



## Study Plan for Bachelor's Degree in Cybersecurity for year 2023-2024

The Bachelor's Degree in Cybersecurity awarded at Princess Sumaya University for Technology after the successful completion of 132 Credit Hours distributed as follows:-

### University Requirements (27 CHs)

#### 1. Compulsory Requirements (18 CHs)

| Course Number | Course Title                                     | Credit Hours | Prerequisite           | Concurrent | Online |
|---------------|--|--------------|------------------------|------------|--------|
| 11100         | Computer Skills (Remedial)                       | 0            |                        |            | Online |
| 31021         | Arabic Language Communication Skills (Remedial)  | 0            |                        |            | Online |
| 31022         | English Language Communication Skills (Remedial) | 0            |                        |            | Online |
| 31112         | Arabic Language Communication Skills             | 3            | 31021                  |            | Online |
| 31122         | English Language Communication Skills            | 3            | 31022                  |            | Online |
| 31151         | National Education                               | 3            |                        |            | Online |
| 31160         | Leadership and Societal Responsibility           | 0            |                        |            |        |
| 31251         | Military Science                                 | 3            |                        |            | Online |
| 31254         | Entrepreneurship and Innovation                  | 3            | Finish 60 Credit Hours |            | Online |
| 31374         | Life Skills                                      | 3            | Finish 60 Credit Hours |            | Online |

#### 2. Elective Requirements (9 CHs)

| Course Number | Course Title                                  | Credit Hours | Prerequisite | Concurrent | Online  |
|---------------|---|--------------|--------------|------------|---------|
| 20251         | History of Science                            | 3            |              |            | Blended |
| 31100         | Sports and Health                             | 3            |              |            | Blended |
| 31130         | Foreign languages                             | 3            |              |            | Blended |
| 31152         | Arabic Islamic Civilization                   | 3            |              |            | Blended |
| 31211         | Arabic Literature                             | 3            | 31112        |            | Blended |
| 31252         | Governance and Development                    | 3            |              |            | Blended |
| 31260         | Human Rights                                  | 3            |              |            | Blended |
| 31261         | Introduction to Politics and Economic Science | 3            |              |            | Blended |
| 31264         | Introduction To Psychology                    | 3            |              |            | Blended |
| 31272         | Development and Environment                   | 3            |              |            | Blended |
| 31311         | Scientific Research Methods                   | 3            |              |            | Blended |
| 31351         | Contemporary Issues in the Arab World         | 3            |              |            | Blended |
| 31352         | Jerusalem : History and Facts                 | 3            |              |            | Blended |
| 31362         | Philosophy and Critical Thinking              | 3            |              |            | Blended |



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**School Requirements (25 CHs)**

**1. Compulsory Requirements (25 CHs)**

| Course Number | Course Title                               | Credit Hours | Prerequisite  | Concurrent | Online  |
|---------------|--|--------------|---------------|------------|---------|
| 11102         | Introduction to Computer Science           | 3            |               |            |         |
| 11103         | Structured Programming                     | 3            | 11102         |            |         |
| 11151         | Structured Programming Lab                 | 1            |               | 11103      |         |
| 20132         | Calculus (1)                               | 3            |               |            |         |
| 20133         | Calculus (2)                               | 3            | 20132         |            |         |
| 20134         | Discrete Mathematics (1)                   | 3            |               |            | Blended |
| 20200         | Technical Writing and Communication Skills | 3            | 31112 , 31122 |            | Blended |
| 20233         | Statistical Methods                        | 3            |               |            | Blended |
| 20234         | Linear Algebra                             | 3            | 20133         |            |         |

