

Information and Communication Technologies

full time - bachelor's degree

First course

First Semester

Nº	Course	Hours	Final Exam	Ongoing Assessment
Compulsory Courses				
1	Linear Algebra	60	X	
2	WEB Design Basics	60	X	
3	Fundamentals of Information and Communication Technologies	60	X	
4	Applied Electrical Engineering and Electrical Measurements	60	X	
5	English Language	60		X
6	Physical Training and Sport	15		
Elective Courses				
1	English Language	60		X
2	Teamwork	45		X

Second Semester

Nº	Course	Hours	Final Exam	Ongoing Assessment
Compulsory Courses				
1	Mathematical Analysis	60	X	
2	Algorithmization and Programming Fundamentals	60	X	
3	Basics of Digital Electronics	60	X	
4	Computer Organization and Architecture	60	X	
5	English Language	60		X
6	Physical Training and Sport	15		X
Elective Courses				
1	English Language	60		X
2	Search Engine Optimization	45		X
Educational practice				
1	Practical Training 1	45		X

Second course

Third Semester

Nº	Course	Hours	Final Exam	Ongoing Assessment
Compulsory Courses				
1	Discrete Structures	60		X
2	Windows Operating Systems	60	X	
3	Cybersecurity Basics	60	X	
4	Introduction to Computer Networks	60	X	
5	Object-oriented Programming Basics	60	X	
Elective Courses				
1	English Language	120		X
Educational practice				
1	Practical Training 2	30		X

Fourth Semester

Nº	Course	Hours	Final Exam	Ongoing Assessment
Compulsory Courses				
1	Operations Research	60		X
2	Computer Networks: Routing and Switching	60	X	
3	Unix and Linux Operating Systems	60	X	
4	Database Design and Administration	60	X	
5	Information Theory and Error Control	45		X
6	Microprocessors and Microcontrollers	60	X	
7	Course Project (on a second and third semester subject)	30		X
Elective Courses				
1	English Language	120		X

Third course

Fifth Semester

Nº	Course	Hours	Final Exam	Ongoing Assessment
Compulsory Courses				
1	Computer Networks: Scaling Networks	60	X	
2	Administration of Windows Operating Systems	60	X	
3	Databases: Big Data	60	X	
4	Object-oriented Programming	60	X	
5	Penetration Testing	60		X
6	Computer Peripherals	45		X

Sixth Semester

Nº	Course	Hours	Final Exam	Ongoing Assessment
Compulsory Courses				
1	Computer Networks: Connecting Networks	60	X	
2	Internet Application Programming	60	X	
3	Administration of UNIX and Linux Operating Systems	60	X	
4	Sensors and Actuators	60		X
5	Internet of Things (IoT), p. 1	60	X	
6	Course Project (on a fourth and fifth semester subject)	30		X
Educational practice				
1	Internship			X

Fourth course

Seventh Semester

Nº	Course	Hours	Final Exam	Ongoing Assessment
Compulsory Courses				
1	Virtualization Systems	60	X	
2	Mobile Device Programming	60	X	
3	Internet of Things (IoT), p. 2	60		X
4	Artificial Intelligence	60		X
5	Course Project (free choice topic)	30		X
6	Introduction to smart technologies	60	X	
Elective Subjects				
1	Vessel Communication Systems, part 1	60		X

Eight Semester

Nº	Course	Hours	Final Exam	Ongoing Assessment
Compulsory Courses				
1	Telecommunications	60	X	
2	Mobile Communications, Radio-relay and Satellite Systems	60	X	
Elective Subjects				
1	Software Engineering	45	X	
2	Optoelectronics	45	X	
3	Vessel Traffic Management and Information Systems	45		X
4	Surveillance and Access Control Systems	45		X
5	Cloud technologies	45	X	
Elective Subjects				
1	Vessel Communication Systems, part 2	48		X