

# MASTER IN CYBER— SECURITY

// OFFICIAL DEGREE  
// VACANCIES: 25 // LANGUAGE: ENGLISH  
// DURATION: 18 MONTHS // ECTS: 90  
// DELIVERY: ONLINE  
(VIRTUAL SYNCHRONOUS)  
// CENTER: COMPUTER SCIENCE FACULTY  
UNIVERSITY OF MURCIA

## AIMED AT

// Students completing their studies in Computer Engineering, or similar, who wish to continue their training in cybersecurity studies.

// Working professionals in positions that require knowledge and skills in cybersecurity in any of its areas.

// Professionals actively seeking employment who wish to acquire skills in the field of cybersecurity.

## ADMISSION

// Students with official qualifications whose most appropriate profiles would be bachelor's degrees in engineering related to Computer Science, in particular: those in **Computer Engineering and Data Science and Engineering**, or their foreign equivalents in the European Higher Education Area or any other area, after verifying the equivalent level of training for access.

// To be a native English speaker or to have a certificate accrediting level B2 or higher in English or pass a level test.

## MODE AND LANGUAGE(S) OF DELIVERY

The master's degree in Cybersecurity is worth **90 ECTS** and is taught over one and a half academic years (**18 months**). It is delivered in an **Online mode (Synchronous Virtual)** exclusively in the afternoons. The language of instruction is **English** throughout the entire master's program, and can be taken **full-time** or **part-time**.

## PRE-REGISTRATION, ENROLMENT AND FEES

Please visit:

<https://www.um.es/en/web/estudios/matricula/master>

MIXED MASTER'S DEGREE. AIMED AT BOTH STARTING A CAREER IN RESEARCH WITH THE DEVELOPMENT OF A DOCTORAL THESIS AND ACQUIRING PROFESSIONAL SKILLS WITH WHICH TO IMPROVE ONE'S PERFORMANCE IN THIS PROFESSION.



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UNIVERSIDAD  
DE MURCIA



Two different graduate profiles are offered:

// **Security Engineer:** oriented towards the design and development of components and systems in which security is a crucial element. Its main market niche is in security production companies, principally in the software creation, critical infrastructures, communications and architecture design departments.


// **Cybersecurity Analyst:** directed towards organisations that need to protect themselves from cyber threats and which require personnel who know how to identify attacks and potential weaknesses in their systems and networks, and are capable of proposing the use and deployment of measures and countermeasures by which to secure them. This profile is more closely linked to cybersecurity managers.




### INFORMATION AND CONTACT

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 <https://www.um.es/web/estudios/masteres/ciberseguridad>

### CURRICULUM

COMPULSORY CREDITS (C).....	48
OPTIONAL CREDITS (O).....	18
MASTER'S THESIS CREDITS.....	24

SEM.	QTR.	COURSE	TYPE	CREDITS
S1		Ethical Hacking	C	6
		Security Operations, Incident management and forensics	C	6
		Cybersecurity and Network Security	C	6
		Risk Analysis, Management and Cybersecurity Governance	C	6
		Q1 Cryptography	C	3
	Q2 Seminar on Innovation and Entrepreneurship I	C	3	
S2	Q1	Law and Regulations	C	3
	Q1	Software Security & Secure Software Lifecycle	C	3
	Q1	Authentication and Authorization Infrastructures	C	3
	Q1	Malware and Attack Technologies	C	3
		CyberSecurity Projects Laboratory	C	6
		5G, IoT and Cyber-Physical Systems Security	O	6
		Advanced Cyber Intelligence Techniques	O	6
	Q2	Human Factors, Privacy and Online Rights	O	3
	Q2	Hardware Security	O	3
	Q2	Distributed Systems Security	O	3
S3		Master's Thesis	C	24
		Introduction to research	O	6
		Seminar on Innovation and Entrepreneurship II	O	6

In the second semester, the student may choose from a series of elective courses, among which two possible profiles would be recommended:

1) Security Engineer or 2) Cybersecurity Analyst.