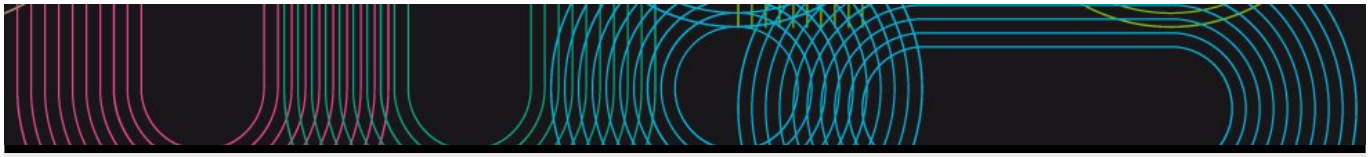
Universidade Vigo

Subject Guide 2022 / 2023



IDENTIFYING DATA				
Government, management and ITC management				
Subject	Government, management and ITC management			
Code	P52M182V01101			
Study programme	Master Universitario en Dirección TIC para la defensa			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	3	Mandatory	1st	1st
Teaching language	Spanish			
Department				
Coordinator	Rodríguez Rodríguez, Francisco Javier			
Lecturers	Ares Tarrío, Miguel Ángel Merino Gil, Miguel Ángel Manuel Rodríguez Rodríguez, Francisco Javier			
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General description	The course aims to provide an overview of the strategic direction of the company and the strategic alignment of ICT. Following the planning process, ICT governance and related standards will be discussed: ISO 38.500 and COBIT 5. In order to evaluate the performance of governance and management, balanced scorecards and ICT performance indicators will be explained. As an indispensable part of an organisation's performance, and at the base of the organisational structure, human resource management will be discussed.			

Skills	
Code	
A6	CB6 - Possess and understand knowledge that provides a basis or opportunity to be original in the development and / or application of ideas, often in a research context.
A7	CB7 - That students know how to apply the acquired knowledge and their ability to solve problems in new or poorly understood environments within broader (or multidisciplinary) contexts related to their area of study.
A8	CB8 - That students are able to integrate knowledge and face the complexity of formulating judgments based on information that, being incomplete or limited, includes reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments.
A9	CB9 - That students know how to communicate their conclusions and the knowledge and ultimate reasons that support them to a specialized and unspecialized public in a clear and unambiguous way.
A10	CB10 - That students possess the learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.
B1	CG1 - Possess advanced and highly specialized knowledge and demonstrate a detailed and well-founded understanding of the theoretical and practical aspects dealt with in the different areas of study.
B3	CG3 - Direct, plan, coordinate, organize and/or supervise tasks, projects and/or human groups. Work cooperatively in multidisciplinary teams acting, where appropriate, as an integrator of knowledge and lines of work.
B6	CG6 - Be able to make decisions in environments characterized by complexity and uncertainty, evaluating the different existing alternatives in order to select the one with the most favorable expected result, appropriately managing the risk associated with the decision.
C1	CE1 - Acquire knowledge and skills to develop effective leadership for the digital transformation of an organization.
C2	CE2 - Have capacities in relation to the ICT Government and the Management, Operation and Maintenance Services of Information and Communication Systems and Technologies and Information Security.
C3	CE3 - Define, implement, direct and manage the organizational, operational and support processes in obtaining ICT resources and for the management and quality of the service; with a guarantee of safety for people and goods, the final quality of the products and their homologation.
C4	CE4 - Strategically plan, direct, coordinate and technically and economically manage projects in the field of ICTs and information security, applying the current normative and regulatory framework in the technical-economic-legal fields.

D1	CT1 - Ability to understand the meaning and application of the gender perspective in the different fields of knowledge and in professional practice with the aim of achieving a fairer and more egalitarian society.
D3	CT3 - Incorporate criteria of sustainability and environmental commitment into professional practice. Acquire skills in the equitable, responsible and efficient use of resources.

