

# R&T | RÉSEAUX INFORMATIQUES ET TELECOMS

## University Bachelor of Technology (B.U.T.) Networks & Telecommunication

**Computer networks** are at the heart of our social and professional lives with the rise of teleworking, mobile communications, transportation, high-speed networks and access to information. These evolving technologies involve deploying infrastructures, configuring computer networks, virtualizing services, managing data flows and dealing with new cybersecurity issues.

The Bachelor of Technology (B.U.T.) in Networks & Telecommunications (R&T) is designed to meet the growing demand for skills in the sectors of information and communication technologies.

The B.U.T. in R&T provides solutions to these challenges by offering a three-year degree program which trains senior technicians to implement, configure and maintain equipment and information systems, while ensuring their physical safety and software security. The course revolves around Networks and Telecommunications, as well as IT skills and five specialized study tracks.

Professional opportunities for graduates include: network administrator, systems administrator, IT asset manager, senior operations and maintenance technician, cloud and data storage architect, DevOps, senior cybersecurity technician, IT business manager.

### Competence-based learning.

The **Cybersecurity study programme** trains qualified technicians to develop the required skills for all jobs related to the security of information systems, from the installation of security equipment (firewalls, network probes) to their monitoring. Graduates will be able to define a company's cybersecurity policy and set the framework for the use of digital resources. They can also operate secure information systems compliant with current regulations such as the GRDP law and governmental recommendations (ANSSI), imposed by the current context.

#### Skills / learning units:

This course aims to develop five core graduate skills called UEs (*unités d'enseignement* / learning units):

- UE1: Administering networks and the Internet
- UE2: Connecting businesses and users
- UE3: Programming: creating IT tools and applications for Networking & Telecommunications
- UE4: Administering a secure information system
- UE5: Monitoring a secure information system

Every class of a semester is **mandatory**. Each learning unit (UE) accounts for 4 to 11 ECTS ; validating all the semester units is required to validate a full semester.

**French-taught programmes**  
Attending all classes is mandatory

### Semesters open to international students.

Programme of studies: **Cybersecurity**

- **Semester 3** (Autumn)
  - Requirements : 60 ECTS in IT & networking
- **Semester 5** (Autumn)
  - Requirements : 120 ECTS in IT & networking
- **French B2/C1**

**F CHAMBER 01**  
Annecy-le-Vieux  
campus



**061 - IT**  
Practical  
teaching & learning



**30-35 hrs a week**  
of study & projects  
in computer rooms



## Semester 3 - Courses, Skills (UE) & ECTS.

Courses	UE1	UE2	UE3	UE4	UE5	Weight
Campus Networks	.	.		.		2
Advanced Network Services	.			.	.	2
Directory services	.			.	.	2
Digital transmission chains		.				1.3
Project1: Implementing a system		.				3.2
Programming Consolidation			.	.		0.9
Event Driven Programming			.	.		0.6
Managing a database system		.	.			0.4
Project2: communicating apps	.		.			2.7
Professional English	.	.	.			1.2
Professional Communication	.	.	.			0.9
Guidance	.	.	.			0.4
Mathematics: Fourier analysis	.	.	.			1.2
Project Management 2	.	.	.			0.6
Pentesting methodology				.	.	3.3
Project4: Discovering pentesting				.	.	2.5
Project5: Designing a secure network	.	.		.	.	4.8
<b>ECTS</b>	<b>8</b>	<b>6</b>	<b>7</b>	<b>5</b>	<b>4</b>	<b>30</b>

## Semester 5 - Courses, Skills (UE) & ECTS.

Course List	UE1	UE2	UE3	UE4	UE5	Weight
Operator Networks	.	.	.			2.5
Access Networks	.	.	.			2.5
Project management 3	.	.	.			1
Communication	.	.	.			2
English: Professional integration 1	.	.	.			1.2
Guidance	.	.	.			0.6
Project 1 - A technical solution	.	.	.			5.8
Projet 2 - Manage an IT project	.	.	.			1.5
Secure architectures				.	.	3
Security audits*					.	3
Norms, standards and risk analysis				.		1.9
Project 3 - Advanced security				.	.	5
<b>ECTS</b>	<b>7</b>	<b>4</b>	<b>6</b>	<b>7</b>	<b>6</b>	<b>30</b>