CIT
CANADIAN INSTITUTE OF TECHNOLOGY

BACHELOR PROGRAM

—

COMPUTER ENGINEERING & IT

OUR **BACHELOR** PROGRAMS

Canadian Institute of Technology offers high quality educational programs ranging from Bachelor in Business Administration, Business Administration and IT, Finance & Accounting, Software Engineering, Telecommunication Engineering, Computer Engineering & IT, Robotics & Mechatronics Engineering and Electronics Engineering. Designed for students interested in pursuing a career in these fields, you will get a start in the job market, and may gain exemptions from professional qualifications.

You will develop a professional understanding of these programs, applicable to real world jobs.

Canadian Institute of Technology commits on delivering quality education through its highly qualified domestic academic staff with teaching experience abroad as well as international academic staff.

Study with McGraw Hill, one of the biggest educational publishers in the world.

Improve your English skills and increase employment opportunities by gaining access to an international career.

A connected and supportive network

Teaching process is based on the best international educational practices, empowering graduates with creative, innovative, entrepreneurial skills, and a passion for knowledge.

WHY BACHELOR IN
COMPUTER ENGINEERING AND INFORMATION TECHNOLOGY

The Bachelor of Computer Engineering and Information Technology (BSc in CE&IT) program has been carefully crafted from the ground-up to prepare students with the knowledge and skills needed to thrive in the ever-expanding and diverse market of technology and computer engineering. The BSc in CE&IT has been designed by experienced academics of CIT (Canadian Institute of Technology) with both industrial and academic experience. This makes the offering of this program especially relevant for students wishing to enter this market well prepared.

Students studying this program will gain a strong foundation in the field of computer engineering with modules from computer science, electronics and telecommunications. This is especially pertinent with networking systems increasingly becoming more software defined with such systems as Software Defined Networks (SDNs) and Software Defined Radios (SDRs). Students on the CE&IT program will acquire knowledge of both software and hardware systems.

In summary, students will commence their study by learning about the architecture of a computer and computer systems, the integration of hardware and software, operating systems to support the hardware, various programming languages (both high-level and low-level), software engineering methods, engineering design and database management. Students will also acquire communication skills that is often overlooked in many academic programs. The students will also be taught robust engineering design principles for both hardware and software systems.

