APPLIED STATISTICS GRADUATE CREDIT CERTIFICATE PROGRAM

Person-in-Charge	Prabhani Kuruppumullage Don
Program Code	STATC_GCT
Campus(es)	World Campus

The graduate certificate in Applied Statistics helps quantitative professionals in a variety of fields become knowledgeable and skillful in applied statistics. The certificate was designed specifically for researchers working with statistical data who wish to advance their careers, and for those who seek career changes.

Effective Semester: Fall 2021
Expiration Semester: Summer 2026

Admission Requirements

Applicants apply for admission to the program via the Graduate School application for admission (https://gradschool.psu.edu/graduate-admissions/how-to-apply/). Requirements listed here are in addition to Graduate Council policies listed under GCAC-300 Admissions Policies (https://gradschool.psu.edu/graduate-education-policies/). International applicants may be required to satisfy an English proficiency requirement; see GCAC-305 Admission Requirements for International Students (https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-300/gcac-305-admission-requirements-international-students/) for more information.

Qualified applicants will have successfully completed one course in statistics and have knowledge of matrix and linear algebra.

Certificate Requirements

Requirements listed here are in addition to requirements listed in Graduate Council policy GCAC-212 Postbaccalaureate Credit Certificate Programs (https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-212-postbaccalaureate-credit-certificate-programs/).

Students earn the certificate by completing 12 credits of instructor-led online course work. Two 3-credit courses are required, and the remaining 6 credits are selected from a list of electives. Students who successfully complete the certificate earn 12 academic credits and receive the graduate certificate in Applied Statistics. Students subsequently admitted to the Department of Statistic's professional Master of Applied Statistics degree program may count up to 15 credits of certificate courses toward the M.A.S. degree, subject to restrictions outlined in GCAC-309 Transfer Credit (http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-300/transfer-credit/). Certificate students who wish to have certificate courses applied towards the Master of Applied Statistics must apply and be admitted to that degree program. Admission to the Applied Statistics graduate degree program is a separate step and is not guaranteed.

Code	Title	Credits
Required Courses		
STAT 500	Applied Statistics	3
STAT 501	Regression Methods	3
Electives		
Select at least 6 credits of the following:		6
STAT 414	Introduction to Probability Theory	
STAT 415	Introduction to Mathematical Statistics	
STAT 480	Introduction to SAS [1]	
STAT 481	Intermediate SAS for Data Management [1]	
STAT 482	Advanced Topics in SAS [1]	
STAT 483	Statistical Programming in SAS [1]	
STAT 484	The R Statistical Programing Language	
STAT 485	Intermediate R Statistical Programming Language	
STAT 487	Introduction to Statistical Analysis with Python	
STAT 502	Analysis of Variance and Design of Experiments	
STAT 503	Design of Experiments	
STAT 504	Analysis of Discrete Data	
STAT 505	Applied Multivariate Statistical Analysis	
STAT 506	Sampling Theory and Methods	
STAT 507	Epidemiologic Research Methods	
STAT 508	Applied Data Mining & Statistical Learning	
STAT 509	Design and Analysis of Clinical Trials	
STAT 510	Applied Time Series Analysis	
GEOG 483	Problem-Solving with GIS	
Total Credits		**12**

[1] Credits cannot be taken for both STAT 483 and STAT 480, STAT 481, or STAT 482.

Courses

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

Learning Outcomes

1. **Data analytic skills**: students will be able to demonstrate their ability to apply common statistical techniques such as regression and analysis to real world problems
2. **Interpretation of Statistical results**: students will be able to communicate data analysis results orally, in writing, and visually in the context of the problem to nonstatistical audience
3. **Statistical software**: students will be able to use statistical software such as R, SAS and Minitab to conduct data analysis
4. **Data visualization**: students will be able to select and create appropriate graphs and tables to visualize data effectively.

Contact

Campus	World Campus
Graduate Program Head	Prabhani Kuruppumullage Don
Director of Graduate Studies (DGS) or Professor-in-Charge (PIC)	Prabhani Kuruppumullage Don
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Program Website	View (http://www.worldcampus.psu.edu/degrees-and-certificates/applied-statistics-certificate/overview/)