## B.S. in Computer Science 2017-2018: Option 1 - CWILT

| First Year  |   |  |         |
|---|---|--|---------|
| Fall  | Credits Interim                                     | Credits Spring   | Credits |
| COS100 or 205 Introduction to Programming or Scientific Computing | 3 GES160 Inquiry Seminar                            | 3 COS105 Computer Science 1  | 4       |
| MAT124M Calculus 1  | 4   | MAT125 Calculus 2  | 4       |
| GES130 Christianity Western Culture                               | 4   | BIB101 Introduction to the Bible                                     | 3       |
| GES140 Introduction to Wellbeing                                  | 3   | Second Language (S) course <sup>1</sup>                              | 4       |
|   | 14  | 3  | 15      |
| Second Year   |   |  |         |
| Fall  | Credits Interim                                     | Credits Spring   | Credits |
| COS212 Computer Science 2   | <sup>4</sup> THE201 Christian Theology              | <sup>3</sup> COS214 Computer Systems                                 | 4       |
| MAT241 Discrete Mathematics                                       | 3   | COS216 Data Structures and Algorithms                                | 3       |
| GES125 Introduction to the Creative Arts                          | 4   | MAT211 Linear Algebra  | 3       |
| Laboratory Science (D) course                                     | 4   | Contemporary Western Life and Thought (L) course                     | 3       |
|   |   | Elective   | 2       |
|   | 15  | 3  | 15      |
| Third Year  |   |  |         |
| Fall  | Credits Interim                                     | Credits Spring   | Credits |
| COS301 Operating Systems and Computer Architecture                | 4 COS450 (interim, even years) Humans and Computers | <sup>3</sup> COS371 (spring, even years) Organization of Programming | 3       |
|   |   | <u>Languages</u>   |         |
| COS318 Web Programming  | 3   | COS477 (spring, even years) Software Engineering                     | 3       |
| MAT376 (fall, odd years (or elective))2 Operations Research       | 4   | Interpreting Biblical Themes (J) course                              | 3       |
| COS320 (fall, odd years) Computer Graphics Programming            | 3   | Elective   | 3       |
| World Cultures (U) course   | 3   | Cross-Cultural Experience (Z) course                                 | 0-3     |
|   | 17  | 3  | 12-15   |
| Fourth Year   |   |  |         |
| Fall  | Credits Interim                                     | Credits Spring   | Credits |
| COS313 (fall, even years) Database Systems                        | 3 Interim Off                                       | COS386 (spring, odd years) Data Communications and Computer          | 3       |
|   |   | <u>Networks</u>  |         |
| MAT330 Probability and Statistics                                 | 3   | COS389 (spring, odd years) Artificial Intelligence                   | 3       |
| MAT344 (or elective)2Numerical Methods                            | 3   | Science, Technology, and Society (K) course                          | 3       |
| Comparative Systems (G) course                                    | 3   | Contemporary Christian Issues (P) course                             | 3       |
| Leisure and Lifetime Sports (Q) course                            | 1   | Artistic Experience (A) course                                       | 0-3     |
|   | 13  | 0  | 12-15   |
| TOTAL: 122  |   |  |         |
|   |   |  |         |

- 1. Students must complete through the second semester of a first year language course or equivalent (Check the catalog for details of this option.)
- 2. Choose one of: MAT344, MAT376, or PHY352/PHY353 (Note: PHY352/PHY353 will require consent of instructor unless prerequisites are satisfied. Please see catalog for details.)

This program assumes a student will use MAT124M and GES334K to meet the general education Mathematics and Science, Technology, and Society requirements.

Most financial aid packages stipulate 12 credits/semester; Minnesota state grants are reduced when credit load falls below 15 credits/semester. (Interim credits may be split between fall and spring for state grant purposes only.)



## **B.S. in Computer Science 2017-2018: Option 2 - Humanities**

| First Year  |  |  |                      |
|---|--|--|----------------------|
| Fall  | Credits Interim  | Credits Spring   | Credits              |
| COS100 or 205 Introduction to Programming or Scientific Computing | <sup>3</sup> GES147 Humanities II: Renaissance and Reformation | 4 COS105 Computer Science 1  | 4                    |
| MAT124M Calculus 1  | 4  | MAT125 Calculus 2  | 4                    |
| GES140 Introduction to Wellbeing                                  | 3  | GES244 Humanities III: European Enlightenment and American                     | 4                    |
|   |  | Culture to 1877  |                      |
| GES145 Humanities I: Greco-Roman through Middle Ages              | 4  | Second Language (S) course <sup>1</sup>  | 4                    |
|   | 14   | 4  | 16                   |
| Second Year   |  |  |                      |
| Fall  | Credits Interim  | Credits Spring   | Credits              |
| COS212 Computer Science 2   | 4 World Cultures (U) course                                    | <sup>3</sup> COS214 Computer Systems   | 4                    |
| MAT241 Discrete Mathematics                                       | 3  | COS216 Data Structures and Algorithms  | 3                    |
| BIB101 Introduction to the Bible                                  | 3  | MAT211 Linear Algebra  | 3                    |
| GES246 Humanities IV: Modern and Contemporary Western Cultur      | 4  | Laboratory Science (D) course  | 4                    |
|   |  | Leisure and Lifetime Sports (Q) course   | 1                    |
|   | 14   | 3  | 15                   |
| Third Year  |  |  |                      |
| Fall  | Credits Interim  | Credits Spring   | Credits              |
| COS301 Operating Systems and Computer Architecture                | <sup>4</sup> COS450 (interim, even years) Humans and Computers | <sup>3</sup> COS371 (spring, even years) Organization of Programming Languages | 3                    |
| COS318 Web Programming  | 3  | COS477 (spring, even years) Software Engineering                               | 3                    |
| COS320 (fall, odd years) Computer Graphics Programming            | 3  | Interpreting Biblical Themes (J) course  | 3                    |
| MAT376 (fall, odd years (or elective))2 Operations Research       | 4  | Comparative Systems (G) course   | 3                    |
|   |  | Cross-Cultural Experience (Z) course   | 3                    |
|   | 14   | 3  | 15                   |
| Fourth Year   |  |  |                      |
| Fall  | Credits Interim  | Credits Spring   | Credits              |
| COS313 (fall, even years) Database Systems                        | 3 Interim Off  | COS386 (spring, odd years) Data Communications and Computer Networks           | 3                    |
| MAT330 Probability and Statistics                                 | 3  | COS389 (spring, odd years) Artificial Intelligence                             | 3                    |
| MAT344 (or elective)2Numerical Methods                            | 3  | Science, Technology, and Society (K) course                                    |                      |
| Elective  Elective  | 3  | Contemporary Christian Issues (P) course                                       | 3                    |
|   | •  | Contemporary Content todado (1 ) course  |                      |
| License   |  | Artistic Experience (A) course   | ∩_?                  |
| Liceave   | 12   | Artistic Experience (A) course   | 0-3<br><b>12-1</b> 5 |

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