



GENERAL INFORMATION

Data of the subject	
Subject name	Data Center and Cloud Security
Subject code	DTC-MCS-526
Main program	
Involved programs	Máster en Ciberseguridad [Primer Curso]
Level	Master
Quarter	Semestral
Credits	4,5 ECTS
Type	Obligatoria
Department	Department of Telematics and Computer Sciences
Coordinator	Rafael Palacios
Course overview	In the block related to the data center, the availability and continuity of IT services and infrastructures are first addressed, presenting their characteristics and the main security guidelines for their design, as well as the techniques and methodologies to enable continuity in situations of emergency or catastrophe (continuity strategies and plans, disaster recovery plans, backup strategies and techniques) according to the industry best practices and standards. It also deals with the issue of the security of virtualized information systems, characterizing them and presenting the techniques and methodologies considered as industry best practices to make them secure (at the hypervisor, virtual machine and virtualized hardware levels).

Teacher Information	
Teacher	
Name	Francisco Javier Santos Ortega
Department	Department of Telematics and Computer Sciences
E-Mail	jsortega@icai.comillas.edu
Teacher	
Name	Francisco José Herrera Luque
Department	Department of Telematics and Computer Sciences
E-Mail	fjherrera@icai.comillas.edu

DESCRIPTION OF THE SUBJECT

Contextualization of the subject
Prerequisites
There are no pre-requisites for this course.

Course contents



Contents

Contents

UNIT I: Introduction to data center security

- Data center characterization
- Security guidelines for the design of data centers
- Classification of data centers by availability level

UNIT II: Information technology services continuity management

- Introduction to the continuity of IT services
- Resources and techniques for the continuity of IT services
- IT services continuity management lifecycle

UNIT III: Security management of virtualized IT systems

- Virtualized IT systems characterization
- Peculiarities of virtualized IT systems security
- Securing virtualized IT systems
- Virtualized IT systems security management during their lifecycle

EVALUATION AND CRITERIA

Grading

- Intermediate exam with a weight of 28% of the final grade
- Final exam with a weight of 56% of the final grade
- Participation and performance of the proposed activities and proactivity, with a weight of 16% of the final grade

BIBLIOGRAPHY AND RESOURCES

Basic References

TIA-942 "Telecommunications Infrastructure for Data Centers", Telecommunications Industry Association.

ISO 22301 Sistema de Gestión de la Continuidad de Negocio.

NIST Special Publication 800-34 Revision 1, "Contingency Planning Guide for Federal Information Systems".

NIST Special Publication 800-125, "Guide to Security for Full Virtualization Technologies".

NIST Special Publication 800-125A Revision 1, "Security Recommendations for Server-based Hypervisor Platforms".

NIST Special Publication 800-125B, "Secure Virtual Network Configuration for Virtual Machine (VM) Protection".



COMILLAS

UNIVERSIDAD PONTIFICIA

ICAI

ICADE

CIHS

Syllabus
2021 - 2022

"download"

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