

MASTER IN

**CYBER—
SECURITY**

**UNLOCK
YOUR POTENTIAL**

MCS— 23/24 - Presentation



UNIVERSIDAD
DE MURCIA



Facultad de
Informática



Welcome to the first edition of the
new Master in CyberSecurity

University of Murcia



Quick summary

- Delivery: VIRTUAL SYNCHRONOUS
- Language: ENGLISH
- Duration: 18 months (90 ECTS)
- Type: MIXED (professional and research careers)
- Official degree
- Web site:

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

New student info

- UMU web site: <https://www.um.es/>
- Facultad de Informática web site:
 - <https://www.um.es/web/informatica/english-information>
 - <https://www.um.es/web/informatica/inicio>
- Regulation:
 - <https://www.um.es/web/informatica/conoce-la-facultad/normativa>
- Quality assurance: <https://www.um.es/web/informatica/calidad>
- International Relationships Area: <https://www.um.es/web/ari/>

Curriculum (sem 1)

Semester	Quarter	Code	Course	Type	ECTS
C1		7810	Ethical Hacking	OB	6
		7811	Security Operations, Incident management and forensics	OB	6
		7812	Cybersecurity and Network Security	OB	6
		7813	Risk Analysis, Management and Cybersecurity Governance	OB	6
	T1	7814	Cryptography	OB	3
	T2	7815	Seminar on Innovation and Entrepreneurship I	OB	3

Curriculum (sem 2)

Semester	Quarter	Code	Course	Type	ECTS
C2	T1	7816	Law and Regulations	OB	3
	T1	7817	Software Security & Secure Software Lifecycle	OB	3
	T1	7818	Authentication and Authorization Infrastructures	OB	3
	T1	7819	Malware and Attack Technologies	OB	3
		7837	CyberSecurity Projects Laboratory	OB	6
		7838	Profile 1: 5G, IoT and Cyber-Physical Systems Security	OP	6
		7839	Profile 2: Advanced Cyber Intelligence Techniques	OP	6
	T2	7840	Human Factors, Privacy and Online Rights	OP	3
	T2	7841	Hardware Security	OP	3
	T2	7842	Distributed Systems Security	OP	3
	T2	7843	Advanced Aspects of Cybersecurity Management	OP	3

Curriculum (sem 3)

Semester	Quarter	Code	Course	Type	ECTS
C3		7844	Master's Thesis	OB	24
		7845	Introduction to research	OP	6
		7846	Seminar on Innovation and Entrepreneurship II	OP	6

More info:

- Academic Staff:
 - <https://www.um.es/web/estudios/masteres/ciberseguridad/profesorado>
- Teaching guides:
 - <https://www.um.es/web/estudios/masteres/ciberseguridad/plan-guias>
- Master Degree official doc:
 - <https://www.um.es/web/estudios/masteres/ciberseguridad/documentacion>
- Student guidance:
 - <https://www.um.es/web/estudios/masteres/ciberseguridad/orientacion>

Calendar 2023/2024

2023/2024	Lunes	Martes	Miércoles	Jueves	Viernes	Sábado	Domingo
Septiembre					1	2	3
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	
Octubre	2	3	4	5	6	7	
	9	10	11	12	13	14	
	16	17	18	19	20	21	
	22	24	25	26	27	28	
	30	31	1	2	3	4	
Noviembre	6	7	8	9	10	11	
	13	14	15	16	17	18	
	20	21	22	23	24	25	
	27	28	29	30	1	2	
Diciembre	4	5	6	7	8	9	
	11	12	13	14	15	16	
	18	19	20	21	22	23	
	25	26	27	28	29	30	
Enero	1	2	3	4	5	6	

	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31	1	2	3	4
Febrero	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	1	2	3
Marzo	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	31
Abril	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	1	2	3	4	5
Mayo	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31	1	2
Junio	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
Julio	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21

Timetable (first semester)

- 12 weeks/semester

First quarter					
	Monday	Tuesday	Wednesday	Thursday	Friday
16:00-16:30	7810 - EH (Theory)		7813 - RMC (Theory)	7811 - SIF (Theory)	
16:30-17:00					
17:00-17:30	7810 - EH (Lab)		7813 - RMC (Lab)	7811 - SIF (Lab)	
17:30-18:00					
18:00-18:15					
18:15-18:45			7812 - CNS (Theory)	7814 - CRYP (Theory)	
18:45-19:15			7812 - CNS (Lab)	7814 - CRYP(Lab)	
19:15-19:45					
19:45-20:15					
Second quarter					
	Monday	Tuesday	Wednesday	Thursday	Friday
16:00-16:30	7810 - EH (Theory)		7813 - RMC (Theory)	7811 - SIF (Theory)	
16:30-17:00					
17:00-17:30	7810 - EH (Lab)		7813 - RMC (Lab)	7811 - SIF (Lab)	
17:30-18:00					
18:00-18:15					
18:15-18:45			7812 - CNS (Theory)	7815 - SIEI	
18:45-19:15			7812 - CNS (Lab)		
19:15-19:45					
19:45-20:15					

