

# STUDY GUIDE

## ***SUSTAINABILITY AND ENVIRONMENTAL MANAGEMENT***

**Organised by**

***Polytechnic University of Viseu***

### 1. IDENTIFYING DATA.

· Course Name.	Sustainability and Environmental Management
· Coordinating University.	Polytechnic University of Viseu

· Partner Universities Involved.	N/A																
· Course Field(s).	Sustainable Development																
· Related Study Programme.	Bachelor's Degree in Environmental Engineering and Master Degree in Environmental Technologies																
· ISCED Code.	850																
· SDG.	3, 6, 7, 11, 12, 13																
· Study Level.	Bachelor; Master																
· EUNICE Key Competencies	<p>Green – strongly; Orange- moderately; Red – partially; Blank cell - not at all</p> <table> <tr> <td>Problem solving</td><td>Moderately</td></tr> <tr> <td>Teamworking</td><td>Moderately</td></tr> <tr> <td>Communication</td><td>Strongly</td></tr> <tr> <td>Self-management</td><td>Strongly</td></tr> <tr> <td>Cognitive flexibility</td><td>Moderately</td></tr> <tr> <td>Digital competence</td><td>Moderately</td></tr> <tr> <td>Technical competence</td><td>Moderately</td></tr> <tr> <td>Global intercultural competence</td><td>Strongly</td></tr> </table>	Problem solving	Moderately	Teamworking	Moderately	Communication	Strongly	Self-management	Strongly	Cognitive flexibility	Moderately	Digital competence	Moderately	Technical competence	Moderately	Global intercultural competence	Strongly
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· Number of ECTS credits allocated.	5 ECTS
· Mode of Delivery.	Online live (synchronous) and self-study (asynchronous)
· Language of Instruction.	English
· Course Dates.	02/02/2026 - 30/06/2026

· Precise Schedule of the Lectures.	13 sequential weeks to be defined close to February Total duration: 52 hours; periodicity: 4 hours / week. Probably 10-14 (CET) Tuesdays.
· Key Words.	Sustainability, Environment, Climate Change, Air Pollution, Waste, Water, Circular Economy
· Catchy Phrase.	Sustainability is the greatest global challenge of today's society; how you can be an active agent of change in your future career!

· Prerequisites and co-requisites.	<ul style="list-style-type: none"> <li>▪ EUNICE Student</li> <li>▪ English Level: B2</li> </ul>
· Number of EUNICE students that can attend the Course.	20
· Course inscription procedure(s).	Eunice Application Portal

## 2. CONTACT DETAILS.

· Department.	School of Technology and Management, Department of Environment
· Name of Lecturer.	Paulo Pinho
· E-mail.	ppaulo@estgv.ipv.pt
· Other Lecturers.	Elisabete Silva; Isabel Brás; Pedro Baila Antunes; Sérgio Lopes

## 3. COURSE CONTENT.

The fulfilment of the United Nations Sustainable Development Goals – from the individual to the global – require urgent interventions to address environmental issues and their multiple threats and challenges.

This course prepares students to have an integrated view of sustainability and environmental management. Students acquire literacy and basic knowledge about environmental sciences and technologies, being prepared to, in the future, actively contribute to problem solving in this transversal field.

## 4. LEARNING OUTCOMES.

- Achieve critical knowledge in sustainability literacy and environmental sciences and technologies.

- Acquire basic knowledge in the main environmental matrices such as air, water and waste: its quality, pollution and treatment.
- Develop interdisciplinary and problem-solving skills to manage environmental challenges.
- Evaluate environmental subjects and management practices.

## 5. OBJECTIVES.

Raising awareness and knowledge of environmental issues and their integration, allowing the acquisition of skills to be applied during professional career.

## 6. COURSE ORGANISATION.

### UNITS

1. Sustainable development, sustainability challenges and opportunities.
2. Fundaments of environmental chemistry.
3. Air quality and climate change.
4. Energy transition challenges.
5. Water quality and water pollution, water management.
6. Waste production and waste management.
7. Environmental impacts, risks and their evaluation.
8. The circular economy and other major environmental challenges.

### LEARNING RESOURCES AND TOOLS.

Zoom or Microsoft Teams platforms, educational media, virtual classroom activities, e-learning (Eunice Moodle).

### PLANNED LEARNING ACTIVITIES AND TEACHING METHODS.

Students achieve knowledge and understanding through attendance in online lectures, through a variety of directed and self-directed learning activities.  
Students apply their understanding and explore case studies in practical works.

## 7. ASSESSMENT METHODS, CRITERIA AND PERIOD.

Practical works - reports and/or presentation (70%) and a final written online exam (30%)

### OBSERVATIONS.

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## 8. BIBLIOGRAPHY AND TEACHING MATERIALS.

Sawyer, C.N., McCarty, P.L., Parikin, G.F., Chemistry for Environmental Engineering and Science, 5th Edition, New York, 2003 McGraw-Hill International Editions. ISBN-13 978-0072480665

Davis, M., Cornwell D., Introduction to Environmental Engineering, 6th Edition, New York, 2023, McGraw-Hill International Editions, 2023. ISBN10: 1260241092 | ISBN13: 9781260241099

He, B., Sharifi, A., Feng C., Climate Change and Environmental Sustainability-Volume 1. MPI. 2022. ISBN 978-3-0365-2673-7 | ISBN 978-3-0365-2672-0.

Specific lectures, videos, and tools are provided by the professors.