

# APPLIED AND COMPUTATIONAL MATHEMATICS, GRADUATE CERTIFICATE

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## Admission Requirements

Applicants who are interested in taking graduate-level courses, but not necessarily interested in pursuing a full master's degree at the current time are eligible for the Graduate Certificate in Applied and Computational Mathematics.

Applicants must meet the general admission requirements (<https://e-catalogue.jhu.edu/engineering/engineering-professionals/admission-requirements/>) that pertain to all graduate study.

- Additionally, your prior education must include the following courses: at least single variable and multivariable calculus (sometimes called calculus I, II, and III) and at least one mathematics course beyond multivariate calculus (such as advanced calculus, differential equations, or linear algebra); and at least one semester/term (or equivalent employment-based proficiency) in a programming language (e.g., C, C++, FORTRAN, Java, Python, R, or MATLAB).
- Applicants whose prior education does not include the courses listed above, may still enroll under a provisional status, followed by full admission once the student has completed the missing courses. Missing courses may be completed with Johns Hopkins Engineering or, with approval, at another regionally accredited institution.
- A detailed work résumé must be submitted.
- A statement of purpose essay must also be submitted. The essay should be 350–450 words in length and address why the student is interested in graduate study in applied mathematics at JHU and how this relates to the student's subsequent career goals.
- When reviewing an application, the student's academic and professional background will be considered.

If the student should decide to pursue the full master's degree, all courses used to fulfill the requirements of the ACM graduate certificate will apply to the master's degree provided they meet program requirements and fall within a five-year time limit.

## Program Requirements

1. Students must complete four courses within five years.
2. At least one of the following three courses must be completed: EN.625.601 Real Analysis, EN.625.603 Statistical Methods and Data Analysis, or EN.625.609 Matrix Theory.
3. The other three courses may be taken from the remaining graduate-level courses in the Applied and Computational Mathematics program numbered 625.600–625.799. Course selections at the 800-level or outside of ACM are subject to advisor approval.
4. A maximum of one independent study course may be applied toward the graduate certificate.