CIT
CANADIAN INSTITUTE
OF TECHNOLOGY

BACHELOR PROGRAM

TELECOMMUNICATION ENGINEERING

www.cit.edu.al

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 **TELECOMMUNICATION ENGINEERING**

The Bachelor of Telecommunications Engineering program has been composed with subjects from telecommunications, computer engineering, electronic engineering and mathematics to create professional telecommunication engineers. Academic staff from both industry and academia with many decades of experience contribute to the successful delivery of this program.

The telecommunication industry continues to expand all over the world with a dire shortage of competent and well-rounded professional engineers who have these multi-disciplinary skills required to work effectively.

Core subjects related to telecommunications include digital communications, signal processing, mobile communications, computer communication, networks, antenna and wave propagation with a solid mathematical and programming foundation. As the trend of moving into software systems continues to permeate the industry, the course covers programming, embedded systems and internet technologies. This will help students to work with Software Defined Networks and Radios. Engineering design, ethics and economics are also taught as recommended by the international professional institutions. Many courses include design and measurement laboratories as an integral part of them, to strengthen the interaction between mathematical models and experimental reality.

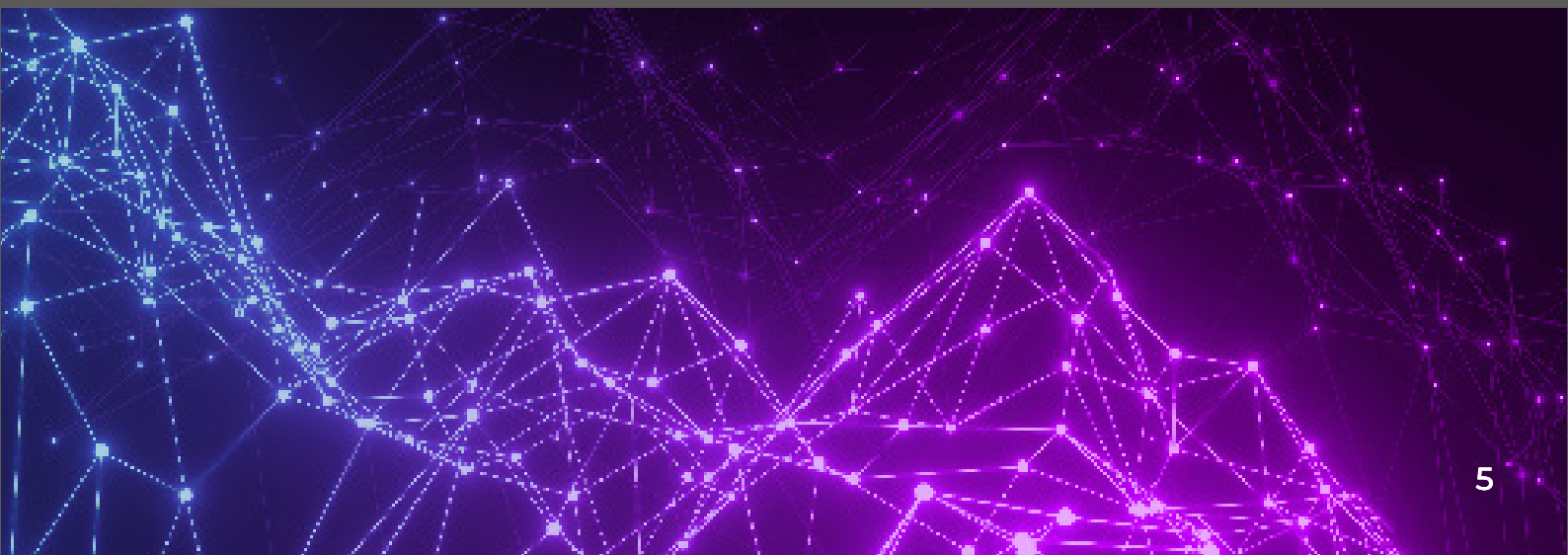
Students studying this program will graduate with a strong foundation in the field of telecommunication engineering with practical experience obtained by the chance to apply for an external industrial internship and the completion of a thesis addressing a real-world telecommunication engineering problem.

TARGET SKILLS

- Utilise their comprehensive knowledge of communications, signal processing, programming, electronics, mathematics and engineering design principles in developing solutions to deploy networks and telecommunications links.
- Diagnose, fault-find networks and communication link breakdowns and resolve them.
- Implement the full digitisation of the telecommunications 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 which is especially relevant for working with Software Defined Networks and Radios.
- Deploy Internet-of-Things (IoTs) in diverse fields from the nano-to the city-wide scale.
- Help in the deployment of 5G and be the architects of 6G.
- Apply established engineering design principles to hardware and software development including trade-off analyses in terms of performance and cost.
- Plan and manage both the terrestrial and space segment of a communication network.
- Learn interpersonal skills in order to work both independently and in a multi-cultural team.
- Comprehend engineering economics and entrepreneurship in engineering practice whilst adhering to ethical and moral principles.
- Communicate precisely, orally and in writing; conveying the knowledge and skills in an uncomplicated way to non-technical stakeholders, managers and consumers.
- Above all to be a world-class future Telecommunications Engineer, lifelong learner and contributor to the wellbeing of a connected world.

