

Alfaisal University

BS in Cybersecurity | Study Plan Summary | Effective: Fall 2025

4 Year Curriculum: 130 Credit Hours Total

| Freshman Year - Fall Semester |  |           |
|-------------------------------|--|-----------|
| Course Code                   | Course-Title                           | CRHs      |
| SE 100                        | Programming for Engineers              | 3         |
| SE 100 L                      | Programming for Engineers Lab          | 1         |
| MAT 101                       | Calculus I                             | 3         |
| PHU 103                       | Physics I                              | 3         |
| PHU 103 L                     | Physics I Lab                          | 1         |
| ENG 101                       | University Writing                     | 3         |
|                               | Social Sciences Elective I             | 3         |
| COE 100                       | Student Orientation & Academic Success | 1         |
|                               | <b>Total</b>                           | <b>18</b> |

| Sophomore Year - Fall Semester |                                      |           |
|--------------------------------|--------------------------------------|-----------|
| Course Code                    | Course-Title                         | CRHs      |
| SE 201                         | Introduction to Software Engineering | 3         |
| SE 215                         | Data Structures                      | 3         |
| SE 215 L                       | Data Structures Lab                  | 1         |
| SE 239                         | Network Programming                  | 3         |
| CSE 230                        | Programming in C                     | 3         |
| CSE 230 L                      | Programming in C Lab                 | 1         |
| MAT 212                        | Linear Algebra                       | 3         |
|                                | <b>Total</b>                         | <b>17</b> |

| Junior Year - Fall Semester |                              |           |
|-----------------------------|------------------------------|-----------|
| Course Code                 | Course-Title                 | CRHs      |
| DSE 200                     | Introduction to Data Science | 3         |
| CSE 310                     | Linux System Administration  | 3         |
| SE 314                      | Operating Systems            | 3         |
| MAT 224                     | Numerical Methods            | 3         |
| MAT 211                     | Calculus III                 | 3         |
|                             | <b>Total</b>                 | <b>15</b> |

| Junior Year – Summer Semester |              |          |
|-------------------------------|--------------|----------|
| Course Code                   | Course-Title | CRHs     |
| CSE 390                       | Internship   | 0        |
|                               | <b>Total</b> | <b>0</b> |

| Senior Year - Fall Semester |                             |           |
|-----------------------------|-----------------------------|-----------|
| Course Code                 | Course-Title                | CRHs      |
| XX 4 __                     | Technical Elective I        | 3         |
| XX 4 __                     | Technical Elective II       | 3         |
| CSE 442                     | Network Security            | 3         |
| SE 495                      | Capstone Project I          | 3         |
|                             | Social Sciences Elective II | 3         |
|                             | <b>Total</b>                | <b>15</b> |

| Freshman Year - Spring Semester |                                   |           |
|---------------------------------|-----------------------------------|-----------|
| Course Code                     | Course-Title                      | CRHs      |
| SE 120                          | Object-Oriented Programming I     | 3         |
| SE 120 L                        | Object-Oriented Programming I Lab | 1         |
| SE 151                          | Discrete Mathematics              | 3         |
| MAT 112                         | Calculus II                       | 3         |
| PHU 124                         | Physics II                        | 3         |
| PHU 124 L                       | Physics II Lab                    | 1         |
| ENG 222                         | Technical Writing                 | 3         |
|                                 | <b>Total</b>                      | <b>17</b> |

| Sophomore Year - Spring Semester |   |           |
|----------------------------------|---|-----------|
| Course Code                      | Course-Title                            | CRHs      |
| SE 252                           | Database Management Systems             | 3         |
| SE 252 L                         | Database Management Systems Lab         | 1         |
| AI 250                           | Introduction to Artificial Intelligence | 3         |
| CSE 250                          | Introduction to Cybersecurity           | 3         |
| STA 212                          | Probability and Statistics              | 3         |
| EE 210                           | Digital Logic Design                    | 3         |
| EE 210 L                         | Digital Logic Design Lab                | 1         |
|                                  | <b>Total</b>                            | <b>17</b> |

| Junior Year - Spring Semester |                               |           |
|-------------------------------|-------------------------------|-----------|
| Course Code                   | Course-Title                  | CRHs      |
| CSE 350                       | Cryptography and Data Privacy | 3         |
| CSE 360                       | Digital Forensics             | 3         |
| CSE 370                       | Database Security             | 3         |
| CSE 380                       | Operating System Security     | 3         |
| MAT 213                       | Differential Equations        | 3         |
|                               | <b>Total</b>                  | <b>15</b> |

| Senior Year - Spring Semester |                                     |           |
|-------------------------------|-------------------------------------|-----------|
| Course Code                   | Course-Title                        | CRHs      |
| XX 4 __                       | Technical Elective III              | 3         |
| XX 4 __                       | Technical Elective IV               | 3         |
| SE 481                        | Ethics and Professional Development | 1         |
| CSE 496                       | Capstone Project II                 | 3         |
| CSE 454                       | Ethical Hacking and System Defense  | 3         |
|                               | Social Sciences Elective III        | 3         |
|                               | <b>Total</b>                        | <b>16</b> |



Alfaisal University – Bachelor of Science Cybersecurity Engineering  
Prerequisites Chart (Effective Fall 2025)

