Computer Science Electives (with prerequisites in parentheses)

A student must take 16 credits from the list of electives below with no more than 4 coming from independent study or research.

- CISS 346 Secure Software Development (CISS 247 or CSCI 247)
- CISS 421 Computer Forensics (CISS 461 or CSCI 461)
- CSCI 321 Game Programming (CSCI 241)
- CSCI 342 Web Scripting (CSCI 330)
- CSCI 351 Windows Software Development (CSCI 345)
- CSCI 372 Robotics: Applications of Artificial Intelligence (Permission of Instructor)
- CSCI 380 Numerical Computations (CSCI 241, MATH 204)
- CSCI 400 Independent Study (Permission of Instructor)
- CSCI 401 Automata and Formal Language Theory (CSCI 301)
- CSCI 402 Artificial Intelligence (CSCI 301)
- CSCI 404 Natural Language Processing (CSCI 301)
- CSCI 410 Programming Languages (CSCI 301)
- CSCI 412 Mobile Device Programming (CSCI 330, CSCI 367)
- CSCI 415 Parallel Computation (CSCI 305, CSCI 347, CSCI 367)
- CSCI 424 Social Network Analysis (CSCI 241, MATH 204, MATH 341)
- CSCI 426 Principles of Human Centered Technology Design (CSCI major status or permission of instructor)
- CSCI 430 Database Theory (CSCI 301, CSCI 330)
- CSCI 436 Technology for Social Good (CSCI major status or permission of instructor)
- CSCI 442 Advanced Web Programming in Java (CSCI 342, CSCI 351 recommended)
- CSCI 450 Compilers (CSCI 301)
- CSCI 461 Computer Security (CSCI 301, CSCI 367 recommended)
- CSCI 462 OS Device Drivers (CSCI 460)
- CSCI 463 Cyber Defense (Permission of Instructor)
- CSCI 467 Computer Networks II (CSCI 367)
- CSCI 471 Machine Learning Algorithms (CSCI 241, MATH 341, MATH 204 recommended, MATH 224 recommended)
- CSCI 474 Bioinformatics (Permission of Instructor)
- CSCI 477 Data Mining (CSCI 241, MATH 204, MATH 341)
- CSCI 479 Spoken Language Processing (CSCI 301, CSCI 305 and CSCI 341) (or Permission of Instructor)
- CSCI 480 Computer Graphics (CSCI 241, MATH 204)
- CSCI 496 Research (Permission of Instructor)
- CSCI 497 This course number is reserved for new topics. It will always have a single letter suffix such as 497D. (Prereqs TBA)
- M/CS 335 Linear Optimization (MATH 204, CSCI 141)
- M/CS 375 Numerical Computation (MATH 204, CSCI 141)
- M/CS 435 Nonlinear Optimization (MATH 204, 224, CSCI 141)
- M/CS 475 Numerical Analysis (MATH 224, M/CS 375)
- M/CS 478 Fundamentals of Cryptography (MATH 204, MATH 341 and one of: CSCI 140, CSCI 141, MATH 307)