

## SUBJECT TEACHING GUIDE

G2032 - Cross-Curricular Values and Objectives of Sustainable Development

First Degree in Computer Systems Engineering

Academic year 2024-2025

1. IDENTIFYING DATA					
Degree	First Degree in Computer Systems Engineering			Type and Year	Core. Year 1
Faculty	Faculty of Sciences				
Discipline					
Course unit title and code	G2032 - Cross-Curricular Values and Objectives of Sustainable Development				
Number of ECTS credits allocated	6	Term	Semester based (1)		
Knowledge Field	Computer and systems engineering				
Web	<a href="https://moodle.unican.es/">https://moodle.unican.es/</a>				
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. INGENIERÍA INFORMÁTICA Y ELECTRÓNICA
Name of lecturer	PABLO SANCHEZ BARREIRO
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Other lecturers	ADOLFO COBO GARCIA RAMON GANDARILLAS PEREZ OLGA MARIA CONDE PORTILLA ANA FERNANDEZ LAVIADA ROCIO VILAR CORTABITARTE

4. OBJECTIVES
The student will know and understand the causes that justify the creation of the Sustainable Development Goals.
The student will understand the concept of sustainability.
The student will understand how the Sustainable Development Goals are structured and organised.
The student will know the specific goals of all the Sustainable Development Goals.
The student will be able to reason adequately about the impact of a given IT project on the Sustainable Development Goals.
The student will be able to plan, design and execute an effective oral communication.
The student will develop a critical attitude to the challenge of new problems in the field of information.
The student will learn to identify and value truthful, reliable, scientific and accessible information in an inclusive and open manner.
The student will develop skills in effective information seeking and the ethical and legal access and use of scientific information.

6. SUBJECT PROGRAM	
CONTENTS	
1	<p>Unit 1. Introduction to the Sustainable Development Goals</p> <p>Process of the definition and approval of the Sustainable Development Goals. Concept of sustainability. Fundamentals of Sustainability Engineering. Structure and organisation of the Sustainable Development Goals. Standards and Regulations. Practical implications of the Sustainable Development Goals.</p>
2	<p>Unit 2. Effective Oral Communication</p> <p>Principles of oral communication. Techniques for effective oral communication.</p>
3	<p>Unit 3. Critical search, access and ethical use of scientific information.</p> <p>Critical analysis of information sources. Scientific communication. Specialised information search tools and artificial intelligence. Copyright and ethical and legal use of information. Open access to scientific knowledge.</p>
4	<p>Unit 4. The Sustainable Development Goals and the IT Profession.</p> <p>The Impact of Information Technologies on Health and Well-being. Education and Information Technologies. Gender Equality in the IT Profession. Ethics of Artificial Intelligence. Energy consumption and green computing. Biases in computer applications. Automation, decent work and economic growth. Industry 4.0. New technology-based entrepreneurship opportunities. Sustainability of IT products. The impact of IT on climate change. Ethical issues of IT technologies: cyberbullying, cybercrime, fake news, right to be forgotten.</p>
5	<p>Unit 5. Sustainable Development Goals beyond IT Engineering</p> <p>End of poverty. Zero hunger. Clean water and sanitation. Reducing inequalities. Sustainable communities and cities. Responsible production and consumption. Climate action. Underwater life. Life of terrestrial ecosystems. Peace, justice and strong institutions. Partnerships to achieve the goals.</p>

**7. ASSESSMENT METHODS AND CRITERIA**

Description	Type	Final Eval.	Reassessn	%
Participation in Discussion	Others	No	Yes	30,00
Presentation on SDGs and Computer Engineering	Work	No	Yes	70,00
<b>TOTAL</b>				<b>100,00</b>
<b>Observations</b>				
<p>In the event that the minimum mark required in any of the evaluable elements is not reached and the weighted average of these elements is higher or equal to 5, the grade that will be recorded in the course elements is greater than or equal to 5, the grade that will be recorded in the minutes of the course will be 4.9, Fail.</p> <p>At any time, the teaching staff may apply the mechanisms they consider appropriate to verify that any material submitted is free of plagiarism. The detection of plagiarism will result in the automatic failure of the subject and its notification to higher authorities so that they may adopt the disciplinary measures they deem appropriate. The use of artificial intelligence applications for the development of assessable activities must be indicated in the delivery of their associated artefacts.</p>				
<b>Observations for part-time students</b>				
<p>Part-time students who, for duly justified reasons, cannot be integrated into work teams with other students may develop the oral presentation individually. Part-time students who for duly justified reasons are unable to attend classes regularly may participate in discussions in the virtual classroom.</p>				

**8. BIBLIOGRAPHY AND TEACHING MATERIALS**

<b>BASIC</b>
<p>M. Rieckmann (2017). Educación para los Objetivos de Desarrollo Sostenible: objetivos de aprendizaje. UNESCO Publishing. <a href="https://unesdoc.unesco.org/ark:/48223/pf0000252423">https://unesdoc.unesco.org/ark:/48223/pf0000252423</a></p>