



COMILLAS

UNIVERSIDAD PONTIFICIA

ICAI

ICADE

CIHS

Syllabus
2025 - 2026

GENERAL INFORMATION

Data of the subject

Subject name	Application Security
Subject code	DTC-MCS-525
Main program	Official Master's Degree in Telecommunications Engineering
Involved programs	Máster Universitario en Ingeniería de Telecomunicación [Second year]
Credits	4,5 ECTS
Type	Obligatoria
Department	Department of Telematics and Computer Sciences

Teacher Information

Teacher

Name	Carlos Manchado Martín
Department	Department of Telematics and Computer Sciences
E-Mail	cmanchado@icai.comillas.edu

Teacher

Name	Miguel Enrique de Vega Martín
Department	Department of Telematics and Computer Sciences
E-Mail	medevega@icai.comillas.edu

DESCRIPTION OF THE SUBJECT

Contextualization of the subject

Course contents

Contents

Theory Block:

TOPIC 1: Introduction to Application Security and S-SDLC.

TOPIC 2: Secure Development Framework – OWASP SAMM Model and MS DSL for Agile.

TOPIC 3: Secure Development Framework – Standard Model I.

TOPIC 4: Secure Development Framework – Standard Model II.

TOPIC 5: DevSecOps and Container Security.

TOPIC 6: Methodology and Software Life Cycles.



COMILLAS

UNIVERSIDAD PONTIFICIA

ICAI

ICADE

CIHS

Syllabus
2025 - 2026

TOPIC 7: Case Studies.

Practical Block:

TOPIC 1: Security Controls.

TOPIC 2: Secure Development.

TOPIC 3: Source Code Auditing.

TOPIC 4: Introduction to Reverse Engineering.

EVALUATION AND CRITERIA

The use of AI to produce full assignments or substantial parts thereof, without proper citation of the source or tool used, or without explicit permission in the assignment instructions, will be considered plagiarism and therefore subject to the University's General Regulations.

Evaluation activities	Evaluation criteria	Weight
Final practice consisting of the completion of a series of short exercises and a security audit on an application, which must be submitted along with the corresponding report.	This task is mandatory to pass the course and must be completed individually.	40
This assessment will be the final exam, where the student's knowledge of both the theoretical and practical parts will be evaluated.	This final exam is mandatory and individual. To pass the course, both the final practice and the final exam must be passed individually. If one of these assessments is not passed, the course will not be passed.	60

BIBLIOGRAPHY AND RESOURCES

Basic References

- Software Security for Developers. Adib Saikali. ISBN: 978-16-1729-858-5.

In compliance with current regulations on the **protection of personal data**, we would like to inform you that you may consult the aspects related to privacy and data [that you have accepted on your registration form](#) by entering this website and clicking on "download"

<https://servicios.upcomillas.es/sedelectronica/inicio.aspx?csv=02E4557CAA66F4A81663AD10CED66792>