

# GRADUATE CERTIFICATE IN DATA SCIENCE (STEM)

The explosion of data in today's world is rapidly shaping the landscape of our lives. This has led to an urgent need to process massive amount of information and obtain meaningful insights. Data scientists are trained to meet such challenges. Through a structured curriculum that provides foundational knowledge as well as application skills, students in the data science program learn how to confront the most complex problems across both government and private industry using data-driven decisions.

Data science is an emerging field that aims to draw actionable conclusions from data. It uses techniques and theories from the broader areas of statistics, computer science, and mathematics. Its applications are in many fields including business, engineering, natural sciences, social sciences, humanities, and health care.

Data Science, and the associated areas referred to as big data and data analytics, is a rapidly emerging technology field fueled by the dramatic growth in the amount of data involved in most areas of society. The 12-credit graduate certificate in data science program allows students to study fundamental ideas that underlie large data systems and document a knowledge base for work in data intensive jobs. Credit earned in the certificate program can be applied to the master of science in the field of data science degree program.

This is a STEM designated program.

Visit the Data Science Program website (<https://datasci.columbian.gwu.edu/>) for additional information.

## ADMISSIONS

Admission Fall - July 1  
deadlines\*:

Spring – November 1

Applications received after the above dates will be considered on a case-by-case basis.

Standardized GRE is not required.

Test Scores:

The Test of English as a Foreign Language (TOEFL), the academic International English Language Testing System (IELTS), or the PTE Academic is required of all applicants except those who hold a bachelor's, master's, or doctoral degree from a college or university in the United States or from an institution located in a country in which English is the official language, provided English was the language of instruction.

To be considered for admission, you must meet the following minimum English proficiency scores:

- Academic IELTS: an overall band score of 6.0 with no individual score below 5.0

- TOEFL: 80 on Internet-based test

- Duolingo: 110

- PTE Academic: 53

Recommendations: (1) letter of recommendation required:

Prior academic records: Transcripts are required from all colleges and universities attended, whether or not credit was earned, the program was completed, or the credit appears as transfer credit on another transcript. Unofficial transcripts from all colleges and universities attended must be uploaded to your online application. Official transcripts are required only of applicants who are offered admission.

If transcripts are in a language other than English, English language translations must be provided. The English translation alone should be uploaded into your application.

Statement of purpose: In an essay of 250 – 500 words, state your purpose in undertaking graduate study in your chosen field. Include your academic objectives, research interests, and career plans. Also discuss your related qualifications, including collegiate, professional, and community activities, and any other substantial accomplishments not already mentioned on the application.

International applicants only: Please follow this link - [https://columbian.gwu.edu/international-graduate-applicants/](https://columbian.gwu.edu/international-graduate-applicants) - to review the International Applicant Information carefully for details on required documents and English language requirements. Please note: international students who require a student visa from GW are not eligible to apply for admission to the program.

Supporting documents not submitted online should be mailed to:

Columbian College of Arts and Sciences, Office of Graduate Studies  
The George Washington University  
801 22nd Street NW, Phillips Hall 107  
Washington DC 20052

For additional information about the admissions process visit the Columbian College of Arts and Sciences Frequently Asked Questions (<https://columbian.gwu.edu/graduate-admissions-faq/>) page.

Contact:

askccas@gwu.edu  
202-994-6210 (phone)

Hours: 9:00 am to 5:00 pm, Monday through Friday

## REQUIREMENTS

| Code             | Title                           | Credits |
|------------------|---------------------------------|---------|
| <b>Required</b>  |                                 |         |
|                  | Two courses from the following: |         |
| DATS 6101        | Introduction to Data Science    |         |
| DATS 6102        | Data Warehousing                |         |
| DATS 6103        | Introduction to Data Mining     |         |
| <b>Electives</b> |                                 |         |

Two additional DATS courses numbered 6000 or above.

## COMBINED PROGRAMS

### Combined programs

- Dual Master of Public Policy and Graduate Certificate in data science (<https://bulletin.gwu.edu/arts-sciences/public-policy-administration/dual-mpp-and-data-science-gc/>)
- Dual Master of Science in the field of statistics and Graduate Certificate in data science (<https://bulletin.gwu.edu/arts-sciences/statistics/dual-ms-gc-data-science/>)
- Dual Master of Science in the field of applied economics and Graduate Certificate in data science (<https://bulletin.gwu.edu/arts-sciences/economics/dual-ms-applied-economics-gc-data-science/>)