7810	(EH) Ethical Hacking
7811	(SIF) Security operations, Incident management and Forensics
7812	(CNS) Cybersecurity and Network Security
7813	(RMC) Risk analysis, Management and Cybersecurity governance
7814	(CRYP) Cryptography
7815	(SIEI) Seminar on Innovation and Entrepreneurship I

Timetable (second semester)

- 12 weeks/semester

First quarter					
	Monday	Tuesday	Wednesday	Thursday	Friday
16:00-16:30	7816 - LR (Theory)	7839 - ACIT (Theory)	7838 - SICSS (Theory)	7818 - AAI (Theory)	
16:30-17:00					
17:00-17:30	7816 - LR (Lab)	7839 - ACIT (Lab)		7818 - AAI (Lab)	
17:30-18:00					
18:00-18:15					
18:15-18:45	7817 - SSL (Theory)	7837 - CPL (Theory)	7838 - SICSS (Lab)	7819 - MAT (Theory)	
18:45-19:15		7837 - CPL (Lab)			
19:15-19:45	7817 - SSL (Lab)			7819 - MAT (Lab)	
19:45-20:15					
Second quarter					
	Monday	Tuesday	Wednesday	Thursday	Friday
16:00-16:30	7842 - DSS (Theory)	7839 - ACIT (Theory)	7838 - SICSS (Theory)	7840 - HPO (Theory)	
16:30-17:00					
17:00-17:30	7842 - DSS (Lab)	7839 - ACIT (Lab)		7840 - HPO (Lab)	
17:30-18:00					
18:00-18:15					
18:15-18:45	7841 - HS (Theory)	7837 - CPL (Theory)	7838 - SICSS (Lab)	7843 - AACM (Theory)	
18:45-19:15		7837 - CPL (Lab)			
19:15-19:45	7841 - HS (Lab)			7843 - AACM (Lab)	
19:45-20:15					

7816	(LR) Law and Regulations
7817	(SSL) Software security & Secure software Lifecycle
7818	(AAI) Authentication and Authorization Infrastructures
7819	(MAT) Malware and Attack Technologies
7837	(CPL) CyberSecurity Projects Laboratory
7838	(SICSS) 5G, IoT and Cyber-Physical Systems Security
7839	(ACIT) Advanced Cyber Intelligence Techniques
7840	(HPO) Human factors, Privacy and Online rights
7841	(HS) Hardware Security
7842	(DSS) Distributed Systems Security
7843	(AACM) Advanced Aspects of Cybersecurity Management

Learning methodology

- Most of the courses based on **Flipped Classroom**
 - **Asynchronous hours**: In advance student's working hours to prepare course's stuff (theory and/or lab) **before** the online/synchronous class
 - Based on online videos, reading text, set up lab scenarios, etc.
 - **Synchronous hours**: online/on-site-zoom teaching hours (theory and lab)
 - Review of content, hands-on, wooclaps, exercises, seminars, etc.
 - **Autonomous student work**: remaining hours to review theory, work on laboratory, write-up reports, etc.
- It is **highly important** to review/prepare in advance material

Evaluation

- Depending on each course
 - Check teaching guides
 - <https://www.um.es/web/estudios/masteres/ciberseguridad/plan-guias>
- In general, based on continuous evaluation
- Final exams only when necessary

Online/On-site-zoom learning

- Based on **ZOOM**
- Each course will provide connection links for theory and lab sessions
- Students are highly encouraged to activate the camera during sessions

Seminars and talks

- Several seminars and talks will be organized throughout the year on different courses
- Some of the already confirmed participants:
 - G's España
 - ISMS Forum
 - KIO
 - Inforges
 - TID
 - Murcia Council
 - ATICA
 - Universidad del Rosario (Colombia)
 -

Grants

- Type of grants:
 - Enrollment fee
 - Oxford Test of English fee
- More [info](#) (Spanish version)
- To be resolved at the end of the academic year

Adds on:

- For this academic year students will have free access to the CCNA Network Security course stuff
 - <https://certic.um.es/web/certic/cisco-cyberops>
 - Open course for master's students
 - Only material, no teaching classes
 - Students must enroll the Cisco course
- Other activities for students:
 - HackTheBox UMU team
 - FIUM student's Cybersecurity club
 - Web site: <https://www.dafium.es/clubs/cybersecurity-club/>
 - Telegram: <https://t.me/joinchat/LQTY8kLwvKP6Q390y5tS1w>
 - MCS Telegram <https://t.me/+qaivS6x1uVc5ZGU09>



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