

## COMPUTER SCIENCE AND ENGINEERING DEGREE

International accreditation EUR-INF



### ACADEMIC YEAR 2020/2021

Studies	Computer Science and Engineering Degree
Centre	Technical College Campus de Cantoblanco 28049 – Madrid Phone: 91 497 22 23/ 22 26 <a href="#">Web Page</a> ↗
Knowledge Branch	Engineering and Architecture
ECTS Credits	240

ECTS CREDITS	
Basic training (FB)	60
Compulsory (OB)	126
Optional (OP)	42
External practical (PE)	-
End-of-degree Project (TFG)	12
<b>Total</b>	<b>240</b>

### FIRST YEAR

Code	Subject	Credits	Type	Semester
<u>17814</u>	ALGEBRA	6	FB	1
<u>17815</u>	CALCULUS I	6	FB	1



Universidad Autónoma  
de Madrid

Code	Subject	Credits	Type	Semester
<u>17816</u>	INTRODUCTION TO COMPUTERS	6	FB	1
<u>17817</u>	PROGRAMMING I	6	FB	1
<u>17818</u>	PRACTICAL COMPUTER WORKSHOP	6	OB	1
<u>17819</u>	CALCULUS II	6	FB	2
<u>17820</u>	COMPUTER ARCHITECTURE AND ORGANIZATION	6	FB	2
<u>17821</u>	PROGRAMMING II	6	OB	2
<u>17822</u>	ELECTROMAGNETISM	6	FB	2
<u>17823</u>	PROGRAMMING PROJECT	6	OB	2

## SECOND YEAR

Code	Subject	Credits	Type	Semester
<u>17824</u>	LOGIC AND DISCRETE STRUCTURES	6	FB	1
<u>17825</u>	ELECTRONICS) (ELECTRONIC CIRCUITS	6	FB	1
<u>17826</u>	DATA STRUCTURES	6	OB	1
<u>17827</u>	ALGORITHM ANALYSIS	6	OB	1
<u>17828</u>	COMPUTER AND SOCIETY	6	OB	1
<u>17829</u>	STATISTICS AND PROBABILITY	6	FB	2
<u>17830</u>	MICROPROCESSOR-BASED SYSTEMS	6	OB	2
<u>17831</u>	OPERATIVE SYSTEMS	6	OB	2
<u>17832</u>	SOFTWARE ANALYSIS AND DESIGN	6	OB	2
<u>17833</u>	SOFTWARE ANALYSIS AND DESIGN PROJECT	6	OB	2

## THIRD YEAR

Code	Subject	Credits	Type	Semester
<u>17834</u>	COMPUTER ARCHITECTURE	6	OB	1
<u>17835</u>	COMMUNICATION NETWORKS I	6	OB	1
<u>17836</u>	COMPUTER SYSTEMS I	6	OB	1
<u>17837</u>	COMPUTER SYSTEMS PROJECT	3	OB	1
<u>17838</u>	FORMAL LANGUAGES AND AUTOMATA	6	OB	1
<u>17839</u>	FORMAL LANGUAGES AND AUTOMATA PROJECT	3	OB	1
<u>17840</u>	ARTIFICIAL INTELLIGENCE	6	OB	2
<u>17841</u>	COMMUNICATION NETWORKS II	6	OB	2
<u>17842</u>	COMPUTER SYSTEMS II	6	OB	2
<u>17843</u>	SOFTWARE ENGINEERING	6	OB	2
<u>17844</u>	SOFTWARE ENGINEERING PROJECT	6	OB	2

## FOURTH YEAR

Code	Subject	Credits	Type	Semester
<u>17846</u>	END-OF-DEGREE PROJECT	12	TFG	Annual
<u>17845</u>	TECNOLOGICAL COMPANIES ORGANOZATION	6	OB	1
	OPTIONAL CREDITS	42	OP	



Universidad Autónoma  
de Madrid

#### OPTIONAL SUBJECTS

Code	Subject	Credits	Type	Semester
<u>18763</u>	DEVELOPMENT OF APPLICATION-SPECIFIC PROCESSORS AND SYSTEMS	6	OP	1
<u>18764</u>	INTRODUCTION TO VIDEOGAME PROGRAMMING AND GRAPHICS	6	OP	1
<u>18765</u>	FUNDAMENTALS OF CRYPTOGRAPHY AND COMPUTER SECURITY	6	OP	1
<u>18766</u>	ALGORITHM DESIGN AND ANALYSIS	6	OP	1
<u>18767</u>	ADVANCED PROGRAMMING	6	OP	1
<u>18768</u>	MULTIMEDIA SIGNAL PROCESSING I: IMAGE AND VIDEO	6	OP	1
<u>18776</u>	FUNDAMENTALS OF MACHINE LEARNING	6	OP	1
<u>18777</u>	COMPUTER SIMULATION METHODS	6	OP	1
<u>18762</u>	PARALLEL SYSTEM ARCHITECTURE	6	OP	2
<u>18770</u>	PLATFORMS FOR EMBEDDED SYSTEMS	6	OP	2
<u>18771</u>	APPLICATION DEVELOPMENT FOR MOBILE DEVICES	6	OP	2
<u>18773</u>	NEUROCOMPUTATION	6	OP	2
<u>18774</u>	INFORMATION SEARCH AND MINING	6	OP	2
<u>18775</u>	COMPLEXITY AND COMPUTATION	6	OP	2
<u>18778</u>	AUTOMATED SOFTWARE DEVELOPMENT	6	OP	2
<u>18780</u>	MULTIMEDIA NETWORKS	6	OP	2
<u>18781</u>	INTERNSHIP	12	OP	1 o 2

#### OPTIONAL SUBJECTS COMPUTER SCIENCE NOT OFFERED IN 2020-2021

Code	Subject	Credits	Type	Semester
<u>18772</u>	DEVELOPMENT OF MULTIMEDIA AND MULTIMODAL APPLICATIONS	6	OP	
<u>18779</u>	MULTIMEDIA SIGNAL PROCESSING II: SPEECH AND AUDIOMULTIME	6	OP	