

DATA ANALYTICS CERTIFICATE

McQuiad Hall, Room 212A

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shu.edu/academics/graduate-certificate-data-visualization-analysis

(<https://www.shu.edu/academics/graduate-certificate-data-visualization-analysis.html>)

Director: Manfred Minimair, Ph.D.

The program is offered by the Department of Mathematics and Computer Science and the Department of Psychology.

This program provides the skills and knowledge that data analysts need to succeed. The students learn how to analyze and visualize complex data with industry-standard applications, including Tableau, and programming languages such as R and Python. The program trains the students to communicate information clearly and effectively through graphic depictions that stimulate and encourage viewer engagement. The students practice preparing real-world data for storing in databases, analyzing data with statistics and machine-learning tools, and using visualization to explore data and present findings. The program is an online program. Students are not required to be present on campus.

Prerequisites

- Minimum undergraduate GPA: 2.75
- Graduate admission to Seton Hall University

Credits for Graduate Programs

The graduate certificate provides credits for two graduate programs in the College of Arts and Sciences, M.S. in Data Science and Masters in Public Administration. Nine credits count equally for all programs and the remaining credits depend on the statistics course.

- **M.S. in Data Science:** total of 12 credits towards the curriculum if DASC 6811 Statistics for Data Science is taken
- **Masters in Public Administration:** total of 12 credits towards the curriculum if PSMA 6002 Research Methods-Stat Analy or DASC 6811 Statistics for Data Science is taken

Graduate Curriculum: Certificate in Data Analytics

The updated curriculum consists of three required courses (9 credits) and one elective course (3 credits). The program is 100% online.

Code	Title	Hours
Required Courses		
Select three courses of following:		9
DASC 7000	Data Visualization	
DASC 6010	Data Mining	
	Statistics	
PSMA 6002	Research Methods-Stat Analy	
DASC 6811	Statistics for Data Science *	
BIOL 6113	Biostatistics	
GMHS 7500	Interm Statistical Methods I	
& GMHS 7508	and Interm Statistical Methods II	
HCAD 6002	Res Methods and Stat Analysis	

PSYC 6100 Res Design and Analy I
& PSYC 6200 and Res Design and Analy II **

Elective Course

Select one of the following courses:

3

DASC 7111 Text Mining

DASC 8211 Machine Learning ***

PSMA 7800 Ethical Challenges of Big Data

PSYC 7214 Cognition for Visualization

Total Hours

12

* For students who demonstrate the required competencies from undergraduate Calculus 1 and 2 and Statistics.

** For majors with these courses

*** For students who meet three conditions:

1. have earned at least a B- in DASC 6010 Data Mining,
2. have passed an undergraduate statistics course or have earned at least a B- in one of the required graduate statistics courses, and
3. have passed undergraduate Calculus I or demonstrate the required skills