The purpose of this study program, Bachelor in Computer Engineering and Information Technology, is to ensure the preparation of specialists in the field of computer engineering based on the most advanced programs of the time. The degree program has a unique course of study that gives students basic engineering concepts and through knowledge of the main features of the processing of the information systems, both in hardware and in the software.
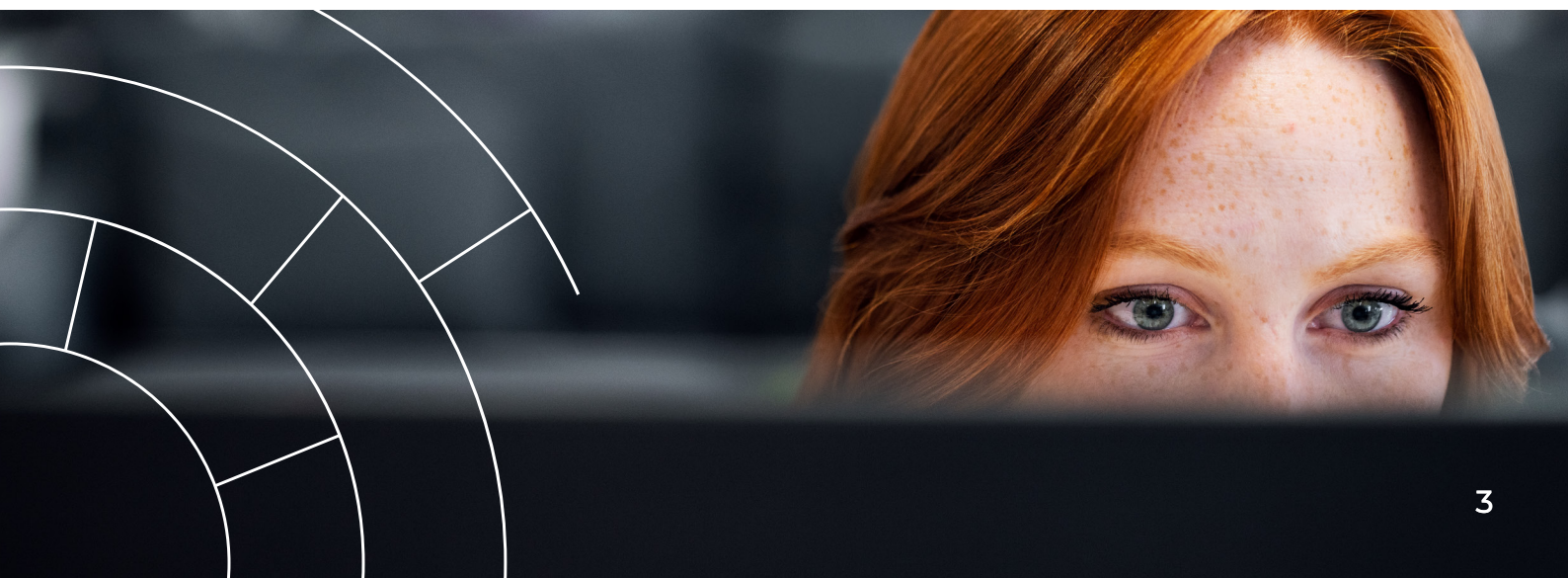
TARGET SKILLS

Utilise their comprehensive knowledge of computing, electronics, mathematics and engineering design principles in developing solutions in industry requiring computer engineering expertise.

Implement the full digitalisation of industry utilising both hardware and software skills.

Acquire a solid understanding of the software development life cycle and processes from the early design stages to the long-term software maintenance and evolution.

Have the competent ability to construct automated and robotic systems in the context of physical systems and real-world applications.

Deploy Internet-of-Things (IoTs) in diverse fields such as in agriculture and medical systems.

Design and program sensors for improved HCI (human computer interaction) providing culturally adapted usability and accessibility.

Apply established engineering design principles to hardware and software development including trade-off analyses in terms of performance and cost.

Nurture and grow the skills necessary to plan and manage large industrial computer engineering projects.

Learn interpersonal skills in order to work both independently and in a team.

Comprehend engineering economics and entrepreneurship in engineering practice whilst adhering to ethical and moral principles.

Be able to communicate precisely, orally and in writing; conveying the knowledge and skills in computer engineering in an uncomplicated way to non-technical stakeholders.

Proficiently utilise the knowledge from the other related areas of engineering, mathematics and complementary studies

Above all to be a world-class future Computer Engineer, lifelong learner and contributor to the wellbeing of the world and its ecosystem

TYPICAL CAREER OPPORTUNITIES

Graduates of the Computer Engineering and Information Technology program have a wide range of career opportunities available to them. Some of the most common career paths for Computer Engineering and Information Technology graduates include:

- Computer Engineer Technician;
- IT Specialist
- Computer Network Manager
- IT System Administrator
- Software Developer
- Systems Analyst

- Database Developer
- Database Administrator
- Database Design
- Conceiving and Information Processing Systems
- Developer

BACHELOR IN
COMPUTER ENGINEERING AND IT

First Year

FIRST SEMESTER COURSES

- Academic Reading and Writing
- Introduction to Economics
- Calculus I
- Computer Applications
- Elective Subject

Choose one of:
- Introduction to Psychology
- Introduction to Research Methods

SECOND SEMESTER COURSES

- Computer Science Fundamentals
- Introduction to Statistics
- Linear Algebra
- Computer Communications and Networks
- Physics I

