



الجامعة المصرية اليابانية للعلوم و التكنولوجيا
エジプト日本科学技術大学
EGYPT-JAPAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

Cybersecurity

Professional Diploma

Program Overview

As the threat of cyberattacks spreads all over the world at a rapid pace, organizations of all sizes require cybersecurity professionals to protect their data. Cybersecurity is the art of protecting networks, devices, and data from unauthorized access or criminal use to ensure confidentiality, integrity, and availability of information.

Cybersecurity is essential for all technologies including hardware, software, computer systems, smartphones, tablets, smart/intelligent transportation systems, shopping systems, smart homes, financial systems, and industry 4.0. With the advancement in these systems and in information technologies, it is essential to implement effective cybersecurity measures because of the widespread, the diversity, and the complexity of cyberattacks.

This professional diploma prepares you for a professional career in cybersecurity. You will gain the practical skills and theoretical knowledge to secure computer systems, computer networks, data centres, smart systems, industrial systems, etc. In addition, you will be qualified and skilful to perform a security assessment and penetration testing, threat detection, incident response, and digital forensics.

This Cybersecurity professional diploma is offered by the Department of Computer Science and Engineering at E-JUST.



Learning Outcomes

- Identify the complexities and interdependencies in cyber space
- Relegate cyber threats to acceptable risks
- Understanding the fundamental concepts underlying the construction of secure systems, from the hardware to the software to the human-computer interface, with the use of cryptography to secure interactions
- Ability to detect security breaches, preventative security, and offensive security
- Discover cryptography, block chain, cryptocurrencies, the security and privacy of personal data, cyberterrorism, cybercrime, and mobile security
- Mastering the security of operating systems and cloud infrastructures
- Gaining knowledge to carry out experiments in network security, mobile security, and to explore threats and defence mechanisms in the context of the Internet of Things



Program Features

The program is approved from the Supreme Council of Universities in Egypt

- Four in-depth core courses, two elective courses and two labs in cybersecurity.
- A gateway to achieving international certifications such as Certified Ethical Hacker (CEH), Certified Information Systems Security Professional (CISSP), Certified Cloud Security Professional (CCSP), Certified Information Systems Auditor (CISA), Certified Information Security Manager (CISM), Cisco Certified Network Associate (CCNA) Security, and many more



Program Outline

1. Core Courses:

Cyber Security Fundamentals (3 credit hours)

Get introduced to the basic concepts of cyber security such as cyberwarfare, information warfare, cyberspace and cyber battlefield, and cyber doctrinarian.

Digital Forensics Fundamentals (3 credit hours)

Learn the process of digital forensics, what digital forensics tools are being used, and successful investigative methodologies.

Network Security Fundamentals (3 credit hours)

Discover how to create networks secured against theft and unauthorized access. Understand the weaknesses of the TCP/IP protocol and related attacks. Also identify the defences, such as intrusion protection and intrusion prevention.



Introduction to Cyber Physical Systems (3 credit hours)

Explore the Cyber Physical Systems (CPS) discipline and the integration between computation and physical process. You will also learn what are the applications of CPS.

2. Elective courses (3 credit hours):

In addition to the core courses, participants choose 2 elective courses from the list below:

- Fundamentals of Cryptography
- Advanced Topics: Artificial Intelligence and Cybersecurity
- Introduction to Critical Systems
- Basics of Security Architecture and Network Defense
- Fundamentals of Wireless Network Security
- Fundamentals of Industrial Espionage and Counterfeiting
- Fundamentals of Cloud Computing
- Quantum Communication and Cryptography
- Distributed Databases

Who is it for?

The program is designed for local and international individuals, from various academic backgrounds, who want to cater their future professional career in Cybersecurity. To achieve the practical and academic goals, the program seeks fresh graduates, network engineers, IT practitioners, systems administrators, and scholars who want to acquire applied and scientific skills and advance their knowledge and skills in preparation for a career in Cybersecurity.

- Bachelor's degree holders from faculties of Engineering, Computer Science, Informatics.
- Engineers working in the I.T. field

Career Options

- Chief information security officer
- Network security engineer
- Cyber incident analyst
- Forensic Computer Analyst
- Cybersecurity engineer
- Penetration Tester/Ethical Hacker
- IT security manager
- Security Architect
- Security architect
- Information Security Analyst
- Security administrator
- Security Systems Administrator

Admission Requirements:

1. A bachelor's degree from a practical faculty (or any other equivalent national or international certificates approved by the Supreme Council of Universities in Egypt) with satisfactory prior knowledge in relevant disciplines.
2. Showing proficiency in the English language by providing one of the following:
 - TOEFL score of 60 IBT
 - IELTS score of 5.5
 - proof of studying in English
 - passing an English exam conducted by E-JUST
3. Passing the entrance examination.
4. Passing a personal interview.
5. Applicants who do not have educational background may be required to take complementary courses before starting regular courses or in parallel.

How can you apply?

- Visit the link: www.ejust.edu.eg and create an account
- Fill the application and upload all the required documents
- Once you submit the application, you will receive a confirmation email



About CSE

The Computer Science and Engineering department enjoys an enriching environment fostering high quality research and teaching. The department seeks to establish a clear understanding of subject matters and encourages open discussions to strengthen the learning process. The department tackles interesting problems with direct relation to society.

The CSE department was successful in attracting various research grants and has strong relationships with universities in many countries such as Japan, France, Italy, and USA. The department owns many embedded devices, sensors, and robots.

About E-JUST

Egypt-Japan University of Science and Technology (E-JUST) is a research-oriented university with the determination to improve the academic environment and become a benchmark for Egyptian and African countries in higher education. The university was established in May of 2009 based on a bilateral agreement between the Egyptian and Japanese governments. In 2010, it accepted the first batch of graduate students and started the excellence journey.

In September 2017, E-JUST reached another milestone when it inaugurated the Faculty of International Business and Humanities (FIBH). It was also in that year that the university began accepting high school students in both the Faculty of Engineering and the Faculty of International Business.

The partnership between both governments is extremely strong to ensure the ease of the educational journey of students. The Japan International Cooperation Agency (JICA) fully supports E-JUST by sending their experts to assist and guide in the technical transfer and management of the university. JICA also sends academic experts from the Japanese Cooperating Universities (JCU) to support in teaching, joint research and co-supervising the graduate students. In addition, JICA provides state-of-the-art equipment and tools for educational and research purposes. As for the Egyptian government, it fully supports the university's needs from capital to operating expenses.

All decisions that govern the university are done through its Board of Trustees (BoT) members, which is comprised of 20 prominent figures from Egypt and Japan. The Egyptian side includes a representative of the Ministry of Foreign Affairs, a representative of the Ministry of International Cooperation, and a representative of the Ministry of Higher Education. Whereas the Japanese side includes the Senior Vice President of JICA, a representative of the Ministry of Education, Culture, Sports, Science and Technology, and a representative of the Ministry of Foreign Affairs, and the presidents of five leading Japanese universities.





For More Information

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