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PENNSTATE



World Campus

Online Programs in  
Applied Statistics

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*Basic statistical methods are increasingly important to many professions. Penn State's online programs in applied statistics were developed to provide access to working professionals who otherwise would not be able to return to campus. You can acquire a broad knowledge in a wide range of statistical application areas while gaining an employable skill set that is in high market demand.*

*Dr. James Rosenberger,  
Program Chair*

# Online Programs in Applied Statistics

Penn State's online Master of Applied Statistics and Graduate Certificate in Applied Statistics programs are designed to help you hone your research and data-analysis expertise. The skills you gain can be applied across many fields, including business, education, health, science, government, and technology—and can enable you to benefit your organization immediately while helping you advance your career.

## **Penn State World Campus Is Penn State—Online**

Our online applied statistics courses are the same academically challenging courses that we have taught on campus since 2001. Yet they provide you with the flexibility to study at times and locations convenient to your busy schedule. Your courses are taught by the same industry-respected faculty who lecture on campus. And they are committed to ensuring that you receive a top-quality academic experience online.

Once you successfully complete the requirements for the master's degree, you will receive a diploma that is identical to the one received by any Penn State student, with no mention of online or distance education.



*To me, there are numerous benefits of the applied statistics program offered through World Campus. First, the graduate course work is focused on applied statistics, which is very practical for everyday use. Understanding applied statistics can help you quickly develop your analytical skills, making you a more efficient and valuable employee. Second, I have been introduced to several statistical software packages that I had not previously worked with, allowing me to add numerous computer skills to my résumé.*

*Kristy Foley, Master of Applied Statistics graduate*

# Master of Applied Statistics

Our online 30-credit Master of Applied Statistics (MAS) program is a professional degree designed for quantitatively oriented students from various backgrounds, and is based on our successful and popular resident program. The MAS is also suitable for professionals who handle data in their current positions, and who are mainly interested in the practical side of statistics.



During your course work, you can gain experience using industry-standard software packages such as Minitab, R, and SAS; improve your data analysis proficiency; and even have the option to prepare for the SAS Base Programming Certification Exam.

The curriculum will provide you with training in statistics focused on developing data-analysis skills and exploring all core areas of applied statistics, without delving deeply into the mathematical statistics foundations.

You can complete the MAS program in as little as two years. Our goal is to provide you with broad knowledge in a wide range of statistical application areas, as well as the practical skills in statistics now so much in demand by government agencies, consulting firms, and industries.

[worldcampus.psu.edu/stat](http://worldcampus.psu.edu/stat)

*We have worked closely with representatives from business and industry to develop the applied statistics program, as statistical analysis has become an indispensable component of many industries.*

*Mosuk Chow, Senior Research Associate  
and Associate Professor*



# Master of Applied Statistics Curriculum

## Required Courses (15 credits)

**STAT 414**—Introduction to Probability Theory (3 credits)

**STAT 415**—Introduction to Mathematical Statistics (3 credits)

**STAT 501**—Regression Methods (3 credits)

**STAT 502**—Analysis of Variance and Design of Experiments (3 credits)

**STAT 580**—Statistical Consulting Practicum I (2 credits)

**STAT 581**—Statistical Consulting Practicum II (1 credit)

## Elective Courses (choose 15 credits)

**STAT 464**—Applied Nonparametric Statistics (3 credits)

**STAT 480**—Introduction to SAS\* (1 credit)

**STAT 481**—Intermediate SAS for Data Management\* (1 credit)

**STAT 482**—Advanced Topics in SAS\* (1 credit)

**STAT 483**—Statistical Programming in SAS\* (3 credits)

**STAT 484**—The R Statistical Programming Language\*\* (1 credit)

**STAT 485**—Intermediate R Statistical Programming Language\*\* (1 credit)

**STAT 500**—Applied Statistics (3 credits)

**STAT 503**—Design of Experiments (3 credits)

**STAT 504**—Analysis of Discrete Data (3 credits)

**STAT 505**—Applied Multivariate Statistical Analysis (3 credits)

**STAT 506**—Sampling Theory and Methods (3 credits)

**STAT 507**—Epidemiologic Research Methods (3 credits)

**STAT 508**—Applied Data Mining and Statistical Learning (3 credits)

**STAT 509**—Design and Analysis of Clinical Trials (3 credits)

**STAT 510**—Applied Time Series Analysis (3 credits)

**STAT 555**—Statistical Analysis of Genomics Data (3 credits)

*\*STAT 480, 481, and 482 are 5-week courses that can prepare you for the SAS Base Programming Certification Exam. STAT 483 is an equivalent 15-week course option.*

