



School of Engineering

ONLINE POST-BACCALAUREATE CERTIFICATE IN COMPUTER SCIENCE



PROGRAM OVERVIEW

The online Post-Baccalaureate Certificate in Computer Science program at Tufts University is designed to provide you with foundational knowledge and skills development in data structures, algorithms, hardware, and systems, so you can begin a new career in technology. Our program offers two tracks, incorporating a real-world focus on the application of computer science. Our certificate track gives students a solid foundation in the field and prepares them for more advanced training, while our master's track is for students with prior programming experience who are ready to pursue our online MS in Computer Science program.

LEARNING OUTCOMES

Online Post-Baccalaureate graduates will be prepared to:

- **Write reliable and efficient programs** in high-level language.
- **Employ a range of proof techniques and mathematical formalisms** to analyze computational problems.
- **Find and fix security flaws** in programs.
- **Provide reasoning** about the semantics and structure of programming languages.
- **Prove important properties** of fundamental algorithms and data structures.
- **Employ machine learning models** to find complex patterns in data sets.
- **Develop complex software**, following best practices and industry standards.

ABOUT THE TUFTS SCHOOL OF ENGINEERING

Tufts School of Engineering is dedicated to educating the next generation of leaders and inspiring new technologies and innovations for the betterment of humanity. Since offering our first engineering courses and degrees in 1865, Tufts University has grown to house a network of 100,000+ alumni working to create a more equitable world by educating our students to become principled leaders and innovators of tomorrow. We provide students with the tools necessary to advance their careers and become industry leaders.



QUICK FACTS

100% Online

PROGRAM FORMAT

7-23

CREDIT HOURS

2

PROGRAM TRACKS

Fall, Spring, Summer

START DATES

No GRE/GMAT Required*

*GRE scores are required for students who do not have an undergraduate degree from an accredited U.S. or Canadian institution.

INTERDISCIPLINARY CURRICULUM

Our curriculum focuses on developing core knowledge and skills in programming and mathematical proofs through programming projects and problem sets. Students will develop an individualized curriculum plan with an adviser based on their professional goals and academic history.*

CERTIFICATE TRACK

Required Courses:

Data Structures

Discrete Mathematics

Students may select two of the following:

Programming Languages

Algorithms

Computation Theory

Students may select one of the following:

Operating Systems

Database Systems

Introduction to Security

Software Engineering

Introduction to
Machine Learning

*The master's track requires the same courses as the certificate track. After successfully completing the certificate courses, master's track students will transition into the online Master of Science in Computer Science program.

APPLICATION MATERIALS

Transcripts from each institution where you earned credit toward an undergraduate, graduate, or professional degree. You may provide unofficial transcripts to apply, but official transcripts are required upon program admission.

Resume or CV that highlights your work experience, scholastic achievements, and relevant extracurricular activities.

Personal statement detailing your interest in computer science and pursuing our program.

One or three letters of recommendation from individuals who can provide a candid and honest assessment of your academic background or professional work experience and convey your abilities and character. The certificate track requires one letter while the master's track requires three letters.

\$85 application fee (non-refundable)

Digital portfolio (optional) including a video presentation of your own design, product, or conducted research to demonstrate your interests and skill sets.

CAREER OUTLOOK

Prospective roles for candidates who continue on and complete the online MS in Computer Science program include:

JOB TITLE	AVERAGE SALARY
Principal Software Engineer	\$149,000
Senior Product Manager	\$144,000
Information Security Officer	\$134,000
Solutions Architect	\$128,000
Data Scientist	\$100,000
Test/Quality Assurance Engineer	\$90,000
Software Developer	\$86,000

Source: Payscale (February 2022). All figures are rounded to the nearest thousand.



READY TO LEARN MORE?

Contact our enrollment team via [email](#) or by calling [617-627-5760](tel:617-627-5760) to discuss our program, learn about admissions requirements, and get your questions answered.

START YOUR APPLICATION