Learning outcomes	
Expected results from this subject	Training and Learning Results
LO1: Know a complete vision of the strategic management of the company.	A10 B1 B3 B6 C1 D1 D3
LO2: Understand the concept of ICT strategic alignment.	A10 B1 B3 B6 C1 C2 C4 D1 D3
Design and carry out research using suitable quantitative methods.	
LO3: ICT governance and related standards: ISO 38.500, COBIT 5.	A6 A7 A10 B1 B3 B6 C4 D1 D3
LO4: Understand the functioning of the value chain and its generation and the use of technology to support processes.	A7 A10 B1 B3 B6 C1 C3 D1 D3
LO5: Understand the use of balanced scorecards and ICT performance indicators.	A7 A9 A10 B1 B3 B6 C1 C2 D1 D3
LO6: Understand how human resource management contributes to strategic objectives.	A7 A8 A10 B1 B3 B6 C1 D1 D3

Contents
Topic

Topic 1. Introduction to strategic business planning	1.1. Introduction. Basic management functions. 1.2. The strategic management process. 1.3. Strategic conceptualisation: vision, philosophy, mission. 1.4. Strategic analysis. 1.5. Organisational culture and goal-setting process. 1.6. Strategy selection.
Topic 2. ICT governance, management and management: ISO/IEC 38500 standard and COBIT 5	2.1. ICT Governance. 2.2. Implementation of ICT Governance. 2.3. Reference frameworks for governance and management of ICT. 2.4. ISO/IEC 38500. Introduction. 2.5. ISO/IEC 38500. Main objectives and basic principles. 2.6. ISO/IEC 38500. Implementation objectives. 2.7. COBIT, Control Objectives for Information and Related Technologies: Introduction. 2.8. COBIT. Reference Framework. 2.9. COBIT. Principles. 2.10. COBIT. Enabling Processes 2.11. COBIT. Product family. 2.12. COBIT 5 and other standards and frameworks. 2.13. Ministry of Defence STIC policy. 2.14. Supplementary information.
Topic 3. Vision and mission of the ICT manager	3.1. Introduction. 3.2. CIO competencies. 3.3. Key relationships of the CIO. 3.4. Director of CISTIC and CIO of the Ministry of Defence. 3.5. Further reading and activities
Topic 4. Value generation and performance management	4.1. Introduction. 4.2. The Value of an Exercise Machine. 4.3. Value of IT in the context of Business. 4.4. How to communicate value. 4.5. New ways to create value. The 4-source model of value creation from IT. 4.6. Value analysis in different IT scenarios, frameworks, methodologies and new IT trends. 4.7. References.
Topic 5. Balanced Scorecards and Performance Management	5.1. The Balanced Scorecard. Introduction and concepts. 5.2. Perspectives of the BSC and objectives. 5.3. Strategy maps. 5.4. Key performance indicators, KPIs. 5.5. Strategic initiatives 5.6. BSC applied to ICT 5.7. KPI indicators, application to ICT. 5.8. Complementary information. Links.
Topic 6. Human and material resources management	6.1. Theoretical-technical elements of management and strategic change: From human resources to talent-based people management (TPD). 6.2. Managing people and talent as a strategic factor. 6.3. Motivational and creative approach to human behaviour.

Planning

	Class hours	Hours outside the classroom	Total hours
Autonomous problem solving	0	6	6
Previous studies	0	35	35
Lecturing	5	5	10
Problem solving	3	3	6
Practices through ICT	4	0	4
Seminars	2	0	2
Discussion Forum	0	3	3
Self-assessment	0	6	6
Presentation	3	0	3

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

	Description
Autonomous problem solving	Activity in which students analyse and solve problems and/or exercises related to the subject independently.

Previous studies	Research, reading, documentation work and/or autonomous performance of any other activity that the student considers necessary to enable him/her to acquire knowledge and skills related to the subject. This is usually carried out prior to classes, laboratory practicals and/or assessment tests.
Lecturing	Presentation by a lecturer of the contents of the subject being studied, theoretical bases and/or guidelines for a project or exercise to be carried out by the student.
Problem solving	Activity in which problems and/or exercises related to the subject are formulated. The student must develop appropriate and correct solutions by exercising routines, applying formulas or algorithms, applying procedures for transforming the available information and interpreting the results.
Practices through ICT	Activities involving the application of knowledge in a given context and the acquisition of basic and procedural skills in relation to the subject, through the use of ICT.
Seminars	Activity focused on working on a specific topic, which allows to deepen or complement the contents of the subject.
Discussion Forum	An activity carried out in a virtual environment in which a variety of current topics related to the academic and/or professional sphere are debated.

