# COMPUTER SCIENCE AND MATHEMATICS

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Computer Science and Mathematics is an interdepartmental major for students who are interested in computational mathematics, the use of computers in mathematics, mathematical aspects of algorithm design and analysis, and theoretical foundations of computing.

## REQUIREMENTS OF THE MAJOR

The major requires fourteen term courses as well as a senior project. Six of the fourteen courses must be in computer science: CPSC 201; CPSC 223; CPSC 323; and CPSC 365 or 366; one advanced course with significant mathematical content; and one additional advanced course other than CPSC 490. Only one of CPSC 365 and 366 may be taken for major credit. The remaining eight courses must be in mathematics: MATH 120, either MATH 225 or 226, MATH 244, and five additional term courses numbered above MATH 200 other than MATH 470 or MATH 480 through MATH 489.

Students who completed multivariable calculus during high school may consult the DUSs about replacing MATH 120 with a higher-level mathematics course.

A course must be listed with a MATH number to count toward the mathematics requirements and must be listed with a CPSC number to count toward the computer science requirements — substitutions from other departments are not allowed.

**Credit/D/Fail** Courses taken Credit/D/Fail may not be counted toward the major.

## SENIOR REQUIREMENT

The senior requirement is a project or an essay on a topic acceptable to both departments. Students typically enroll in CPSC 490 or MATH 475. Permission must be obtained in writing from the director of undergraduate studies (DUS) of both departments before embarking on the project or the essay.

## ADVISING

The entire program of each student majoring in Computer Science and Mathematics must be approved by the DUS in each department.

## SUMMARY OF MAJOR REQUIREMENTS

**Prerequisites** None

**Number of courses** 14 term courses, 6 in computer science and 8 in math (not incl senior req)

**Specific courses required** CPSC 201; CPSC 223; CPSC 323; CPSC 365 or 366; MATH 120; MATH 225 or 226; MATH 244

**Distribution of courses** 2 addtl courses in computer science with 1 adv course with significant mathematical content and 1 adv course other than CPSC 490; 5 addtl courses in math numbered above 200 (may not include MATH 470, or MATH 480 through MATH 489)

**Senior requirement** CPSC 490 or MATH 475