UNIVERSIDAD DE CASTILLA - LA MANCHA
GUÍA DOCENTE

1. General information

Course: INFORMATION SYSTEMS AUDITING
Type: ELECTIVE
Degree: 347 - DEGREE PROGRAMME IN COMPUTER SCIENCE ENGINEERING (CR)
Center: 108 - SCHOOL OF COMPUTER SCIENCE OF C. REAL
Year: 4
Main language: English
Use of additional languages:
Web site:

Code: 42366
ECTS credits: 6
Academic year: 2022-23
Group(s): 20
Duration: C2
Second language:
English Friendly: N
Bilingual: Y

Lecturer: **IGNACIO GARCIA RODRIGUEZ DE GUZMAN** - Group(s): **20**				
Building/Office	**Department**	**Phone number**	**Email**	**Office hours**
Fermín Caballero / 3.26	TECNOLOGÍAS Y SISTEMAS DE INFORMACIÓN	6617	ignacio.grodriguez@uclm.es	

2. Pre-Requisites

In order to take this course, it is advisable to have taken the Basic Training modules (Module I) and the Common to the Computer Branch module (Module II).

3. Justification in the curriculum, relation to other subjects and to the profession

From the 1950s onwards, Information Technology has become a very important tool in financial auditing, as it allows operations to be carried out quickly and precisely that would manually consume too many resources. The so-called computer-aided audit begins, in which the computer is used as a financial audit tool. However, the growth of organizations makes them increasingly dependent on information systems, and therefore there is a need to verify that they work properly. At the end of the 1960s, the first cases of fraud committed with the help of the authorising officer were discovered. These reasons make it necessary to audit such role, the aim of which is precisely to verify the correct, effective and efficient functioning of information technologies and systems. Today, no one doubts that information has become one of the main assets of companies. Organizations invest enormous amounts of money and time in the creation of information systems and in the acquisition and development of technologies that offer them the highest possible productivity and quality. For this reason, auditing is taking on great importance both nationally and internationally. Systems auditing is related to a large number of concepts acquired in other subjects since the main areas of application of systems auditing are varied. Some examples are outsourcing, databases, communication networks, system maintenance, video surveillance, personal data protection, etc.

Audit, as a profession, is developed in a wide range of domains in the field of organizations, however, the scope of this subject focuses on auditing in the context of Information Systems.

4. Degree competences achieved in this course

Course competences

Code	Description
INS01	Analysis, synthesis, and assessment skills.
INS02	Organising and planning skills.
INS05	Argumentative skills to logically justify and explain decisions and opinions.
PER01	Team work abilities.
SI01	Ability to integrate information and communiction technology solutions and entrepeneurial process so as to fulfil the needs for information in organisation, allowing them to meet their goals in an effective and efficient manner, providing them with competitive benefits.
SI05	Ability to understand and apply principles for the assessment of risks, and correctly apply them in the elaboration and execution of acting plans.
SIS01	Critical thinking.
SIS03	Autonomous learning.
UCLM01	Command of a second language at a B1 level within the Common European Framework of Reference for Languages
UCLM04	Professional ethics.

5. Objectives or Learning Outcomes

Course learning outcomes

Description
Knowledge of the legal environment of information systems auditing, as well as of the main areas of information systems auditing, and the possession of skills in the use of tools for auditing.
To know and know how to apply the main techniques and methodologies of internal control and information systems audit.

6. Units / Contents

Unit 1: Introduction and basic concepts of information systems auditing
Unit 2: Internal Control

Unit 3: Evaluation, internal control and audit methodologies

Unit 4: Review areas

Unit 5: Legal and regulatory aspects of auditing

Unit 6: IT Auditing tools

Deliverables:

1º) Information System Internal Control Development

2º) Information System external IT Auditing

3º) Technological Environment Auditing

7. Activities, Units/Modules and Methodology

Training Activity	Methodology	Related Competences (only degrees before RD 822/2021)	ECTS	Hours	As	Com	Description
Class Attendance (practical) [ON-SITE]	Lectures	INS01 INS02 INS05 SI05 SIS01 UCLM01 UCLM04	0.72	18	N	-	Teaching of the subject matter by lecturer (MAG)
Individual tutoring sessions [ON-SITE]		INS01 INS02 INS05 SI05	0.18	4.5	N	-	Individual or small group tutoring in lecturer's office, classroom or laboratory (TUT)
Study and Exam Preparation [OFF-SITE]	Self-study	INS01 INS02 INS05 SI05 SIS03	2.1	52.5	N	-	Self-study (EST)
Other off-site activity [OFF-SITE]	Practical or hands-on activities	INS01 INS02 INS05 PER01 SI05 SIS03	0.6	15	N	-	Lab practical preparation (PLAB)
Problem solving and/or case studies [ON-SITE]	Problem solving and exercises	INS01 INS02 INS05 PER01 SI05	0.6	15	Y	N	Worked example problems and cases resolution by the lecturer and the students (PRO)
Writing of reports or projects [OFF-SITE]	Self-study	INS01 INS02 INS05 PER01 SI05 SIS01 SIS03	0.9	22.5	Y	N	Preparation of essays on topics proposed by lecturer (RES)
Laboratory practice or sessions [ON-SITE]	Practical or hands-on activities	INS01 INS02 INS05 PER01 SI05 UCLM01 UCLM04	0.6	15	Y	Y	Realization of practicals in laboratory/computing room (LAB)
Other on-site activities [ON-SITE]	Assessment tests	INS01 INS02 INS05 SI05 UCLM01 UCLM04	0.3	7.5	Y	Y	Realization of a final exam (EVA)
Total:			**6**	**150**			
Total credits of in-class work: 2.4				**Total class time hours: 60**			
Total credits of out of class work: 3.6				**Total hours of out of class work: 90**			

As: Assessable training activity

Com: Training activity of compulsory overcoming (It will be essential to overcome both continuous and non-continuous assessment).

