

| <b>General Education Requirements:</b> Students must complete the DSC requirements for General Education or equivalent.     |                |   |
|---|----------------|---|
| <b>CS Emphasis Requirements</b>   | <b>TOTAL</b>   | <b>22-33</b>  |
|   | <b>Credits</b> | <b>Prerequisites and notes</b>                            |
| • CS 1400, Fundamentals of Programming  | 3              |   |
| • CS 1410, Object-Oriented Programming  | 3              | CS 1400   |
| • CS 2420, Intro to Algorithms and Data Structures  | 3              | CS 1410   |
| • CS 2450, Software Engineering   | 3              | CS 2420   |
| • CS 2810, Computer Organization and Architecture   | 3              | CS 1410   |
| • CS 3000 Internet Publishing & Design  | 3              | CS 2420   |
| • CS 3005, Programming in C++   | 2              | CS 1410   |
| • CS 3310, Discrete Math  | 3              | CS 1410 and MATH 1210                                     |
| • CS 3400, Operating Systems or<br>CS 3410, Distributed Systems   | 3              | CS 2420 and CS 2810, or<br>CS 2420, CS 2810 and IT 2400   |
| • CS 3510, Advanced Algorithms/Data Structures  | 3              | CS 2420, CS 2810 and CS 3310                              |
| • CS 3520, Programming Language   | 3              | CS 2420 and CS 2810                                       |
| • CS 3530, Computational Theory   | 3              | CS 2420, CS 2810 and CS 3310                              |
| • CS 3600, Graphics Programming   | 3              | CS 2420 and CS 2810                                       |
| • CS 4300, Artificial Intelligence  | 3              | CS 2420 and CS 2810                                       |
| • CS 4307, Database Design and Management   | 3              | CS 2420 and CS 2810                                       |
| • CS 4550, Compilers  | 3              | CS 2420 and CS 2810                                       |
| • CS 4600, Senior Project   | 3              | Senior Status   |
| • MATH 1210, Calculus I   | 5              | MATH 1050 and MATH 1060, or MATH 1065 or ACT 26 or above. |
| • MATH 1220, Calculus II  | 4              | Math 1210   |
| • BIOL 1610/1615 Principles of Biology I with Lab   | 5              |   |
| • PHYS 2210/2215 Physics for Scientists/Engineers I with Lab  | 5              | Math 1210   |
| <b>TOTAL</b>  | <b>69</b>      |   |
| <b>Math &amp; Science Elective Courses (8 or more credits from the following list; at least 3 credits with MATH prefix)</b> | <b>Credits</b> | <b>Prerequisites and Notes</b>                            |
| • MATH 2210, Multivariable Calculus   | 3              | MATH 1220   |
| • MATH 2270, Linear Algebra   | 3              | MATH 1210   |
| • MATH 2280, Ordinary Differential Equations  | 3              | MATH 1220   |
| • MATH 3400, Probability and Statistics   | 3              | MATH 1220   |
| • BIOL 1620/1625 Principles of Biology II with Lab  | 5              | BIOL 1610/1615  |
| • CHEM 1210/1215 Principles of Chemistry I with Lab   | 5              | MATH 1050   |
| • CHEM 1220/1225 Principles of Chemistry II with Lab  | 5              | CHEM 1210/1215  |
| • PHYS 2220/2225 Physics for Scientists/Engineers II with Lab   | 5              | PHYS 2210/2215  |
| <b>TOTAL</b>  | <b>8</b>       |   |
| <b>Computer Science Elective Courses (9 credits from the following list)</b>  | <b>Credits</b> | <b>Prerequisites and Notes</b>                            |
| • VT 1400 Into to Internet Development  | 3              |   |
| • CS 3100 Interactive Multimedia  | 3              | CS 2420   |
| • CS 3400, Operating Systems or<br>CS 3410, Distributed Systems   | 3              | CS 2420 and CS 2810, or<br>CS 2420, CS 2810 and IT 2400   |
| • CS 3500, Application Development  | 3              | CS 1410   |
| • CS 4000, Dynamic Web Development  | 3              | CS 2420 and VT 1400                                       |
| • CS 4010, Interactive Web Development  | 3              | CS 2420 and VT 1400                                       |
| • IT 3100, Systems Design and Administration I  | 3              | CS 1400 and IT 2400                                       |
| • IT 3110, Systems Design and Administration II   | 3              | IT 3100   |
| • IT 3200, Perl Programming   | 3              | CS 1410   |
| • IT 4200, Advanced Web Delivery  | 3              | IT 3100 and VT 1400                                       |
| • IT 4500, Information Security   | 3              | CS 1400 and IT 3100                                       |
| <b>TOTAL</b>  | <b>9</b>       |   |

**Complete a minimum of 120 college-level credits (1000 and above). Complete at least 40 upper-division credits (3000 and above). Complete at least 30 upper-division credits at DSC for institutional residency. Cumulative GPA 2.0 or higher. Grade C- or higher in each Core Discipline and Elective Requirement Course. Math prerequisites requires C or higher. Courses used to fill required credits cannot be used to fill elective credit. NOTE: This is a worksheet only. For graduation you must use the 2011-2012 Catalog.**