MATHEMATICS AND COMPUTER SCIENCE

For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: academic@cs.illinois.edu or math@illinois.edu

Degree title: Bachelor of Science in Liberal Arts and Sciences

Minimum required major and supporting course work normally equates to 68-70 hours.

General education: Students must complete the Campus General Education requirements.

Minimum hours required for graduation: 120 hours

Departmental distinction: To graduate with distinction requires a specified minimum grade point average in all Computer Science and Mathematics courses listed below. A GPA of 3.25 is required for Distinction, 3.5 for High Distinction, and 3.75 for Highest Distinction. In addition, students must complete at least three semester hours of additional Computer Science or Mathematics courses selected from the following:

- CS 196 Freshman Honors 1
- CS 296 Honors Course 1
- CS 397 Individual Study 1-3
- CS 492 Senior Project I 3
- CS 493 Senior Project II, ACP 3
- CS 499 Senior Thesis 3
- any CS course numbered 411 or higher
- MATH 412 Graph Theory 3,4
- MATH 414 Mathematical Logic 3,4
- MATH 417 Intro to Abstract Algebra 3,4
- MATH 418 Intro to Abstract Algebra II 3,4
- MATH 423 Differential Geometry 3,4
- MATH 432 Set Theory and Topology 3,4
- MATH 448 Complex Variables 3,4
- MATH 482 Linear Programming 3,4
- MATH 484 Nonlinear Programming 3,4
- MATH 496 Honors Seminar 3
- CS/MATH 357 Numerical Methods I 3
- CS 373 Theory of Computation 3
- CS 457 Numerical Methods II 3
- MATH 415 Applied Linear Algebra 3 OR 4
- or MATH 416 Abstract Linear Algebra
- 400-level mathematics and computer science requirements: 21-22

Students must select at least seven 400-level mathematics and computer science courses, including one from each of the following groups:

GROUP I
- MATH 461 Probability Theory
- STAT 400/ MATH 463
- Group II
- MATH 412 Graph Theory
- MATH 417 Intro to Abstract Algebra
- GROUP III
- MATH 441 Differential Equations
- MATH 446 Applied Complex Variables
- MATH 484 Nonlinear Programming
- GROUP IV
- MATH 444 Elementary Real Analysis
- MATH 447 Real Variables
- GROUP V
- MATH 414 Mathematical Logic
- CS/MATH 473 Fundamental Algorithms
- CS/MATH 475 Formal Models of Computation
- GROUP VI
- CS 421 Progrmg Languages & Compilers
- CS 423 Operating Systems Design

NOTE: A student taking a cross-listed course in this major may designate it as either mathematics or computer science.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

All foreign language requirements must be satisfied.