UNIVERSIDADE DA CORUÑA

| Teaching Guide | | | | |
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| Identifying Data | | | | 2018/19 |
| Subject (*) | Information Systems Standards | | Code | 614G01044 |
| Study programme | Grao en Enxeñaría Informática | | | |
| Descriptors | | | | |
| Cycle | Period | Year | Type | Credits |
| Graduate | 2nd four-month period | Third | Obligatory | 6 |
| Language | SpanishGalicianEnglish | | | |
| Teaching method | Face-to-face | | | |
| Prerequisites | | | | |
| Department | Computación | | | |
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| General description | In this course we will tackle the conceptual and theoretical foundations associated with the work of a IS Auditor. The work of a IS Auditor is to ensure that information systems safeguard the assets of the organization, maintaining the integrity of the data and achieve business objectives in an efficient and effective way. The quality assurance requirements for information systems determine the daily operation of enterprises and organizations and justify the task of auditing information systems. This course will detail the classical process of the Information Systems Audit, its implications for corporate IT Governance, strategies for asset protection in information systems, plans for business continuity after disaster situations and regulatory issues and laws on data protection in Information Systems. The knowledge acquired by students in this course follows the recommendations of the "Information Systems Audit and Control Association" which offers certification of Certified Information System Auditor. After completing the course the student should know the procedures, controls and reports required to carry out an Information Systems Audit. | | | |

| Study programme competences / results | |
|---|---|
| Code | Study programme competences / results |
| A47 | Capacidade para determinar os requisitos dos sistemas de información e comunicación dunha organización de acordo cos aspectos de seguridade e cumprimento da normativa e a lexislación vixente. |
| A51 | Capacidade para comprender e aplicar os principios e as técnicas de xestión da calidade e da innovación tecnolóxica nas organizacións. |
| B1 | Capacidade de resolución de problemas |
| B3 | Capacidade de análise e síntese |
| B7 | Preocupación pola calidade |
| B8 | Capacidade de traballar nun equipo interdisciplinar |
| C6 | Valorar criticamente o coñecemento, a tecnoloxía e a información dispoñible para resolver os problemas cos que deben enfrontarse. |

| Learning outcomes | | | |
|---|---|---|---|
| Learning outcomes | Study programme competences / results | | |
| Information Systems Audit | A47<br>A51 | B1<br>B3<br>B7<br>B8 | C6 |
| Information Systems Quality Assurance | A51 | B3<br>B7 | C6 |
| Information Systems Control | A47 | B3<br>B7 | |

| Contents |
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| Topic | Sub-topic |
|---|---|
| Unit 1: Introduction to the Quality Assurance Concept in Information Systems. | Concept, needs, requirements.<br>QA Levels and tasks.<br>Quality Management Systems.<br>QA planning and quality reviews |
| Unit 2: IS Auditing process | Concept, needs, functions<br>Risk assessment<br>Internal Controls<br>Audit planning and audit evidences<br>Performing an IS Audit |
| Unit 3: IT Governance | Concept and needs<br>IS strategies vs corporative strategies.<br>Frameworks: COBIT.<br>Auditing IT governance structures.<br>Risk management |
| Unit 4: Protection of Information Assets | Concept and needs<br>IS Protection<br>Logical and applied protection of IS<br>Physical protection of IS infrastructure.<br>Security frameworks auditing. |
| Unit 5: Business continuity plans and recovering after disasters. | General concepts.<br>Business continuity planning and components.<br>Auditing the BCP |
| Unit 6: Legal aspect in IS | Spanish regulatory framework.<br>Data protection regulation. |

| Planning | | | | |
|---|---|---|---|---|
| Methodologies / tests | Competencies / Results | Teaching hours (in-person & virtual) | Student?s personal work hours | Total hours |
| Workbook | B3 | 2 | 7 | 9 |
| Case study | B1 B8 | 10 | 25 | 35 |
| Mixed objective/subjective test | A51 B1 B7 C6 | 2 | 0 | 2 |
| Supervised projects | A47 B1 B3 B7 | 7 | 21 | 28 |
| Guest lecture / keynote speech | A47 A51 B7 | 19 | 57 | 76 |
| Personalized attention | | 0 | 0 | 0 |
| (*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students. | | | | |

| Methodologies | |
|---|---|
| Methodologies | Description |
| Workbook | Readings for consolidating and complement the knowledge acquired by the student during the lessons. Topics: techniques, applications and information systems. |
| Case study | Case studies with problem analysis and achieved solutions. |
| Mixed objective/subjective test | In this test the knowledge acquired by the student about the theoretical and operative topics covered during the course will be evaluated. |
| Supervised projects | A set of guided works proposed by the professor will be developed by the students individually or in groups. |
| Guest lecture / keynote speech | Lectures for the exposition of the theoretical aspects of the course using different resources such as blackboard, slides, beamer, demonstrations, and online teaching tools. |

| Personalized attention |
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| Methodologies | Description |
|---|---|
| Supervised projects | Guided works will be proposed by the professor to be solved by the students |

| Assessment | | | |
|---|---|---|---|
| Methodologies | Competencies / Results | Description | Qualification |
| Case study | B1 B8 | Case studies for the independent working of the students and student participation in the lectures. It is mandatory to achieve at least the 40% of the marks in order to pass the course | 40 |
| Mixed objective/subjective test | A51 B1 B7 C6 | Questions about the acquired knowledge. Questions involving critical reasoning for solving practical problems of the real world. It is mandatory to achieve at least the 40% of the marks in order to pass the course | 40 |
| Supervised projects | A47 B1 B3 B7 | Tracking of the working process and evaluation of the final output from the students. It is mandatory to achieve at least the 40% of the marks in order to pass the course | 20 |

| Assessment comments |
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| Para a segunda oportunidade, tanto as prácticas e traballos como a teorías avaliaranse no exame mixto.<br>En lo referente a alumnos en regimen parcial, no se dispensará la asistencia a las actividades donde se realice evaluación. |

| Sources of information | |
|---|---|
| Basic | - Sandra Senft y Frederick Gallegos (2008). Information Technology Control and Audit. Auerbach Publishers Inc<br>- Chris Davis, Mike Schiller, Kevin Wheeler (2006). IT Auditing: Using Controls to Protect Information Assets. McGraw-Hill<br>- ISACA (2012). Cobit 5: A Business Framework for the Governance and Management of Enterprise IT..<br>- ISACA (). http://www.isaca.org.<br>- Mario G. Piattini Velthuis, Félix O. García Rubio, Ignacio García Rodríguez de Guzmán, Francisco J. (2015). Calidad de sistemas de información 2nd ed. RAMA |
| Complementary | |

| Recommendations |
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| Subjects that it is recommended to have taken before |
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| Subjects that are recommended to be taken simultaneously |
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| Subjects that continue the syllabus |
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| Other comments |
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(*)The teaching guide is the document in which the URV publishes the information about all its courses. It is a public document and cannot be modified. Only in exceptional cases can it be revised by the competent agent or duly revised so that it is in line with current legislation.