



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 EJ-UST. TrendMicro, a leader Japanese cybersecurity company, is the industrial partner with E-JUST offering this Diploma. TrendMicro will assist in teaching courses by leading professionals in Cybersecurity.



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

- Case studies by experts working in technological giants such as Trend Forward Capital, Forescout Technologies, Wedge Network, Magalix
- Some lectures and practical training will be offered by TrendMicro (a leading Japanese cybersecurity company)
- 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
- Cyber incident analyst
- Cybersecurity engineer
- IT security manager
- Security architect
- Security administrator
- Network security engineer
- Forensic Computer Analyst
- Penetration Tester/Ethical Hacker
- Security Architect
- Information Security Analyst
- Security Systems Administrator

Diploma Tuition Fees

The fees for this diploma are 45,000 EGP (2,250 EGP/credit hour) for the duration of 1 year (20 credit hours).

15% scholarship applied for first batch applicants.

25 % scholarship applied for corporate applicants.

How can you apply?

- Visit the link <https://executive-admission21.ejust.edu.eg/login> and create an account
- Fill the application and upload all the required documents
- Once you submit the application, you will receive a confirmation email



Instructors

Program Director: **Dr. Samir Elsagheer, Associate Professor of CSE, E-JUST:** samir.elsagheer@ejust.edu.eg
[Academic Profile \(ejust.edu.eg\)](#)

Faculty members of CSE

- Dr. Samir A. Elsagheer, Associate Professor of CSE, E-JUST, [Academic Profile@E-JUST](#)
- Prof. Ahmed El-Mahdy, Professor of CSE, E-JUST, [Academic Profile@E-JUST](#)
- Prof. Amin Shoukry, Professor of CSE, E-JUST, [Academic Profile@E-JUST](#)
- Dr. Ramy Zewail, Assistant Professor of CSE, E-JUST, [Academic Profile@E-JUST](#)

Faculty Members from outside E-JUST

- **Dr. Ahmed Taha**, Assistant Professor, Computer Science Department, Faculty of Computers & Artificial Intelligence, Benha University, Benha, Egypt. [Academic Profile](#)
- **Dr. Mohamed Taha**, Associate Professor, Computer Science Department, Faculty of Computers & Artificial Intelligence, Benha University, Benha, Egypt. [Academic Profile](#)

Specialists from Industry

- **Dr. Wael Mohamed**, Formar President, Trend Forward Capital; Chief Executive Officer at Forescout Technologies Inc., Dallas, Texas, United States; Chairman of the Board of CYSIV Cybersecurity Monitoring and Management Services Company; Co-founded Third Brigade, a cybersecurity company focused on providing enterprise-class. [LinkedIn Profile](#)
- **Dr Hossam Kenawi**, President, founder and & Chief Scientist of Wedge Network, <https://www.wedgenetworks.com/> Canadian network security company
- **Dr Mohamed Ahmed**, CEO and founder of Magalix, <https://www.magalix.com/> American cloud security company
- Experts of cybersecurity professionals from TrendMicro.

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.





ABOUT TRENDMICRO

Trend Micro, a global cybersecurity leader, helps make the world safe for exchanging digital information.

Fueled by decades of security expertise, global threat research, and continuous innovation, our cybersecurity platform protects 500,000+ organizations and 250+ million individuals across clouds, networks, devices, and endpoints.

Trend Micro provides the practical training related to the diploma.



For More Information

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