The Masters Program in Computer Science (MPCS) at the University of Chicago is a professionally-oriented Masters in Computer Science degree in applied computing. The program combines the foundations of computer science with the applied skills necessary for careers in software engineering, mobile computing, data analytics, and high-performance computing. *This is a course-based masters program with no research component, no advisors are assigned, and a thesis is not required.*

The MPCS offers a 9-course program of study which includes core classes in Programming, Algorithms and Computer Systems, Networks and Architectures, and elective coursework in applied technologies.

Students in the 9-course program will have the following degree requirements:

1. **Complete 5 core courses**
   - (1) Algorithms course
   - (1) Programming course
   - (3) Computer Systems, Networks and Architectures courses

Following are the courses that satisfy each core area:

**Algorithms:**
- MPCS 55001 Algorithms
- MPCS 55003 Intermediate Algorithms
- MPCS 55005 Advanced Algorithms

**Programming:**
- MPCS 51036 Java Programming
- MPCS 51040 C Programming
- MPCS 51042 Python Programming
- MPCS 51043 Swift Programming
- MPCS 51100 Advanced Programming

**Computer Systems, Networks and Architectures:**
- MPCS 51020 Computer Architecture
- MPCS 51300 Compilers
- MPCS 51400 Functional Programming
- MPCS 52011 Introduction to Computer Systems
- MPCS 52030 Operating Systems
- MPCS 52040 Distributed Systems
- MPCS 53001 Databases
- MPCS 53003 Advanced Databases
- MPCS 54001 Networks
2. Complete four (4) elective courses

**Software Engineering**
- MPCS 51030 iOS Application Development
- MPCS 51031 Android Application Development
- MPCS 51044 C++ for Advanced Programmers
- MPCS 51045 Advanced C++
- MPCS 51050 OO Architecture
- MPCS 51200 Introduction to Software Engineering
- MPCS 51220 Applied Software Engineering
- MPCS 51221 Applied Software Engineering II
- MPCS 51230 User Interface and User Experience Design
- MPCS 51240 Product Management
- MPCS 51410 Object Oriented Programming
- MPCS 52553 Web Development
- MPCS 52554 Advanced Web Development

**High Performance Computing**
- MPCS 51083 Cloud Computing
- MPCS 51087 High Performance Computing
- MPCS 55005 Advanced Algorithms
- MPCS 58001 Numerical Methods
- MPCS 58020 Time Series Analysis

**Data Analytics**
- MPCS 53003 Advanced Databases
- MPCS 53013 Big Data
- MPCS 53110 Foundations of Computational Data Analysis
- MPCS 53111 Machine Learning
- MPCS 53112 Advanced Data Analytics
- MPCS 53120 Applied Data Analysis
- MPCS 56420 Bioinformatics for Computer Scientists

**Mobile Computing**
- MPCS 51030 iOS Application Development
- MPCS 51031 Android Application Development
- MPCS 51032 Advanced iOS
- MPCS 51033 Backends for Mobile Applications
- MPCS 51034 React Native Application Development
- MPCS 51230 User Interface and User Experience Design
Other

- MPCS 51026 Trading Systems Design
- MPCS 51250 Entrepreneurship for Technology
- MPCS 56515 Computer and Network Security
- MPCS 56600 Introduction to Blockchain

The 9-course Masters in Computer Science program can be completed full time in 9 months. Students who begin in the Autumn quarter 2019 will take three classes per quarter for the Autumn, Winter and Spring quarters. They will graduate in June 2020.

Please let me know if you have any questions about the program, the degree or the curriculum.

Sincerely,

Borja Sotomayor
Director, Masters Program in Computer Science
Senior Lecturer, Department of Computer Science