

Course guide

480USE005 - 480USE005 - Innovation, Planning and Sustainable Management in Organisations

Last modified: 17/06/2026

Unit in charge:	Barcelona School of Civil Engineering	
Teaching unit:	758 - EPC - Department of Project and Construction Engineering. 751 - DECA - Department of Civil and Environmental Engineering.	
Degree:	MASTER'S DEGREE IN SUSTAINABILITY AND STRATEGIES FOR A JUST GLOBAL TRANSITION (Syllabus 2026). (Compulsory subject).	
Academic year: 2026	ECTS Credits: 5.0	Languages: Spanish

LECTURER

Coordinating lecturer:	Gonçaves Ageitos, Maria
Others:	Guevara Vilardell, Marc Velez Sabater, Gemma Lopez Grima, Victor

PRIOR SKILLS

Not needed.

TEACHING METHODOLOGY

MD.1.- Active theory learning (interactive masterclass).
MD.3.- Problem based learning (PBL)
MD.4.- Case studies.
MD.7.- Project based learning.

LEARNING OBJECTIVES OF THE SUBJECT

This module aims to equip students with the skills to define and apply sustainable planning and management strategies in both public and private organisations. Adopting a global perspective, the module delves into the characterisation and practical foundations of key tools and processes for planning, evaluation, the promotion of responsible innovation, and the integration of ethics to address the challenges of the current eco-social transition.

Upon completion of this module, students will be able to:

- Analyse public policy frameworks, organisational planning systems, and business management from a sustainability perspective.
- Analyse and compare development models and economic strategies, identifying their strengths and weaknesses.
- Apply ethical criteria in strategic decision-making and in the management of technological innovation.
- Evaluate the environmental and social impacts of production processes and business models, including the foundations for applying technical tools (e.g. environmental impact assessment, life cycle assessment, carbon footprint).
- Propose and implement innovative solutions for resource optimisation within organisations, for instance, integrated into management and continuous improvement frameworks.
- Design business strategies that combine economic viability with environmental and social sustainability, including the preparation and communication of corporate sustainability reports.
- Integrate principles of sustainability and social justice into project development and innovation processes.

STUDY LOAD

Type	Hours	Percentage
Hours large group	22,7	18.15
Hours medium group	11,4	9.11
Hours small group	11,0	8.79
Self study	80,0	63.95

Total learning time: 125.1 h

CONTENTS

Integration of the social and environmental component in public and private planning and management. Challenges.

Description:

Planning structure. Policies, plans, programs, portfolios, and projects. Integration of the social and environmental component in planning. Historical evolution. Global and European context. Current challenges.

Evaluation vs. continuous improvement. Planning (forecasting tools) and operation (diagnostic tools).

Governance models. Transparency and good governance. Examples of good practices.

Related activities:

A.1: Guided activities oriented towards the analysis and resolution of case studies.

A.2: Class presentations.

A.3: Teamwork.

Full-or-part-time: 17h

Theory classes: 5h

Self study : 12h

Strategies and tools for the integration of sustainability into organizational planning.

Description:

Environmental impact assessment (EIA). Characterization of environmental factors and project factors. Qualitative and quantitative evaluation. Tools and methodologies for environmental impact assessment. Environmental monitoring plans.

Environmental and social life cycle assessment (LCA). Environmental LCA methodology: ISO 14040 standard. Cradle-to-Grave and Cradle-to-Cradle approaches.

Phases of LCA. Goal and scope definition, inventory analysis, impact assessment, interpretation, and improvement proposals.

Introduction to social LCA. Methodology. Stakeholders. Relationship with the SDGs.

Related activities:

A.1: Guided activities oriented towards the analysis and resolution of case studies.

A.2: Class presentations.

A.3: Teamwork.

Full-or-part-time: 41h 30m

Theory classes: 12h

Self study : 29h 30m

Integration of sustainability into business management and activities.