*\*\*STAT 484 and 485 are offered in 7.5-week accelerated format.*

## Begin Your Application Today

To apply to the master's degree program, visit [worldcampus.psu.edu/stat](http://worldcampus.psu.edu/stat) and click on "How to Apply." You will need to provide the following:

- GRE scores
- TOEFL or IELTS score, if applicable
- statement of purpose
- online application form and nonrefundable fee
- three references
- two official transcripts from each institution attended

# Graduate Certificate in Applied Statistics

Regardless of your professional background, obtaining a Graduate Certificate in Applied Statistics can help you improve your data-analytic skills. The certificate program consists of 12 credits of course work (6 required and 6 elective), allowing you to choose the statistics courses that meet your specific needs. You will also have the opportunity to learn elements of SAS, Minitab, and other statistical software packages.



The program blends practical and theoretical data analysis and can give you the tools and knowledge you need to handle and analyze data for your organization. The course curriculum is based on our resident program and was developed to give you a solid background in the fundamentals of statistics that extends beyond a software program's capabilities or features.

You can gain an excellent skill set that is useful in fields such as business, education, health, science, government, and technology. You can also acquire skills to apply immediately in your workplace, helping to make you a more valuable problem-solver for your organization. In addition, based on your acceptance into the master's degree program, the credits you earn in the certificate program may be applied to the master's program.

[worldcampus.psu.edu/statc](http://worldcampus.psu.edu/statc)



# Graduate Certificate in Applied Statistics Curriculum

## Required Courses (6 credits)

**STAT 500**—Applied Statistics (3 credits)

**STAT 501**—Regression Methods (3 credits)

From the following list, choose the courses that will help you best meet your professional development goals:

## Elective Courses (choose 6 credits)

**STAT 414**—Introduction to Probability Theory (3 credits)

**STAT 464**—Applied Nonparametric Statistics (3 credits)

**STAT 480**—Introduction to SAS\* (1 credit)

**STAT 481**—Intermediate SAS for Data Management\* (1 credit)

**STAT 482**—Advanced Topics in SAS\* (1 credit)

**STAT 483**—Statistical Programming in SAS\* (3 credits)

**STAT 484**—The R Statistical Programming Language\*\* (1 credit)

**STAT 485**—Intermediate R Statistical Programming Language\*\* (1 credit)

**STAT 502**—Analysis of Variance and Design of Experiments (3 credits)

**STAT 503**—Design of Experiments (3 credits)

**STAT 504**—Analysis of Discrete Data (3 credits)

**STAT 505**—Applied Multivariate Statistical Analysis (3 credits)

**STAT 506**—Sampling Theory and Methods (3 credits)

**STAT 507**—Epidemiologic Research Methods (3 credits)

**STAT 508**—Applied Data Mining and Statistical Learning (3 credits)

**STAT 509**—Design and Analysis of Clinical Trials (3 credits)

**STAT 510**—Applied Time Series Analysis (3 credits)

*\*STAT 480, 481, and 482 are 5-week courses that can prepare you for the SAS Base Programming Certification Exam. STAT 483 is an equivalent 15-week course option.*

*\*\*STAT 484 and 485 are offered in 7.5-week accelerated format.*

## Begin Your Application Today

To apply to the graduate certificate program:

- visit [worldcampus.psu.edu/statc](http://worldcampus.psu.edu/statc)
- click on “How to Apply”
- review the technical requirements and prerequisites
- complete the online Penn State Graduate School application

# For More Information

## Contact Us

pennstateonline@psu.edu

worldcampus.psu.edu

800-252-3592 (toll free within the United States)

814-865-5403 (local and international)

814-865-3290 Fax

## Student Services Hours

(inquiries and registration)

8:00 a.m.–9:30 p.m. ET Monday–Thursday

8:00 a.m.–5:00 p.m. ET Friday

Closed Saturday and Sunday

## Admissions Counseling Hours

8:00 a.m.–8:00 p.m. ET Monday–Thursday

8:00 a.m.–5:00 p.m. ET Friday

Closed Saturday and Sunday



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