industrial, pharmaceutical, research, market research, actuarial, financial, medical, and other related sectors. Our current students and graduates also include career changers.

Most programs in the U.S. take 2 full years to finish—our full-time students complete the program in just three semesters. Our first graduating class completed the program in 2008, and our job-placement record has been nearly 100% over the intervening years. As a result, we also have a large network of graduates who help recent graduates in their job search.

## FACULTY

Applied Statistics and Predictive Modeling faculty members are passionate about their teaching and dedicated to their research. Professional faculty members work at notable organizations such as Amylin Pharmaceuticals, BASF, Glaxo SmithKline, Goble and Associates, Janssen Pharmaceutica, Merck Pharma, Novartis, and the U.S. Government. Areas of faculty interest include Bayesian Statistics; Data Visualization; Environmental Statistics and Toxicology (Bioassay, Relative Potency and Synergy Assessment); Experimental and Optimal Design; Linear and Nonlinear Regression; Missing Data; Nonparametric Statistics; Predictive Analytics and Modeling; and Statistics Education.

## PREREQUISITES

Students are required to have taken two basic calculus classes and an introductory statistics course before entry into this MS program. Before applying, students lacking the needed background in calculus should contact the Graduate Program Director to discuss strategies to make up deficiencies.

## FINANCIAL AID

Begin the financial aid process by completing your Free Application for Federal Student Aid (FAFSA) at [fafsa.ed.gov](http://fafsa.ed.gov).

The Graduate School has limited funds available for financial assistance. Financial aid from Loyola's Financial Aid Office will not impact your ability to apply for financial aid through the Graduate School. To learn more about these financial aid opportunities, visit [LUC.edu/finaid/graduateschool](http://LUC.edu/finaid/graduateschool).

## LEARN MORE

APPLY

[gpem.LUC.edu/apply](http://gpem.LUC.edu/apply)

*For all application requirements and deadlines, please visit [LUC.edu/gpem/info](http://LUC.edu/gpem/info).*

CONTACT INFORMATION

*For further information about the academic program or to arrange a visit, please contact:*

Applied Statistics Program  
Loyola University Chicago  
1032 W. Sheridan Road  
Chicago, IL 60660

PHONE: 773.508.3558

ONLINE: [LUC.edu/appliedstats](http://LUC.edu/appliedstats)

*For questions regarding your application or the application process, please contact:*

Graduate and Professional  
Enrollment Management  
Loyola University Chicago  
820 N. Michigan Avenue  
Lewis Towers 1200  
Chicago, IL 60611

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