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Accelerated Master of Science in Computer Science

School of Informatics, Computing, and Cyber Systems

Accelerated Program: BS Computer Science – MS Computer Science (non-thesis; 2021-2022 catalog)

**Overview**

*This plan includes 12 units that are used to complete both the undergraduate and the graduate requirements:*

*6 at the undergraduate level and 6 at the graduate level. Students must receive a grade of “B” or higher in this coursework used towards both degrees.*

**Undergraduate requirements for students in the accelerated program**

The following 97 units of core courses, maintaining a 3.0 GPA overall and 3.0 in major (CS) courses:

* Pre-professional Requirements (at least 33 units)
	+ Basic Science courses, select one of the following blocks (7-8 units):
		- PHY 161 and PHY 262 (7 units)
		- CHM 151, CHM 151L, and CHM 152 (8 units)
		- BIO 181, BIO 181L, BIO 182, and BIO 182L (8 units)
	+ MAT 136, MAT 137, MAT 226, and (MAT 316 or MAT 362) (14 units)
	+ CENE 225, STA 270, or STA 275 (3 units)
	+ Technical electives at the 200-level or above, from science and engineering disciplines: AST, BIO, GLG, GSP, INF, CENE (excluding CENE 225), CHM, CS, EE, MAT, ME, STA (excluding STA 270 or STA 275), and PHY. (9 units).
* Professional Requirements: CS major electives (58 units)
	+ Core Courses: CS 105, CS 126, CS 126L, CS 136, CS 136L, CS 200, CS 205, CS 212, CS 249, CS 305, CS 315, CS 386, CS 396, CS 421, CS 476 and CS 480 (37 units)
	+ CS 486C (4 units)
	+ CS electives at the 300-level or above (6 units)
	+ CS electives at the 400-level (6 units)
	+ CS electives at the 500-level (6 units)

**Graduate requirements for students in the accelerated program**

Coursework: the following 30 units

* Statistics and Mathematics (3 units)
	+ Any graduate level (500 and above) STA or MAT prefixed course, or INF 511
* Project based learning (6 units)
	+ CS 685 or CS 697
* CS electives (21 units)
	+ CS electives at the 500-level and above (15 units)
	+ CS electives at the 400-level (6 units)

**Suggested Progression Plan**

^ Denotes undergraduate course required for the undergraduate degree

% Denotes a course that applies towards both degrees

\* Denotes graduate course required for the graduate degree

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| **Fall Year 1 (Term 1: 15 units)** | **Spring Year 1 (Term 2: 15 units)** |
| ^CS 126 Computer Science I | ^CS 136 Computer Science II |
| ^CS 126L Computer Science I Lab | ^CS 136L Computer Science II Lab |
| ^MAT 136 Calculus I | ^CS 200 Introduction to Computer Organization |
| ^CS 105 Computing Tools I | ^MAT 137 Calculus II |
| ^Liberal Studies and/or Diversity | ^Foundation English |
| ^Liberal Studies and/or Diversity |  |

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| **Fall Year 2 (Term 3: 17-18 units)** | **Spring Year 2 (Term 4: 16 units)** |
| ^CS 249 Data Structures | ^CS 386 Software Engineering |
| ^MAT 226 Discrete Mathematics | ^Undergraduate CS major elective (300-level CS course) |
| ^CS 212 Web Programming I | ^Basic Science course  |
| ^CS 205 Computing Tools II | ^CENE 225, STA 270, or STA 275 |
| ^Basic Science course  | ^Liberal Studies and/or Diversity |
| ^Liberal Studies and/or Diversity |  |

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| **Fall Year 3 (Term 5: 16 units)** | **Spring Year 3 (Term 6: 15 units)** |
| ^EGR 333W Technology and Society | ^CS 396 Principles of Languages |
| ^CS 315 Automata Theory | ^CS 480 Operating Systems |
| ^CS 305 Computing Tools III | ^CS Technical elective (200-level or above science course) |
| ^CS Technical elective (200-level or above science course) | ^MAT 316 or MAT 362 |
| ^CS Technical elective (200-level or above science course) | ^Liberal Studies and/or Diversity |
| ^General Elective Course |  |

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| **Fall Year 4 (Term 7: 14 units)** | **Spring Year 4 (Term 8: 13 units - graduate with BS)** |
| ^CS 421 Algorithms | ^CS 486C Capstone Experience |
| ^CS 476 Requirements Engineering | %Graduate CS elective (500-level CS course) |
| %Graduate CS elective (500-level CS course) | %CS Major Elective (400-level CS course) |
| %CS Major Elective (400-level CS course) | ^Liberal Studies and/or Diversity |
| ^CS Major Elective (300-level CS course) |  |

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| **Fall Year 5 (Term 9: 9 units)** | **Spring Year 5 (Term 10: 9 units - graduate with MS)** |
| \* INF 511, 500-level STA course, or 500-level MAT course | \* CS 685 or CS 697 |
| \* CS 685 or CS 697 | \* Graduate CS elective (500- or 600-level CS course) |
| \* Graduate CS elective (500- or 600-level CS course) | \* Graduate CS elective (500- or 600-level CS course) |