8. Evaluation criteria and Grading System

Evaluation System	Continuous assessment	Non-continuous evaluation*	Description
Final test	50.00%	50.00%	Compulsory activity that can be retaken (rescheduling) to be carried out within the planned exam dates of the final exam call (convocatoria ordinaria)
Theoretical papers assessment	15.00%	15.00%	Non-compulsory activity that can be retaken. To be carried out before end of teaching period.
Laboratory sessions	25.00%	25.00%	Compulsory activity that can be retaken. To be carried out before end of teaching period.
Oral presentations assessment	10.00%	10.00%	Non-compulsory activity that can be retaken (rescheduling). To be carried out in the theory/laboratory sessions for the students of the continuous modality. The students of non-continuous modality will be evaluated of this activity through an alternative system in the ordinary call
Total:	**100.00%**	**100.00%**	

According to art. 4 of the UCLM Student Evaluation Regulations, it must be provided to students who cannot regularly attend face-to-face training activities the passing of the subject, having the right (art. 12.2) to be globally graded, in 2 annual calls per subject , an ordinary and an extraordinary one (evaluating 100% of the competences).

Evaluation criteria for the final exam:

Continuous assessment:

In compulsory activities, a minimum mark of 40% is required in order to pass that activity and have the possibility to therefore pass the entire subject. The evaluation of the activities will be global and therefore must be quantified by means of a single mark. In the case of the activities that may be retaken (i.e., rescheduling), an alternative activity or test will be offered in the resit/retake exam call (convocatoria extraordinaria).

The final exam will be common for all the theory/laboratory groups of the subject and will be evaluated by the lecturers of the subject in a serial way, i.e., each part of the final exam will be evaluated by the same lecturer for all the students.

A student is considered to pass the subject if she/he obtains a minimum of 50 points out of 100, taking into account the points obtained in all the evaluable activities, and also has passed all the compulsory activities.

For students who do not pass the subject in the final exam call (convocatoria ordinaria), the marks of activities already passed will be conserved for the resit/retake examcall (convocatoria extraordinaria). If an activity is not recoverable, its assessment will be preserved for the resit/retake exam call (convocatoria extraordinaria) even if it has not been passed. In the case of the passed recoverable activities, the student will have the opportunity to receive an alternative evaluation of those activities in the resit/retake exam call and, in that case, the final grade of the activity will correspond to the latter grade obtained.

The mark of the passed activities in any call, except for the final exam, will be conserved for the subsequent academic year at the request of the student, provided that mark is equal or greater than 50% and that the activities and evaluation criteria of the subject remain unchanged prior to the beginning of that academic year.

The failure of a student to attend the final exam will automatically result in her/him receiving a "Failure to attend¿ (no presentado). If the student has not passed any compulsory evaluation activity, the maximum final grade will be 40%.

Non-continuous evaluation:

Students may apply at the beginning of the semester for the non-continuous assessment mode. In the same way, the student may change to the non-continuous evaluation mode as long as she/he has not participated during the teaching period in evaluable activities that together account for at least 50% of the total mark of the subject. If a student has reached this 50% of the total obtainable mark or the teaching period is over, she/he will be considered in continuous assessment without the possibility of changing to non-continuous evaluation mode.

Students who take the non-continuous evaluation mode will be globally graded, in 2 annual calls per subject, an ordinary and an extraordinary one (evaluating 100% of the competences), through the assessment systems indicated in the column "Non-continuous evaluation".

In the "non-continuous evaluation" mode, it is not compulsory to keep the mark obtained by the student in the activities or tests (progress test or partial test) taken in the continuous assessment mode.

Specifications for the resit/retake exam:

Evaluation tests will be conducted for all recoverable activities.

Specifications for the second resit / retake exam:

Same characteristics as the resit/retake exam call.

9. Assignments, course calendar and important dates

Not related to the syllabus/contents	
Hours	hours
Unit 1 (de 6): Introduction and basic concepts of information systems auditing	
Comment: The course is taught in three weekly sessions of 1.5 hours.	

10. Bibliography and Sources

Author(s)	Title/Link	Publishing house	Citv	ISBN	Year	Description
Del Peso,E., Del Peso, M., Piattini, M.	Auditoría de Tecnologías y Sistemas de Información	RA-MA		978847897846	2008	
Hervada, F., Piattini, M.	Gobierno de las Tecnologías y Sistemas de Información	RA-MA		978847897767	2007	
ISACA	COBIT® 5: A Business Framework for the Governance and Management of Enterprise IT				2014	
ISACA	COBIT® 5 for Assurance				2014	