**Generic Study Plan for BSc. In Information Security**

**Cohort fall 2019 and after - Total = 130 credit hours**

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| Year 1 - First Semester | | | | Year 1 - Second Semester | | | |
| **Course #.** | **Course Title** | **Pre-req.** | **Cr.** | **Course #.** | **Course Title** | **Pre-req.** | **Cr.** |
| MATH105 | Calculus I |  | 3 | MATH110 | Calculus II | MATH105 | 3 |
| PHYS105 | General Physics I |  | 3 | CENG205 | Digital Design & Computer Org. |  | 3 |
| GEIT112 | Fourth Industrial Revolution |  | 3 | CENG202 | Discrete Mathematics | MATH105 | 3 |
| CSBP119 | Algorithms and Problem Solving |  | 3 | CSBP219 | Object-Oriented Programming | CSBP119 | 3 |
| ESPU1081 | Intro to Acad. English for IT |  | 3 | HSS105 | Emirates Studies |  | 3 |
| CSBP121 | Programming Lab I | CSBP119 (co) | 1 | CSBP221 | Programming Lab II | CSBP121,CSBP219 (co) | 1 |
|  | Semester Credit Hours | | 16 |  | Semester Credit Hours | | 16 |
| **Year 2 - First Semester** | | | | **Year 2 - Second Semester** | | | |
| **Course #.** | **Course Title** | **Pre-Req.** | **Cr.** | **Course #.** | **Course Title** | **Pre-Req.** | **Cr.** |
| CENG210 | Comm. & Net. Fund. | CENG205 (co/pre) & PHYS 105 | 3 | ITBP370 | Professional Responsibility in IT | ESPU1081 | 3 |
| CSBP315 | Operating Systems Fundamentals | CENG205 | 3 | STAT210 | Probability and Statistics | MATH110 | 3 |
| BIOC100/ CHEM111 | Basic Bio. I or General Chem. I |  | 3 | ITBP301 | Security Principles & Practice | CENG210 | 3 |
| CSBP319 | Data Structures | CSBP219 | 3 | ISLM1103 | Islamic Culture |  | 3 |
| Elective | Cultural Elective 1 |  | 3 | CSBP340 | Database Systems | CSBP319 | 3 |
|  |  |  |  |
|  | Semester Credit Hours | | 15 |  | Semester Credit Hours | | 15 |
| **Year 3 - First Semester** | | | | **Year 3 - Second Semester** | | | |
| **Course #.** | **Course Title** | **Pre-Req.** | **Cr.** | **Course #.** | **Course Title** | **Pre-Req.** | **Cr.** |
| ISEC311 | Network Security I | ITBP301 | 3 | ISEC322 | Design and Analysis of Security Prot. | ISEC312, ISEC324 (co) | 3 |
| ISEC312 | Cryptography | ITBP301, CENG202 | 3 | ISEC323 | Secure Software Design and Eng. | CSBP219, ITBP301 | 3 |
| CSBP320 | Data Mining | STAT 210 | 3 | ISEC324 | Cryptography Lab | ISEC322 (Co) | 1 |
|  | Major Elective 1\*\* |  | 3 | ITBP418 | Entrepreneurship in IT | ITBP301 or ITBP280 | 3 |
| GESU121 | Sustainability |  | 3 | Elective | Cultural Elective 2 |  | 3 |
|  | Semester Credit Hours | | 15 |  | Semester Credit Hours | | 13 |
| **Year 4 - First Semester** | | | | **Year 4 - Second Semester** | | | |
| **Course #.** | **Course Title** | **Pre-Req.** | **Cr.** | **Course #.** | **Course Title** | **Pre-Req.** | **Cr.** |
| ISEC411 | Privacy and Anonymity | CSBP320, ISEC311 | 3 | ISEC412 | Digital Forensics | CSBP315, ISEC321, ISEC323 | 3 |
| ISEC421 | Risk Analysis and Management | STAT210, ITBP301 | 2 | ISEC422 | Security Policy, Laws, and Governance | ITBP370, ISEC421 | 3 |
| ITBP480 | Senior Graduation Project I\* | STAT210 | 3 | ISEC423 | Systems Security Lab | ISEC413 (Co) | 1 |
|  | Major Elective 2 \*\* |  | 3 | ITBP481 | Senior Graduation Project II | ITBP480 | 3 |
| ISEC414 | Network Security Lab | ISEC321 (Co) | 1 | ISEC413 | Security Architecture and Mechanisms | ISEC322, ISEC423 (co) | 3 |
| ISEC321 | Network Security II | ISEC311, ISEC414 (Co) | 3 |  |  |  |  |
|  | Semester Credit Hours | | 15 |  | Semester Credit Hours | | 13 |
| **Year 5 - First Semester** | | | |  | | | |
| ITBP495: Internship (12 credit hours)  *(Students are not Allowed to register any additional courses during their internship without the approval of the College)* | | | | | | | |

\*Students must have finished 80 Cr. Hr to register in ITBP480

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| Major electives Courses\*\* | Pre-req. | Major electives Courses\*\* | Pre-req. |
| ISEC 416 Information Security Management | ITBP 301 | ISEC 428 Special Topics in Information Security | ITBP301,ISEC322 |
| ISEC 417 Database Security | CSBP320 ,ITBP301 | ITBP 280 Information Technology Project Management Exhibition | CSBP219 |
| ISEC 424 Hardware-Oriented Security & Trust | CSBP320 ,ITBP301 |  |  |

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| **Cultural Elective Courses** | | |
| **Social and Behavioral Sciences (3 Cr. Hrs. )** | | |
|  | AGRB 210 | Introduction to Agribusiness |
|  | ECON 110 | Principles of Economics |
|  | HSR 140 | Introduction to Society and Behavior |
|  | HSR 150 | Introduction to Government, Policy, and Urban Studies |
|  | PSY 100 | Introduction to Psychology |
|  | GEO 200 | World Regional Geography |
|  | GHEP111 | Happiness and Wellbeing |
| **Humanities/Fine Art (3 Cr. Hrs. )** | | |
|  | ARCH 366 | History and Theory of Architecture |
|  | HSR  120 | Introduction to Heritage and Culture |
|  | HSR  130 | Introduction to Language and Communication |
|  | PHI101 | Introduction to Philosophy |
|  | HIS 130 | Sheikh Zayed; History, Found.& Dev. |
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