Personalized assistance

Methodologies	Description
Lecturing	Given the blended nature of the course, we will distinguish between two cases: (1) Attention in the distance phase: this will be carried out using telematic means. Students who wish to do so may ask the lecturers questions in forums or by e-mail. They will also be able to arrange individual tutorials with the lecturer, which will be carried out by videoconference. (2) Attention in the face-to-face phase: although it is still possible to use telematic mechanisms for student attention, during this phase, face-to-face tutoring mechanisms (individual and/or group) will also be used.
Problem solving	Given the blended nature of the course, we will distinguish between two cases: (1) Attention in the distance phase: this will be carried out using telematic means. Students who wish to do so may ask the lecturers questions in forums or by e-mail. They will also be able to arrange individual tutorials with the lecturer, which will be carried out by videoconference. (2) Attention in the face-to-face phase: although it is still possible to use telematic mechanisms for student attention, during this phase, face-to-face tutoring mechanisms (individual and/or group) will also be used.
Practices through ICT	Given the blended nature of the course, we will distinguish between two cases: (1) Attention in the distance phase: this will be carried out using telematic means. Students who wish to do so may ask the lecturers questions in forums or by e-mail. They will also be able to arrange individual tutorials with the lecturer, which will be carried out by videoconference. (2) Attention in the face-to-face phase: although it is still possible to use telematic mechanisms for student attention, during this phase, face-to-face tutoring mechanisms (individual and/or group) will also be used.
Seminars	Given the blended nature of the course, we will distinguish between two cases: (1) Attention in the distance phase: this will be carried out using telematic means. Students who wish to do so may ask the lecturers questions in forums or by e-mail. They will also be able to arrange individual tutorials with the lecturer, which will be carried out by videoconference. (2) Attention in the face-to-face phase: although it is still possible to use telematic mechanisms for student attention, during this phase, face-to-face tutoring mechanisms (individual and/or group) will also be used.

Assessment

	Description	Qualification	Training and Learning Results
Practices through ICT	Activities involving the application of knowledge in a specific context and the acquisition of basic and procedural skills in relation to the subject, through the use of ICT. They allow the student's knowledge and skills to be assessed. They will be assessed by means of deliverables.	50	A7 A8 A9 A10 B1 B3 B6 C1 C2 C3 C4 D1 D3
Discussion Forum	An activity carried out in a virtual environment in which a variety of current topics related to the academic and/or professional sphere are debated. It allows the evaluation of the student's skills, knowledge and, to a lesser extent, attitudes. Participation in the forums will be assessed.	10	A6 A10 B1 B3 B6 C1 C2 D1 D3
Self-assessment	A mechanism in which, by means of a series of questions or activities, it is possible for the student to autonomously evaluate his/her degree of acquisition of knowledge and skills on the subject, allowing self-regulation of the personal learning process.	20	A6 A7 A8 A10 B1 B3 B6 C1 C2 C3 C4 D1 D3
Presentation	Presentation by the students, individually or in groups, of a topic related to the contents of the subject or the results of a project, exercise, project, etc. Knowledge, skills and attitudes can be assessed through the presentation.	20	A7 A8 A9 A10 B1 B3 B6 C1 C3 D1 D3

Other comments on the Evaluation

It will be necessary to obtain at least 50% of the grade to pass the subject.

In the event that the student does not manage to pass the subject in the ordinary call, he/she will have the right to a second opportunity for assessment (extraordinary call) on the dates established for this purpose by the Master's Academic Committee. The evaluation in this extraordinary call will consist of a single written test, which will be carried out in the distance mode, which will account for 100% of the grade, being necessary to obtain at least 50% to pass the subject.

Fraud or attempted fraud on the part of the student in the evaluation process (copying or plagiarism or facilitating it to third parties) will be penalised by giving the student a failing grade (0.0) in the exam session in which it occurs.
In the case of any difference between the Galician/Spanish/English guides related to the evaluation, the Spanish guide will always prevail.

Sources of information

Basic Bibliography

Complementary Bibliography

J. A. O Brien, G. M. Marakas, **Sistemas de información gerencial**, 7, McGraw-Hill, 2006

International Organization for Standardization, **ISO/IEC 38500:2015 Information technology -- Governance of IT for the organization**, 2015

J.R Rodríguez, **Planificación y dirección estratégica de sistemas de información**, Editorial UOC, 2015

C. M. Fernández Sánchez, M. Piattini Velthuis, **Modelo para el gobierno de las TIC basado en las normas ISO**, AENOR, 2012

Karl D. Schubert, **CIO Survival Guide, the Roles and Responsibilities of the Chief Information Officer**, Wiley, 2004

Recommendations

Subjects that are recommended to be taken simultaneously

ICT process management and continuous improvement/P52M182V01102