

SUBJECT TEACHING GUIDE

M1693 - Quality and safety certification of information systems

Master's Degree in computing engineering

Academic year 2021-2022

1. IDENTIFYING DATA					
Degree	Master's Degree in computing engineering			Type and Year	Compulsory. Year 2
Faculty	Faculty of Sciences				
Discipline	SOFTWARE ENGINEERING				
Course unit title and code	M1693 - Quality and safety certification of information systems				
Number of ECTS credits allocated	6	Term	Semester based (1)		
Web					
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. INGENIERÍA INFORMÁTICA Y ELECTRÓNICA				
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3.1 LEARNING OUTCOMES
- Knowing the main models and standards relating to product and process quality (ISO 9001, ISO 25000, CMMI, SPICE).
- Knowing the main models and standards relating to security (ISO 27001, MAGERIT, LOPD, ENS).
- Knowing conduct quality evaluations and measurements supported by software tools.
- Knowing how to audit systems by following official guides.
- Learn to use a software tool to support certification of quality and security.

4. OBJECTIVES

Knowing the main models and standards relating to product quality, process quality and security.

Quality evaluations and audits.

Using software tools to support quality and security certifications.

6. COURSE ORGANIZATION

CONTENTS

1	FUNDAMENTALS. Introduction to quality and security in software systems. Models and standards.
2	SECURITY CERTIFICATION. - ISO 27001. - Risk Analysis (MAGERIT). - Regulations (ENS, LOPD). - Implementation of security controls (25002 and ENS). - Security in Data Bases
3	QUALITY CERTIFICATION. - Implementation of systems of quality management (ISO 9001). - Product Quality (ISO 25000). - Service Management Quality (ITIL, ISO 20000) - Process Quality (CMMI, SPICE-15504).

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Case study of quality certification: The students must do practical cases and exercises in which they apply the theoretical concepts acquired in Quality Certification.	Work	Yes	Yes	40,00
Case study of security certification: The students must do practical cases and exercises in which they apply the theoretical concepts acquired in Security Certification.	Work	Yes	Yes	60,00
TOTAL				100,00
Observations				
Observations for part-time students				
Part-time students can perform remotely all theoretical and most practical activities carried out in the classroom. In this way, they can manage their time to fit with their professional or personal factors.				

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

Piattini, M., García, F., García-Rodríguez de Guzmán, I., Pino, F. Calidad de Sistemas de Información (3º Ed.). Ra-Ma. 2015

Del Peso, E., Del Peso, M, Piattini, M. Auditoría de Tecnologías y Sistemas de Información. Ra-Ma. 2008

Calero, C., Moraga, M y Piattini, M. Calidad del producto y proceso software. Ra-Ma. 2010

Gómez, L. Cómo implantar un SGSI según UNE-ISO/IEC 27001:2014 y su aplicación en el Esquema Nacional de Seguridad. AENOR. 2015.