

## List of Computer Science major (CSC-prefixed) courses and significant attributes

(Courses **required** within the Computer Science major are indicated in **bold** typeface. Please see the Computer Science Department website ([cs.salemstate.edu](http://cs.salemstate.edu)) for complete course description, topic list, bibliography, etc.)

| Course  | Credits | Required Lab | Programming Load  | Typically Offered  | Typical Language(s) / O.S. / Hardware                           |
|---|---------|--------------|-------------------|--------------------|---|
| <b>CSC 105 Survey of Computer Science</b>               | 4       |              | minimal           | Spring & Fall      |   |
| <b>CSC 110 Software Design and Implementation I</b>     | 4       | ✓            | heavy             | Spring & Fall      | Java  |
| <b>CSC 115 Software Design and Implementation II</b>    | 4       | ✓            | heavy             | Spring & Fall      | Java  |
| CSC 235 Computer Security Basics                        | 3       |              | moderate          | sporadic           | Java, plus some PHP, MySQL, Linux scripting                     |
| CSC 246 Information Visualization                       | 4       | ✓            | moderate          | Spring, odd years  | Processing  |
| <b>CSC 260 Data Structures &amp; Algorithms</b>         | 4       | ✓            | heavy             | Spring & Fall      | Java  |
| CSC 263 Database Systems                                | 4       |              | moderate          | Spring             | Java, SQL (Oracle and/or MySQL)                                 |
| CSC 276 Topics in Computer Science                      | 3       |              | variable          | sporadic           | variable  |
| CSC 278 Scripting Techniques                            | 4       |              | heavy             | Fall, odd years    | multiple, varies by semester: e.g. JavaScript, Python, PHP, ... |
| CSC 279 C + C++   | 4       |              | heavy             | Fall, even years   | C and C++   |
| <b>CSC 295 Computer Architecture &amp; Organization</b> | 4       |              | moderate          | Spring             | Altera's Quartus II and DE2 board                               |
| <b>CSC 299 Concepts of Programming Languages</b>        | 3       |              | moderate          | Spring             | variable  |
| <b>CSC 300 Software Engineering I</b>                   | 4       | ✓            | moderate          | Spring             | UML, JavaScript   |
| CSC 315A Computer Networks and Data Communications      | 4       |              | moderate          | Spring             | Python, PHP, HTML, Linux, Windows                               |
| CSC 340 Artificial Intelligence                         | 4       |              | moderate          | Spring             | Python  |
| CSC 351 Software Engineering II                         | 4       | ✓            | moderate to heavy | Fall               | UML, JavaScript   |
| CSC 367 Internship in Computer Science                  | 1-6     |              | variable          | as needed          | highly variable   |
| CSC 376 Topics in Computer Science                      | 3       |              | variable          | sporadic           | variable  |
| <b>CSC 381 Operating Systems</b>                        | 3       |              | minimal           | Fall               |   |
| CSC 400 Theory of Computation                           | 3       |              | minimal           | sporadic           |   |
| <b>CSC 415 Analysis of Algorithms</b>                   | 3       |              | minimal           | Spring             |   |
| CSC 425 Computer Graphics and Games                     | 4       |              | heavy             | Spring, even years | Java  |
| CSC 435 Computer and Network Security                   | 4       | ✓            | moderate          | Fall, even years   | C / C++, plus some PHP, MySQL, Linux scripting                  |
| CSC 455 Machine Learning                                | 4       |              | moderate          | Fall, even years   | Python  |
| CSC 475 Distributed and Cloud Computing                 | 3       |              | moderate          | Fall, odd years    | C, Java, Linux, Windows   |
| CSC 485 Robotics and Computer Vision                    | 4       | ✓            | moderate          | Fall, odd years    | Python  |
| CSC 490 Compiler Construction                           | 4       | ✓            | heavy             | sporadic           | variable  |
| <b>CSC 520 Computer Science Capstone Project Spec</b>   | 1       |              | minimal           | Spring & Fall      | variable  |
| <b>CSC 521 Computer Science Capstone Project</b>        | 3       |              | heavy             | Spring & Fall      | variable  |

(Note: Staffing and enrollment issues may necessitate exceptions to the "typically offered" schedule presented above. The Computer Science Department makes every effort to keep to the schedule as presented.)