

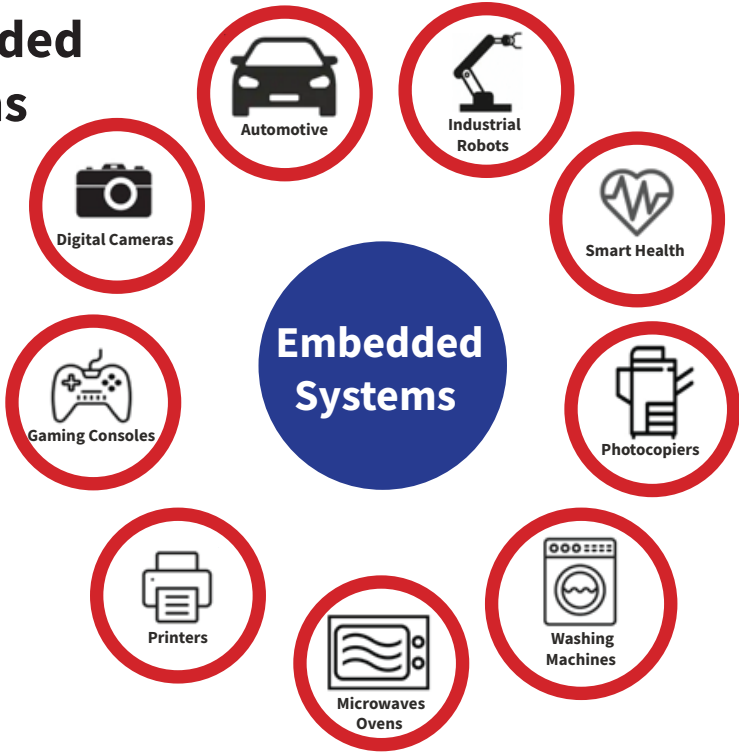


الجامعة المصرية اليابانية للعلوم والتكنولوجيا
エジプト日本科学技術大学
EGYPT-JAPAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

**Professional
Diploma**

**Embedded
Systems**

Embedded Systems



Why Embedded Systems Diploma from E-JUST

Studying in E-JUST enables you to become part of the most advanced university in Egypt and the Middle East. The diploma offers the main and most needed knowledge and practical experience in Embedded Systems Design. It allows you to fully understand the mandatory concepts to be an Embedded Systems Engineer. You will be instructed and trained by world class professors from E-JUST and experts who are already in this field for years. Through the diploma labs you will be able to develop your own Embedded System

What is Embedded Systems

An embedded system is a microprocessor- or microcontroller-based system designed to carry out computation for real-time operations. It has hardware and software designed to perform dedicated functions within a larger system. Embedded systems' complexity range from a single microcontroller to a suite of processors with connected peripherals and networks. The complexity of an embedded system varies significantly depending on the task for which it is designed. Embedded system applications range from washing machines and microwaves to hybrid vehicles and avionics

Career options

Demand for embedded systems engineer is massive in fields like Medical Electronics, Automobiles, Toys, Consumer Electronics, Home appliances, Food industry, Telecommunication, Industrial machines, Agriculture, Construction, or simply everywhere. Lot of career opportunities are available in embedded systems. Some of them are; Embedded Software Engineer (firmware), System Software Engineer (kernel & RTOS), Application Software Engineer (device drivers), Software Test Engineer, Embedded Hardware Engineer



Embedded systems are managed by microcontrollers, digital signal processors (DSP), application-specific integrated circuits (ASIC), or field-programmable gate arrays (FPGA). These processing systems are integrated with components dedicated to handling electric and/or mechanical interfacing. Embedded systems programming instructions, referred to as firmware, are stored in read-only memory or flash memory chips, running with limited computer hardware resources. Embedded systems communicate with the outside world through peripherals

