

**BS Major in Computer Science, 2010-11**  
**Sample Course Sequence Starting with Math 10 Precalculus**

The definitive source for degree requirements is the official UVM Catalogue.

Your specific sequence may be different from this one. Responsibility for completion of degree requirements rests with you, the student. Read the catalog and plan your course sequence carefully. Note prerequisites. Contact your academic advisor in the Computer Science Department if you have questions.

The *minimum* number of academic credits required is 120. To complete the degree in the minimum number of credits, the required Minor must also be fulfilled within these 120 credits.

|   | <b>SEMESTER</b>       |                       |  |
|---|-----------------------|-----------------------|--|
| <b>FIRST YEAR</b>                           | <b>1<sup>st</sup></b> | <b>2<sup>nd</sup></b> | <b>*MATH 10:</b>   |
| CS 16 or 21, Computer Prog. I <sup>1a</sup> | 3                     | -                     | These credits will count toward free electives, so the elective category has been reduced by these 3 credits.  |
| MATH 10, Precalculus *                      | 3                     | -                     |  |
| English I, Written Exp.                     | 3                     | -                     | <b><sup>1</sup>Electives:</b><br>a) Students with no programming experience may want to take an 0XX level course with a programming component as one of their CS electives *prior* to CS 21 Computer Programming I. See other sample sequence beginning with CS 0XX.<br><br>b) See requirements for all elective categories.<br><br>c) <b>Minor:</b> There may be prerequisite sequences, so don't wait too long to begin.<br><br>d) <b>Science requirement:</b> 13 credits including one sequence chosen from: Biology 1 (or BCOR 11), 2 (or BCOR 12), Chemistry 31, 32, Physics 31 or 51, 125 or 152.<br><br>Chemistry 1 or Biology 1 is typically chosen as the first Science Elective since MATH 21 is a prerequisite for Physics 31 and 51. Biology 2 may actually be taken prior to Biology I. |
| Electives <sup>1</sup>                      | 4                     | 9                     |  |
| CS 110, Computer Prog. II                   | -                     | 4                     |  |
| MATH 21, Calculus I                         | -                     | 4                     |  |
|   | <b>13</b>             | <b>17</b>             |  |
| <b>SOPHOMORE YEAR</b>                       |                       |                       |  |
| CS 0XX or above, elective                   | 3                     | -                     |  |
| CS 121, Computer Org.                       | 3                     | -                     |  |
| MATH 22, Calculus II                        | 4                     | -                     |  |
| CS 64, Discrete Structures                  | 3                     | -                     |  |
| Electives <sup>1</sup>                      | 3                     | 3                     |  |
| CS 123, Prog. Lang.                         | -                     | 3                     |  |
| CS 124, Data Structures                     | -                     | 3                     |  |
| MATH 124, Linear Alg <sup>3</sup>           | -                     | 3                     |  |
| MATH 173, Combin. <sup>2,3</sup>            | -                     | 3                     |  |
|   | <b>16</b>             | <b>15</b>             |  |
| <b>JUNIOR YEAR</b>                          |                       |                       |  |
| CS 243, Comp. Theory <sup>2</sup>           | 3                     | -                     | Physics: The CS Department recommends Physics 31/21 and 42/22 as Science Electives due to its relevance in the computing field. Physics is needed for some Minors (e.g., EE). It is not, however, an absolute requirement.   |
| CS 2XX                                      | 3                     | -                     |  |
| Stat 153, Prob/Statistics                   | 3                     | -                     |  |
| Electives <sup>1</sup>                      | 6                     | 9                     |  |
| CS 2XX                                      | -                     | 3                     |  |
| CS 2XX                                      | -                     | 3                     |  |
|   | <b>15</b>             | <b>15</b>             |  |
| <b>SENIOR YEAR</b>                          |                       |                       |  |
| CS 201, Operating Sys.                      | 3                     | -                     | <b><sup>2</sup>CS requirements</b> include "224 or 243." This program shows the selection of 243. Note that MATH 173 is a prerequisite for CS 224.   |
| CS 292, Senior Seminar                      | 1                     | -                     |  |
| Electives <sup>1</sup>                      | 12                    | 7                     |  |
| CS 2XX                                      | -                     | 3                     |  |
| CS 2XX                                      | -                     | 3                     |  |
|   | <b>16</b>             | <b>13</b>             | <b><sup>3</sup>MATH requirements</b> include "two of 121, 124, 173, 271." This program shows the selection of 124 and 173. There are alternative selections.   |