Department of Computer Science
College of Science and Mathematics
Montclair State University, Richardson Hall

MONTCLAIR STATE UNIVERSITY

# Computer Science Major Program (B.S. in CS)
## Effective Fall 2014

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| **I. GENERAL EDUCATION REQUIREMENTS** | 32 |
| A. New Student Seminar | 1 |
| C. Communications | |
| College Writing I & II | 6 |
| Communications | 3 |
| D. Fine and Performing Arts | 3 |
| F. Humanities | |
| World Literature / General Humanities | 3 |
| Philosophy / Religion | 3 |
| G. Computer Science (satisfied by taking CSIT 111) | |
| H. Mathematics (satisfied by taking MATH 122) | |
| I. Natural / Physical Sciences (satisfied by courses taken in 3A) | |
| J. Physical Education | 1 |
| K. Social Science | |
| American / European History | 3 |
| Non Western Culture | 3 |
| Social Science | 3 |
| L. General Education Elective | 3 |

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| **II. WORLD LANGUAGES AND WORLD CULTURES** | 3-9 |
| A. World Languages | 3-6 |
| B. Multicultural Awareness | 0-3 |

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| **III. MAJOR AND COLLATERAL COURSES** | 72 |
| A. Collateral Courses – one of the following sequences | 12 |
| A1.PHYS 191, 192 | 8 |
| A2. CHEM 120, 121 | 8 |
| A3. BIOL 112, 113, 213 | 12 |

Students who take sequence A1 or A2 must take at least an additional 4 credits from the following list of courses: PHYS 210, PHYS 240, PHYS 242, PHYS 245, PHYS 247, PHYS 280, CHEM 230, CHEM 231, and CHEM 232

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| B. REQUIRED MATHEMATICS COURSES | 18 |
| MATH 122 Calculus I | 4 |
| MATH 221 Calculus II | 4 |
| MATH 235 Introduction to Linear Algebra | 4 |
| STAT 401 Applied Statistics for the Sciences | 3 |
| CSIT 270 Discrete Mathematical Structures | 3 |
| C. REQUIRED COMPUTER SCIENCE COURSES-CORE | 24 |
| CSIT 104 Computational Concepts | 3 |
| CSIT 111 Fundamentals of Programming I | 3 |
| CSIT 112 Fundamentals of Programming II | 3 |
| CSIT 212 Data Structures and Algorithms | 3 |
| CSIT 230 Computer Systems | 3 |
| CSIT 379 Computer Science Theory | 3 |
| CSIT 315 Software Engineering I | 3 |
| CSIT 415 Software Engineering II | 3 |
| D. REQUIRED COMPUTER SCIENCE ADVANCED COURSES | 12 |
| CSIT 340 Computer Networks | 3 |
| CSIT 355 Database Systems | 3 |
| CSIT 313 Foundations of Programming Languages | 3 |
| CSIT 345 Operating Systems | |
| E. COMPUTER SCIENCE ELECTIVES | 6 |
| Any two CSIT courses selected as Electives | |

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| **IV. FREE ELECTIVE CREDITS** | 7-13 |
| **BS in CS Degree Total** | 120 |