



## BACHELOR OF SCIENCE IN SOFTWARE ENGINEERING (MATHEMATICS CONCENTRATION)

### FRESHMAN - FALL SEMESTER

|                      |  |           |
|----------------------|--|-----------|
| ENG 1113             | Communication: English Composition I     | 3         |
| <b>MAT 1195</b>      | <b>Reasoning: Calculus I</b>             | 5         |
| <b>UNI 1111</b>      | <b>Opportunities: University Seminar</b> | 1         |
| <b>CIS 1033</b>      | <b>Foundations of Computer Science</b>   | 3         |
| <b>CIS 1163</b>      | <b>Personal Cybersecurity</b>            | 3         |
| <b>Total Credits</b> | .....                                    | <b>15</b> |

### FRESHMAN - SPRING SEMESTER

|                               |   |           |
|-------------------------------|---|-----------|
| ENG 2213 /<br><b>ENG 3813</b> | Communication: English Composition II <i>or</i><br><b>Communication: Professional Writing and Editing</b> | 3         |
| <b>UNI 1121</b>               | <b>Reasoning: Introduction to Critical Thinking</b>   | 1         |
| <b>CIS 1144</b>               | <b>Computer Science I</b>   | 4         |
| <b>MAT 1173</b>               | <b>Discrete Mathematics</b>   | 3         |
| <b>MAT 2255</b>               | <b>Calculus II</b>  | 5         |
| <b>Total Credits</b>          | .....   | <b>16</b> |

### SOPHOMORE - FALL SEMESTER

|                      |  |           |
|----------------------|--|-----------|
| ECO 2023             | Society: Principles of Microeconomics  | 3         |
| DISCOVER             | Communication: (Communication Options) | 3         |
| <b>CIS 1154</b>      | <b>Computer Science II</b>             | 4         |
| <b>MAT 2263</b>      | <b>Calculus III</b>                    | 3         |
| <b>MAT 3343</b>      | <b>Mathematical Statistics</b>         | 3         |
| <b>Total Credits</b> | .....                                  | <b>16</b> |

### SOPHOMORE - SPRING SEMESTER

|                                |   |           |
|--------------------------------|---|-----------|
| DISCOVER                       | Inquiry: (Inquiry Options)*   | 4         |
| <b>CIS 1141</b>                | <b>Introduction to Linux and Scripting</b>                          | 1         |
| <b>CIS 2003 or</b><br>CIS 4981 | <b>Web and User Experience Design or</b><br>Internship in Computing | 3         |
| <b>CIS 2213</b>                | <b>System Analysis and Design</b>                                   | 3         |
| <b>CIS 2253</b>                | <b>Full Stack Web Development</b>                                   | 3         |
| <b>Total Credits</b>           | .....   | <b>14</b> |

### JUNIOR - FALL SEMESTER

|                                       |   |           |
|---------------------------------------|---|-----------|
| BIB 1013                              | Values: Old Testament History   | 3         |
| DISCOVER <i>or</i><br><b>CIS 3313</b> | Society: (American Studies Options) <i>or</i><br><b>Advanced System Analysis and Design</b> | 3         |
| <b>CIS 2013</b>                       | <b>Networking and Cloud Computing</b>   | 3         |
| <b>CIS 3123</b>                       | <b>Survey of Data Science</b>   | 3         |
| <b>CIS 3323</b>                       | <b>Database Management System Design</b>  | 3         |
| <b>CIS 3412</b>                       | <b>Machine Organization</b>   | 2         |
| <b>Total Credits</b>                  | .....   | <b>17</b> |

### JUNIOR - SPRING SEMESTER

|                                       |  |           |
|---------------------------------------|--|-----------|
| CIS 2003 <i>or</i><br>CIS 4981        | Web and User Experience Design <i>or</i><br>Internship in Computing          | 1         |
| <b>CIS 3033 or</b><br><b>CIS 3553</b> | <b>Secure Software or</b><br><b>Software Quality Assurance and Testing</b>   | 3         |
| <b>CIS 3333</b>                       | <b>Algorithms and Data Structures</b>  | 3         |
| <b>CIS 3433 or</b><br>CHOICE          | <b>Artificial Intelligence and Machine Learning or</b><br>Mathematics Choice | 3         |
| <b>CIS 3852</b>                       | <b>Computing Ethics and Professional Development</b>                         | 2         |
| <b>Total Credits</b>                  | .....  | <b>12</b> |

### SENIOR - FALL SEMESTER

|                                       |   |           |
|---------------------------------------|---|-----------|
| DISCOVER                              | Enrichment: (Enrichment Options)  | 3         |
| BIB 1023                              | Values: New Testament History   | 3         |
| DISCOVER                              | Discipline: (Discipline Options)  | 3         |
| DISCOVER <i>or</i><br><b>CIS 3313</b> | Society: (American Studies Options) <i>or</i><br><b>Advanced System Analysis and Design</b> | 3         |
| <b>CIS 4462</b>                       | <b>Applied Software Engineering I</b>   | 2         |
| <b>MAT 3323</b>                       | <b>Linear Algebra</b>   | 3         |
| <b>Total Credits</b>                  | .....   | <b>17</b> |

### SENIOR - SPRING SEMESTER

|                                       |  |           |
|---------------------------------------|--|-----------|
| DISCOVER                              | Values: (Cultural Awareness Options)   | 2         |
| DISCOVER                              | Values: (Spiritual Formation Options)  | 2         |
| <b>CIS 3033 or</b><br><b>CIS 3553</b> | <b>Secure Software or</b><br><b>Software Quality Assurance and Testing</b>   | 3         |
| <b>CIS 3433 or</b><br>CHOICE          | <b>Artificial Intelligence and Machine Learning or</b><br>Mathematics Choice | 4         |
| <b>CIS 4423</b>                       | <b>Operating Systems</b>   | 3         |
| <b>CIS 4472</b>                       | <b>Applied Software Engineering II</b>                                       | 2         |
| <b>Total Credits</b>                  | .....  | <b>16</b> |

DISCOVER Core Curriculum

\*Major Requirements

**Total Credits to Graduate: 123**

*Updated Spring 2025*