Description:

Business management. Concept of a company. Business operations. Business objectives (financial, environmental). Corporate strategies facing the eco-social transition. Challenges. Corporate social responsibility (CSR). Definition, evolution, and future of CSR. Forética Report. The consumer as a driver of change. Operations management: tools for continuous improvement, control, and evaluation. Environmental management systems (ISO 14001 Standard and EMAS Regulation). Legal framework and structure of sustainability reports. Methodologies for calculating and managing the carbon footprint of organizations.

Related activities:

- A.1: Guided activities oriented towards the analysis and resolution of case studies.
- A.2: Class presentations.
- A.3: Teamwork.

Full-or-part-time: 41h 30m

Theory classes: 12h

Self study : 29h 30m

Business ethics and innovation

Description:

Funding, purpose, and ethics of innovation.
Impact of Artificial Intelligence (jobs, decision-making).
Environmental ethics, utilitarianism, and sustainable development.

Related activities:

- A.1: Guided activities oriented towards the analysis and resolution of case studies.
- A.2: Class presentations.
- A.3: Teamwork.

Full-or-part-time: 26h 40m

Theory classes: 7h 40m

Self study : 19h

GRADING SYSTEM

Any academic fraud, plagiarism or use or possession of unauthorised means in an assessment activity leads to a mark of zero (0) for the affected test or assignment. Furthermore, in accordance with the University's regulations, if disciplinary proceedings are initiated the subject is recorded as "Pending Assessment" until a decision is reached. These incidents are managed in accordance with the [Action Framework for Academic Integrity in Assessment at the UPC](#).

Directed activity marks (A.1) = 20%

Class presentation marks (A.2) = 20%

Teamwork marks (A.3) = 30%

Final Exam (FE) = 30%

Final Mark (FM): $0.20A.1 + 0.20A.2 + 0.30A.3 + 0.30FE$

EXAMINATION RULES.

1. Directed Activities (A.1): There will be an assessment of directed activities (in-class or outside) corresponding to the submission of assigned coursework. These tasks may be individual or group-based, at the discretion of the lecturer.
2. Class Presentations (A.2): Students will prepare and deliver classroom presentations based on the results of case study analyses, problem-solving exercises, or class assignments.
3. Teamwork (A.3): Students will work on a group project throughout the course, which will be submitted and presented jointly.
4. Final Examination (FE): There will be a final exam with a maximum duration of 2 hours. It will consist of questions related to the theoretical knowledge of the module syllabus, aimed at assessing the learning outcomes achieved by the student.

BIBLIOGRAPHY

Basic:

- Gómez Orea, D. Evaluación de impacto ambiental: un instrumento preventivo para la gestión ambiental.. 2a ed., rev. y ampl. Madrid: Mundi-Prensa, 2003. ISBN 8484760847.
- Glasson, J.; Therivel, R. Introduction to environmental impact assessment. 5th ed. New York: Routledge, 2019. ISBN 9781138600751.
- Lawler, E.E.; Worley, C.G.; Creelman, D. Management reset : organizing for sustainable effectiveness.. New York: John Wiley & Sons, 2011. ISBN 9780470637982.
- Müller-Christ, G.. NouSustainable management: coping with the dilemmas of resource-oriented management. llibre. Heidelberg: Springer, 2011. ISBN 9783642443602.
- Partidário, M.R.; Clark, R.. Perspectives on strategic environmental assessment. Boca Ratón, Florida: Lewis, 2000. ISBN 1566703603.
- Therivel, R. Strategic environmental assessment in action. 2nd ed. London ; Washington, DC: Earthscan, 2010. ISBN 9781849710657.

Complementary:

- Asociación Española de Normalización y Certificación (AENOR). UNE-EN ISO 14044 /A2:2021: gestión ambiental: análisis del ciclo de vida: requisitos y directrices [on line]. 2022. Madrid: AENOR, 2022 [Consultation: 31/07/2026]. Available on: <https://plataforma-aenormas-aenor-com.recursos.biblioteca.upc.edu/standard/UNE/N0066259>.

RESOURCES

Other resources:

Class materials available in Atenea