



## **Bachelor of Science (Hons.) in Network Technology and Cyber Security**

**Standard Period of Studies: 36 months**

**ECTS Credits: 180**

The Bachelor of Science (Hons.) in Network Technology and Cyber Security\* is a focused Undergraduate programme of studies. Its modules are delivering security techniques and use real-world networking equipment in a security context. Students are also educated about Cisco Routing & Switching Techniques, security appliances, ethical hacking techniques, vulnerability analysis, penetration testing, and data encryption technology. This program has been designed to equip graduates with essential knowledge on IT networks and their security.

### **Modules of the Bachelor in Network Technology and Cyber Security:**

#### *1. Year 1*

- i. Introduction to IT
- ii. Programming Fundamentals using C
- iii. Data Communication and Networking
- iv. Computational Mathematics I
- v. Communication (English)
- vi. Computational Mathematics II
- vii. Technical & Professional Communication
- viii. Object-oriented Programming (C++ / Java)
- ix. Data Base Management System
- x. Digital Electronics and Logic Design

#### *2. Year 2*

- i. Linear Algebra

- ii. Computer Architecture and Design
- iii. Data Structure and Algorithm
- iv. Network Analysis and Design
- v. Routing and Switching Essentials
- vi. Numerical Methods
- vii. The Network Operating System
- viii. Microprocessors
- ix. Client Server Computing
- x. Wireless and Mobile Communication

#### *3. Year 3*

- i. Data Communication and Network Security
- ii. Network Programming
- iii. System Analysis and Design
- iv. Fundamentals of Project Management



- v. Network Management
  - vi. Server Administration
  - vii. Broadband Networks
  - viii. Ethical Hacking
  - ix. Project I
  - x. *Elective I*
4. Year 4
- i. Cyber Security
  - ii. Artificial Intelligence
  - iii. Industrial Training
  - iv. Project Dissertation I
  - v. *Elective II*
  - vi. Network and System Administration
  - vii. Project Dissertation II
  - viii. *Elective III*
  - ix. *Elective IV*

<b>Elective I</b>	Distributed Networking
	E-Governance
	Wireless Networking
<b>Elective II</b>	Cryptography
	E-Commerce
	Net Centric Design
	Embedded System Programming
<b>Elective III</b>	Internet Technology
	Advanced Java Programming
	Information Retrieval
	Information Security
<b>Elective IV</b>	Knowledge Management
	Advanced Networking with IPv6
	Cloud Computing
	Innovation Management
	Multimedia Network



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	Scaling and Connecting Network
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\* This BSc programme may not be offered by all centres delivering EurAka University studies. Please contact the University's Registry ([registry@euraka.ch](mailto:registry@euraka.ch)) for enquiries. Registry will inform about study opportunities for this course.