**Program Requirements (80 CHs)**

**1. Compulsory Requirements (68 CHs)**



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| Course Number | Course Title                                     | Credit Hours | Prerequisite           | Concurrent | Online  |
|---------------|--|--------------|------------------------|------------|---------|
| 11213         | Data Structures and Algorithms for Cybersecurity | 3            | 15200                  |            |         |
| 11223         | Database Fundamentals *                          | 3            | 15200                  |            |         |
| 11335         | Operating Systems *                              | 3            | 11213                  |            |         |
| 15110         | Cybersecurity Fundamentals                       | 3            | 11102                  |            | Blended |
| 15200         | Programming for Security Professionals           | 3            | 11103                  |            |         |
| 15201         | Programming for Security Professionals Lab       | 1            |                        | 15200      |         |
| 15220         | Networks Fundamentals                            | 3            | 15110                  |            |         |
| 15261         | Secure Web Design and Development *              | 3            | 15200                  |            |         |
| 15262         | Secure Web Design and Development Lab            | 1            |                        | 15261      |         |
| 15310         | Cryptography                                     | 3            | 15200 , 20234          |            |         |
| 15312         | Database Security *                              | 3            | 11223                  |            |         |
| 15313         | Database Security Lab                            | 1            |                        | 15312      | Blended |
| 15321         | Network Security and Protocols *                 | 3            | 15220 , 15310          |            |         |
| 15322         | Network Security and Protocols Lab               | 1            |                        | 15321      |         |
| 15350         | Artificial Intelligence and Data Analytics*      | 3            | 20134 , 20233          |            |         |
| 15361         | Secure Systems Development and Design *          | 3            | 11223                  |            | Blended |
| 15381         | Infrastructure Security using Linux              | 3            | 11335                  |            |         |
| 15382         | Auditing, Policies, Legal, Ethics, Compliance *  | 3            | 15312                  |            | Blended |
| 15410         | Data Integrity and Authentication *              | 3            | 15310                  |            |         |
| 15411         | Digital Forensics and Incident Response          | 3            | 11335                  |            | Blended |
| 15412         | Digital Forensics and Incident Response Lab      | 1            |                        | 15411      |         |
| 15433         | Malware Analysis and Reverse Engineering *       | 3            | 11335                  |            | Blended |
| 15453         | Ethical Hacking and Penetration Testing          | 3            | 15411                  |            |         |
| 15483         | Information systems risk management *            | 3            | 15382                  |            |         |
| 15490         | Practical Training                               | 3            | Finish 90 Credit Hours |            | Blended |
| 15491         | Graduation Project1                              | 1            | Finish 90 Credit Hours |            | Blended |
| 15492         | Graduation Project 2                             | 2            | 15491                  |            | Blended |

### 2. Elective Requirements (12 CHs)



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| Course Number | Course Title                             | Credit Hours | Prerequisite | Concurrent | Online  |
|---------------|--|--------------|--------------|------------|---------|
| 15340         | Identity Management                      | 3            | 15310        |            |         |
| 15371         | Cyber Crimes                             | 3            | 15310        |            |         |
| 15383         | Blockchain Technology                    | 3            | 15310        |            |         |
| 15413         | Advanced Forensics                       | 3            | 15411        |            |         |
| 15420         | Mobile and Wireless Security *           | 3            | 15220        |            | Blended |
| 15422         | Multimedia Security                      | 3            | 11213        |            |         |
| 15423         | Cloud Computing Security                 | 3            | 15321        |            | Blended |
| 15425         | Network Programming                      | 3            | 11335        |            |         |
| 15434         | Internet of Things                       | 3            | 15321        |            |         |
| 15435         | Hardware Security                        | 3            | 15310        |            |         |
| 15443         | Social Engineering and Human Factors     | 3            | 15110        |            |         |
| 15455         | E-Business Security                      | 3            | 15261        |            |         |
| 15485         | Cyber Resilience and Business Continuity | 3            | 15382        |            |         |
| 15493         | Special Topics in Cybersecurity (1)      | 3            |              |            | Blended |
| 15494         | Special Topic Cybersecurity (2)          | 3            |              |            |         |

\* is PBL: Project Based Learning course with (20%-30% ) weight