UNIVERSITÉ FRANÇAISE D'ÉGYPTE

UNIVERSITÉ HAUTE-ALSACE · ALLIANCE SORBONNE UNIVERSITÉ / utc · efrei PARIS PANTHÉON-ASSAS UNIVERSITÉ · Université Gustave Eiffel · CY CERGY PARIS UNIVERSITÉ · CESI ÉCOLE D'INGÉNIEURS

BACHELOR OF CYBERSECURITY AND COMMUNICATIONS ENGINEERING

Overview

The Bachelor of Cybersecurity and Communications Engineering is a 4-year engineering program taught in English. Graduates earn an Egyptian bachelor's degree and have the opportunity to pursue a French master's degree in just one additional year through our French partner universities. It allows students to gain international hands-on experience, with various opportunities of knowledge transfer and exposure. This program provides students with a comprehensive set of technical and soft skills essential for addressing modern security and communication challenges in interconnected systems.

WHY STUDY CYBERSECURITY AND COMMUNICATIONS ENGINEERING?

- Earn an Engineering bachelor's degree in just four years.
- Only one additional year is required to earn a master's degree from one of our partner universities in France, which includes a hands-on internship with a monthly salary at a French company. UFE students enjoy the same status as French nationals.
- Qualify for PhD programs worldwide upon completing the French master's degree.
- Engage in practical experiences and summer internships during your studies, bridging the gap between academic knowledge and real-world skills.
- Experience international exposure through visiting professors, fostering a rich environment for knowledge exchange.
- Benefit from 1-2 semester(s) exchange and summer internship programs with our French partner universities.

Program duration	4 years	European Credits (ECTS)	240
French Partner Universities	University of Haute Alsace, Technological University of Compiègne, Gustave Eiffel University, EFREI Panthéon-Assas University Paris II, CY Cergy Paris University, and CESI School of Engineering		
Faculty within UFE	Engineering and Architecture		

POSSIBLE CAREER PATHS:

- Security Engineer / Analyst
- Network Security Engineer
- Communications Engineer
- Cloud/ IoT Security Engineer
- Systems / Infrastructure Security Engineer
- Cyber Intelligence / Malware Analyst
- IAM Engineer
- Information Security Engineer
- Forensic Security Engineer
- Security Architecture Engineer

PROGRAM CONTENTS:

SEMESTER 1

-Mathematics 1
-Physical Mechanics
-Waves and Electromagnetism
-Introduction to Programming
-Eco design
-French Language
-English Language

SEMESTER 2

-Mathematics 2
-Chemistry
-Geometrical Optics
-Logic Design
-Professional Project (Summer Internship)
-Languages Fr & En
-Elective 1

SEMESTER 3

-Technical Drawing
-Introduction to Applied Mathematics
-Project 1
-Languages Fr & En
-Elective 2
-Software Engineering
-Object-oriented Programming

SEMESTER 4

-Statistics and Probabilities
-Structure and Physical Properties of Materials
-Thermodynamics 1
-Project 2
-Elective 5
-Algorithms and Data Structures
-Database Systems

SEMESTER 5

-Virtualization
-Operating Systems
-Introduction to Cybersecurity and Computer Storage
-Penetration Testing and Ethical Hacking
-Languages Fr / En
-Elective 8
• Computer Networks
• Communication Systems
• Exploratory Data Analysis and Visualization
-Elective 9
• Project Management
• Marketing Strategies
• Monitoring and Quality Control Systems

SEMESTER 6

-Digital Signal Processing
-Computer Architecture and Organization
-Cloud Computing & IoT
-Linux Operating System
-Professional Project (Summer Internship)
-Languages Fr / En
-Elective 10
• Computer and Information Security
• Database Security
• Cryptography and Steganography

SEMESTER 7

-Network Security
-Cloud Security and Virtualization
-Blockchain Technologies
-Incident Handling and Response
-Graduation Project 1
-Elective 11
• Advanced Operating Systems Security
• Biometrics
• Advanced Cybersecurity Strategies
• Electric and Electronic Circuits Analysis

SEMESTER 8

-Digital Forensics
-IoT and Mobile Communications and Security
-Malware Analysis
-Graduation Project 2
-Legislation
-Elective 12
 Field Theory
• Security Operation Center
• Vulnerability, Security Assessment and Monitoring
• Threat Intelligence & Risk Management

UNIVERSITÉ FRANÇAISE D'ÉGYPTE

37 Ismailia Desert road,
Al Shorouk City, Cairo 11837, Egypt.

admission@ufe.edu.eg

Mob:
20 127 111 2791
20 155 108 4384
20 155 109 7287

17054

WWW.UFE.EDU.EG