Embedded System Trainer. With a Professional Diploma degree in Embedded Systems, you will excel in this most exciting and rewarding field with potentially very attractive income. Likewise, a Diploma degree in Embedded Systems allows you to move on to a Master degree M. Eng. And subsequently to a career in academia and research institutions



Program Features

The Embedded Systems diploma is offered by the Department of Electronics and Communications Engineering at E-JUST. This professional diploma provides a broad introduction to the field of Embedded Systems. This diploma program have the following aims

- To provide students with a profound understanding of the scientific background of the embedded system field
- To familiarize students with architectures of hardware and software systems for embedded applications
- To provide students with practical skills in using computer-aided design tools
- To acquaint students with design models, languages and techniques for all levels of the design process of embedded systems in heterogeneous applications
- To give students hands-on experience in industry-related embedded systems projects
- To develop students' communication, interpersonal, and team working skills

The program duration is one year (20 credit hours). Participants have to pass 4 core courses (12 credit hours), 2 labs (2 credit hours), and two elective courses (6 credit hours) as follows:

Core Courses

- Introduction Embedded Systems
- Embedded C Programming
- Data Structures and Algorithms
- FPGA-based System Design

Labs

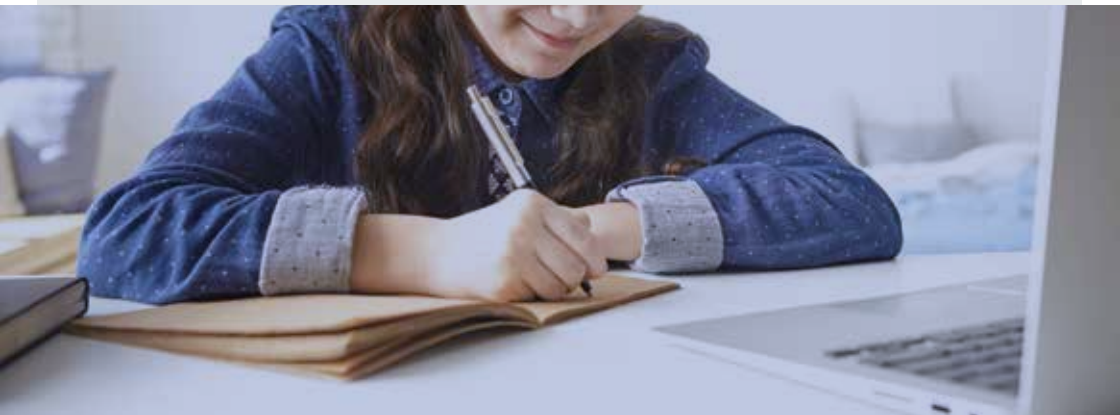
- Embedded Systems Lab1
- Embedded Systems Lab2

Elective courses

- Electronics Design Principles
- Hardware/Software Interfacing
- Embedded Systems Hardware Design
- Software Engineering Principles
- Embedded OS Platform Applications
- Introduction to IoT
- Network Security

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 to apply

- Create an account through the link www.ejust.edu.eg
- Submit all required documents
- You'll receive a confirmation email for your submission

About E-JUST

Egypt-Japan University of Science and Technology (E-JUST) is a research-oriented university with the determination to cultivate an 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. Later in 2010, it was ready to accept its first batch of graduate students and start 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 the ECE Department

The Department of Electronics and Communications Engineering (ECE) at Egypt-Japan University of Science and Technology provides research oriented education, based on the best Japanese engineering research and education practices, through five research laboratories, namely, Photonics Systems, Wireless Communication Systems, Digital and Embedded Systems, RF and Microwave Engineering and Image and Video Processing

The partnership with the Graduate School of Information Science and Electrical Engineering (ISEE), Kyushu University, and the internship of our graduate students in the research laboratories of our Japanese counterpart, ensure that our students are exposed to research directions in the fields of electronics and communications

A double degree program (DD) for Ph.D. students has been initiated between the ECE department and the ISEE School



For more Information

Please email the Industry Training Unit (ITU):
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