TYPICAL CAREER OPPORTUNITIES

- Mobile Communications Industry
- Satellite Communications Industry
- Aerospace & Defence Industry
- Cloud Storage & Solution Architect
- Software Protocol Developer
- Embedded System Developer
- Multimedia System Designer
- Network Manager & Consultant
- Radio & TV Broadcasting Industry
- Audio & Video Surveillance Engineer
- Network & Cybersecurity Consultant
- Internet Broadcasting Services
- Healthcare Informatics
- Field Engineers/Outside Plant Engineers
- Optical Network Engineer
- Radio Access Planner



BACHELOR IN **TELECOMMUNICATION ENGINEERING**

First Year

FIRST SEMESTER COURSES

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

Choose one of:

- Introduction to Psychology
- Research Methods
- History of Economics
- Internet Technologies

SECOND SEMESTER COURSES

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

Second Year

THIRD SEMESTER COURSES

- Fundamentals of Programming I
- Physics II
- Electric Circuits
- E-commerce and Innovation
- Calculus II

FOURTH SEMESTER COURSES

- Fundamentals of Programming II
- Digital Logic
- Engineering Chemistry
- Calculus III
- Basic of Telecommunication

Third Year

FIFTH SEMESTER COURSES

- Introduction to Wireless Communication Systems
- Project Management
- Antenna and Wave Propagation
- Digital Transmission
- Security Engineering

SIXTH SEMESTER COURSES

- Signal and Systems
- Embedded Systems
- Elective Subject

Choose one of:
- Algorithms and Web-based Systems
- Mechanics for Engineering
- Quality Assurance
- Signal and Systems
- Microprocessor 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.

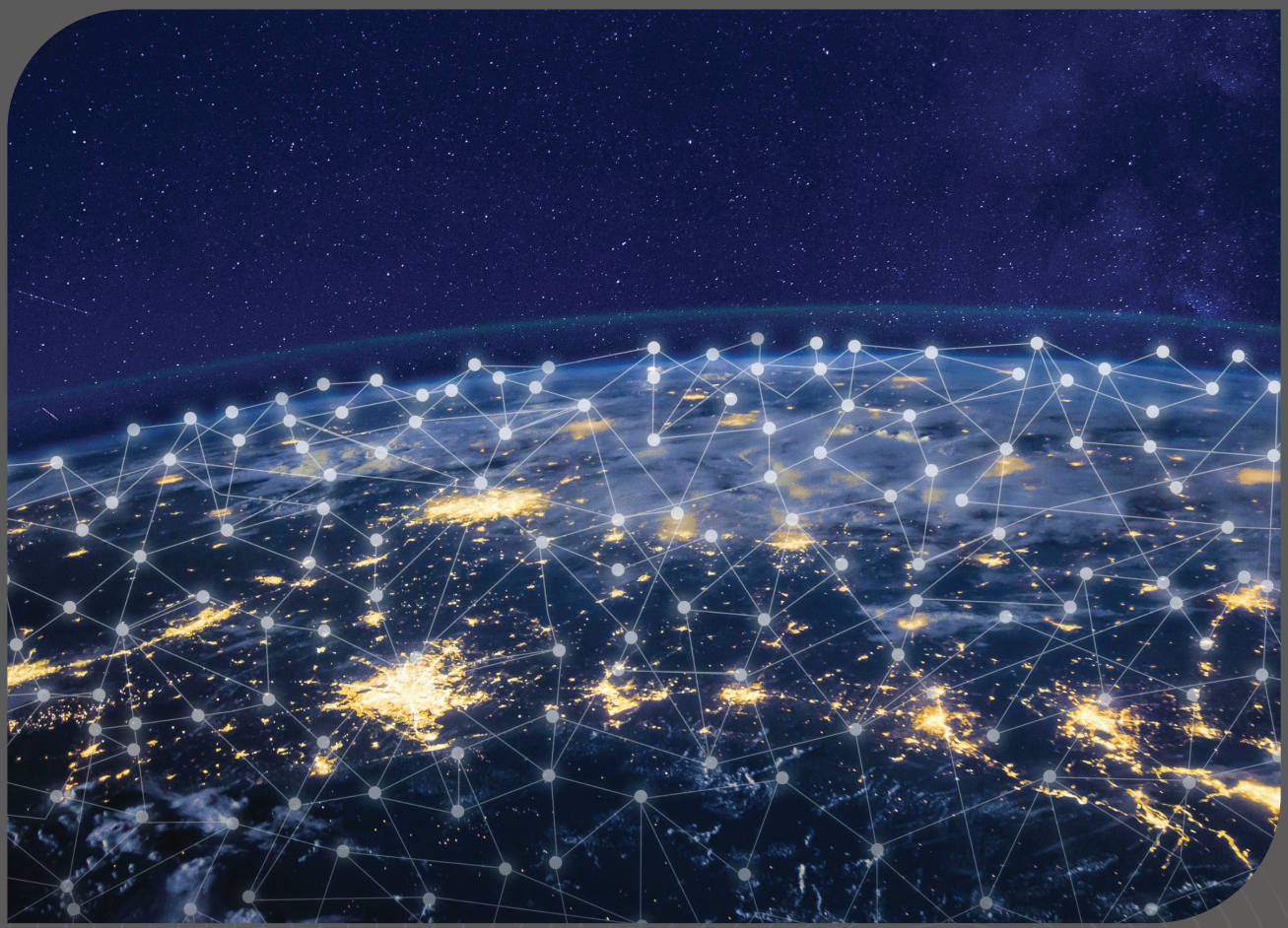
d. Contribute to market-related opportunities.

• **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 Telecommunication Engineering.

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

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**

Canadian Institute of Technology
Str. "Xhanfize Keko" No.12
("Xhura" Complex near TV Klan)
Tirana-Albania
+355 (0) 42 22 9778 | +355 (0) 67 40 42 042
info@cit.edu.al
www.cit.edu.al

Canadian Institute of Technology
Canadian Institute of Technology - CIT
@CITECHNOLOGY
canadian_institute_of_tech