Programs of Study

The Masters Program in Computer Science (MPCS) offers a comprehensive and professionally-oriented computer science education that combines the foundations of computer science with the applied and in-demand skills necessary for today’s careers in technology.

The MPCS offers four programs of study to accommodate students with a wide range of backgrounds and interests:

**MS in Computer Science Program**

This program is designed for students trying to extend their computer science education and experience. Within this program students can elect to enroll in either the 9-course or 12-course MS in CS.

**9-Course MS in Computer Science Program**

› The 9-course Masters in Computer Science Program provides a balance between foundations in CS and the skills necessary for technology careers. Full-time students are able to complete the program in 9 months and part-time students can complete the program in as few as 15 months.

› Students will complete five courses in the following core areas:
  - Algorithms
  - Programming
  - Computer Systems, Networks and Architectures

› In addition, students will have the opportunity to take four elective courses in areas such as Big Data, High Performance Computing, Web Development, Machine Learning, App Development, Cloud Computing, Computer and Network Security, Data Analysis, and Bioinformatics.

**12-Course MS in Computer Science Specialization Program**

› The 12-course program is designed for students seeking further specialization that will build a strong professional skill set in a specific focus area. This program also offers the opportunity for an internship or research project.

› Degree required internships give students the opportunity to put the skills they are learning in the classroom into practice in the workplace. This will help build student resumes and provide real-life workplace or research experience. Students can seek internship opportunities both internal and external to the University.

› Students will complete six core courses, three electives courses, and three concentration courses in the areas of:
  - Software Engineering
  - High Performance Computing
  - Data Analytics
  - Mobile Computing
**MS in Computer Science (with Immersion)**

This program is designed for individuals without a background in computer science, programming, or discrete math. This program is offered in the Summer and Winter quarters.

- In this program, students complete two CS Immersion courses before beginning core classes in the MS in CS program.
  - Concepts of Programming
  - Math for Computer Science: Discrete Math
- These fast-paced, rigorous, introductory classes will provide solid fundamentals in programming and discrete math to prepare students for classes in the MS in Computer Science program.
- Successful completion of the CS Immersion Program allows students to directly enter the MS in Computer Science program. Students can choose from the 9-Course MS in Computer Science Program or the 12-Course MS in Computer Science Specialization Program.

**Pre-Doctoral MS in Computer Science**

This program is designed for those wanting to pursue research.

- 12-course research-oriented masters program for students who want to explore computer science research. The Pre-Doc program is for full-time students with a CS background starting in the Autumn quarter.
- Students in the Pre-Doc program will work closely with a CS faculty member to strengthen their research background.
- Please visit our site for a complete list of Pre-Doctoral faculty advisors and their research interests.

**Joint MBA/MPCS Program**

This program is for those looking to merge business and technology.

- The MBA/MPCS program is a joint program allowing students to earn both an MBA from the Booth School of Business and an MS in Computer Science from the Masters Program in Computer Science (MPCS). This joint program is intended to offer students the opportunity to combine a business and technology education leading to opportunities in technology product management, FinTech and entrepreneurship. Students must be admitted to BOTH the Booth MBA program and the Masters Program in Computer Science to participate in this joint program. Admissions are handled separately by each program.
- The MBA/MS degree consists of 21 – 23 total courses worth 100-units each.
- Booth = 1400 units of Booth only courses (plus LEAD which is a zero unit course)
  - 300 units of credit for Foundations (Financial Accounting, Microeconomics, and Statistics)
  - 600 (of 700) units of credit in the Functions, Management, and Business Environment
  - 500 units of credit in Electives
- Masters Program in Computer Science = 700-900 units (7-9 classes) of MPCS only courses
  - 2 prerequisite classes (programming and math) if needed
  - 4 Core courses including 1 Programming, 1 Algorithms and 2 Systems classes
  - 3 MPCS Electives