Second Year

THIRD SEMESTER COURSES

- Physics II
- Electric Circuits
- Computer Architecture and Assembly Language/Microprocessor Systems
- E-commerce and Innovation
- Calculus II

FOURTH SEMESTER COURSES

- Introduction to Software Engineering
- Engineering Simulations
- Engineering Chemistry
- Calculus III
- Digital Logic

Third Year

FIFTH SEMESTER COURSES

- Database Systems
- Introduction to Web Design
- Introduction to Operating Systems
- Introduction to Photonics
- Elective Subject

Choose one of:
- Technology in Society
- Software Project Management
- Basic of Telecom

SIXTH SEMESTER COURSES

- Signals and Systems
- Operating Systems II
- Embedded Systems

• Internship

The Internship Course takes place in the third year of bachelor studies, spanning 4 weeks (120 hours) and earning 6 ECTS credits. It offers practical experience in real-world scenarios, enhancing critical thinking, innovation, and design skills. Through collaboration with professionals, students learn to address challenges, meet objectives, and explore novel ideas in commercial devices, systems, or software. The internship should align closely with their field of study.

Objectives of the Internship Course:
a. Bridge the gap between theory and practical implementation.
b. Cultivate skills within a professional work environment.
c. Provide valuable job market experience.
d. Contribute to market-related opportunities.

• Thesis

The undergraduate diploma thesis is an integral part of the final semester of the program. It is valued at 6 credits in the first cycle academic and professional higher education study program in Computer Engineering and Information Technology.

The diploma thesis can be prepared at the same time as other study requirements are completed in the third year, and the submission and defence of the diploma thesis is the final component of first cycle studies. Theses is the ultimate obligation of the student to get a diploma at the end of the study program. It is an individual research work, which the student performs during the last year of the studies. The thesis can guide their master's studies and career as well.

HOW TO APPLY

Bachelor's Programs (National Students)

The first step to become a student at CIT is to complete the application form, which is available at **www.cit.edu.al**. An Admissions Officer will then contact you to provide further details about the pre-registration process and the required documents for this stage.

NOTE: Completing the A1/A1Z form on e-Albania portal and the online form in U-Albania portal are fundamental steps for your enrollment.

Admission Criteria
To be admitted to the bachelor's study programs, the candidate must have:
• Successfully completed high school;
• A high school GPA of 6.5 and above;
• Demonstrated English language proficiency at the B1 level or higher.

All high school students must include University College "Canadian Institute of Technology" as one of their 10 choices in the U-Albania System to register at our university.

SCAN ME

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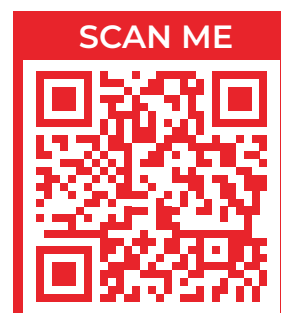
Bachelor's Programs (International Students)

The first step to become a student at CIT is to complete the application form, which is available at **www.cit.edu.al**. An Admissions Officer will then contact you to provide further details about the pre-registration process and the required documents for this stage.

Admission Criteria
To be admitted to the bachelor's study programs, international candidates must meet the following requirements:
• Hold a high school diploma recognized by the Albanian Education Service Center;
• A high school GPA of 6.5 and above;
• Demonstrated English language proficiency at the B1 level or higher.

International students are required to apply to the Albanian Education Service Center (QSHA) for the recognition of their high school diplomas.

SCAN ME

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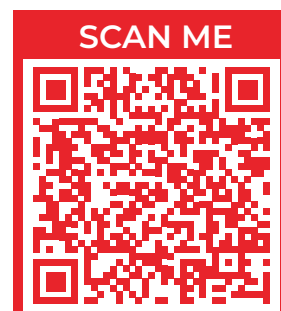
OPEN YOUR DOOR
TO THE WORLD

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