

## Cybersecurity Educational Programs for MSMEs

### A) Government supports the following cyber security programs in universities:

#### “These Programs are under the supervision and support of the Egyptian Supreme Council of Universities”

- A Bachelor’s program that combines the study of Networks and Cyber Security at the Faculty of Computer engineering in most of Egyptian Universities:
  - Cairo University Program:
    - A bachelor's program that combines the study of networks and **cybersecurity** at the Faculty of Computing and Artificial Intelligence.
  - Ain shams University Program:
    - ASU Offers Training Program on **Cyber Security** the training program in cooperation with the United States Agency for International Development at **West Virginia University in the field of cybersecurity**.
  - Alexandria University cyber security Program:
    - Objectives of Cybersecurity Program:
      - 1- Analyze, design, and build **secure IT systems**.
      - 2- Provide the necessary support, management and maintenance to ensure the effective and **efficient performance of information technology and security systems**.
      - 3- **Identify, analyze and mitigate threats to IT systems or networks**.
      - 4- **Investigate electronic events/IT crimes, systems, networks and digital evidence**.
      - 5- Gathering and analyzing **cybersecurity information** that may be used to develop protection for systems and networks.
      - 6- Analyze, review and evaluate available cybersecurity information to determine its usefulness for investigations.
      - 7- Provide leadership, management, and guide for individuals and organizations to act effectively and consciously toward cybersecurity
  - Helwan University Cybersecurity Program:

The Faculty of Computers and Artificial Intelligence at Helwan University, offered a set of graduate programs, including the cybersecurity program in the three stages (diploma - master - PhD).

- [Egypt University of Informatics.](#)
- This university provide “**Professional Masters in Information Security**” agreement with **Purdue University West Lafayette** (ranked #6 in Cyber Security in US. News, in 2021)
- A full **Cybersecurity Track** under Computing and Information Sciences Program.
- **Nile university also offers MCs, PhD degree in information security:**
  - Offers **Information Security Masters** conduct security research and education. It aims to be the national initiative for the leading CIT security sector in Egypt and the region.
  - Offers **Information Security PhD** track The research of this track includes but not limited to novel ideas in cryptography, operating systems and mobile applications security, security in wireless ad-hoc networks, digital forensics, penetration testing, malware analysis, security incident handling, risk management, and systems exploitation.
  - [Egypt-japan university of science and technology :](#)
  - 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.
  - [Cyber talent Academy :](#)
  - Cyber Talents offers a” **Cybersecurity Academy Program** where that provide different cybersecurity academic courses to all governmental universities to deliver to students with flexible hands-on labs to build and grow students’ technical skills”.

## **B] Government developed DEBI program:**

MCIT launched Digital Egypt Builders Initiative “DEBI” with cooperation of Ottawa University in Canada to offer **Master’s degree in electrical, computer engineering**, to empower the next generation of Egyptian young graduates of engineering and computer science colleges to become leaders at the global level and be capable of implementing Egypt digital vision.

The [initiative](#) offers, annually, a **free scholarship** to 1,000 top graduate students from Faculties of Engineering departments of Computer, Communications, Electronics, Biomedical or Faculties of Computer Science, or Faculty of Science Department of Mathematics (Computer Science), It include **a full Cybersecurity track with a Master degree** that aims to graduate outstanding young cadres in the latest areas of information and communication technology including comprehensive [cyber security program](#).

EG-CERT collaborated with 2 workshops in 2020, 2021 for more than 40 students about various cybersecurity topics such as incident handling, digital forensics and malware analysis.

The educational objectives of the DEBI Cybersecurity program are:

- To develop skilled workforce to help protect Egypt from potential cyber-threats, while ensuring the alignment of security priorities with the business needs and strategies of the country
- To provide graduates with the necessary knowledge and skills required to protect and defend computer systems and networks
- To prepare graduates who can identify, analyze, and remediate computer security breaches
- To prepare graduates who can plan, implement, and monitor cyber security mechanisms to help ensure the protection of information technology assets.

### **C ]Government initiatives to support cyber security programs:**

- The **NTRA** has signed a joint cooperation protocols with **the Arab Academy for Science:**
  - **To exchange expertise and training programs**, as well as improve research and development aspects. AASTMT is considered an educational as well as a training institute which aims to provide **several training programs including Cybersecurity programs** as well as activities, and prepare specialized cadres in information technology.
- **EG-CERT:**
  - **“EG-CERT offers a cybersecurity training programs”**
    - Program to Prepare Cadres to **Encounter Cyber Threats**
    - Program to prepare human calibers and expertise necessary to implement the **cybersecurity system** in various sectors as a part of its **“National Cybersecurity Strategy”**.

The program is to be implemented in cooperation and partnership between governmental entities, the private sector, **universities** and CSOs, based on the leading experience carried out by the National Telecom Regulatory Authority (NTRA).
- **MCIT** collaborated with the Information Technology Industry Development Agency (ITIDA) :
  - to set a program that **support capacity building and certifying young calibers** on the recent advances in communication and information technologies and **Cyber defense Programs (1) (2)**, objectives of these courses:
    - o Building capacity and certifying young calibers on the recent advances in communication and information technologies.

- o Increasing the competitiveness of local ICT companies by facilitating their training and capacity building plans.
- o Supporting creation of job and business opportunities for the youth through wage employment, freelancing, or startup establishment.
- o Forming nationwide mentoring and review networks in leading technologies to act as platform for fostering innovation and entrepreneurship.

- The **Ministry of Communications and Information Technology** in partnership with Cisco Global Corporation (Cisco Systems):

MCIT announce for ([the Initiative of Cybersecurity by Using Distance Learning](#)) to enhance the digital culture of dealing with data and using the **Internet safely**, in a way that contributes to strength the protection of personal data and privacy when using social media via the Internet.

- **ITI** Institute of Information Technology :
  - Provide information technology and [Cyber security programs onsite/online](#) learning platform "[Mahara-Tech](#)" that offers high-quality courses authored by Information Technology Institute ITI.