Course guide
860012 - 42001ENR - Engineering Resources

Last modified: 28/04/2025

Unit in charge: Manresa School of Engineering
Teaching unit: 860 - EEI - Igualada School of Engineering.

Degree: **Academic year:** 2025 **ECTS Credits:** 6.0
Languages: Catalan, Spanish, English

LECTURER

Coordinating lecturer: Borràs Riba, Eulàlia

Others: -

PRIOR SKILLS

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REQUIREMENTS

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DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
1. Communicating with clarity at least in Catalan, Spanish and English in contexts such as meetings, presentations and multilingual and interdisciplinary teamwork.
2. Capacity for planning, structuring and supervising teamwork; decision making, leadership skills, human resources management to favour labour relations, career development to full potential.

Transversal:
3. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 3. Communicating clearly and efficiently in oral and written presentations. Adapting to audiences and communication aims by using suitable strategies and means.
4. THIRD LANGUAGE. Learning a third language, preferably English, to a degree of oral and written fluency that fits in with the future needs of the graduates of each course.

TEACHING METHODOLOGY

Students will do task-based projects and activities. We will brainstorm prior knowledge and objectives with the whole class and then will work in small groups, reporting conclusions back to the whole class. The teacher will support the groups. The communicative approach is very interactive and participatory in order to achieve practical communication needs in international groups.

Students will perform the more interactive activities in class (small group meetings, communicating results to whole class). Students are therefore expected to work independently outside of class (occasionally also in groups), usually through the campus, by searching information, reading or by doing exercises. In short, students must prepare prior to the class to maximize quality class time by reading texts, preparing documents or presentations, watching videos that will be later discussed in class.

Students will be asked to publically defend a project related to their actual engineering final project. Students will make contributions to the other student projects during their oral presentations. A written paper will also have to be submitted.

Additionally, related materials (cases, videos, exercises..) will be made available online. To attend class students will have prepared the material beforehand. This will hopefully stir up debate on current issues of interest, in such diverse topics as economics, geopolitics or technology.
The final exam will help to focus the main contents and provide objective feedback.

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

Type	Hours	Percentage
Guided activities	10,0	6.67
Hours medium group	20,0	13.33
Hours large group	30,0	20.00
Self study	90,0	60.00

Total learning time: 150 h

CONTENTS

In Company

Description:
1. Chemical Engineering projects
2. Communication at Work
3. Management
4. Leadership
5. Negotiations
6. Conflict Resolution
7. Work Relations
8. Human Resources

Full-or-part-time: 20h
Theory classes: 5h
Laboratory classes: 5h
Self study : 10h

Project Design

Description:
1. Project brainstorming
2. Project definition
3. Project examples: European Projects
4. Project designing
5. Project writing
6. Project revision

Full-or-part-time: 47h
Theory classes: 10h
Laboratory classes: 7h
Self study : 30h

International Project Meetings

Description:
1. Working in international teams: Brainstorming in small groups, internal debates, task coordination, group leadership
2. Intercultural communication
3. Public speaking: clarity and intelligibility
4. Preparing for public speaking

5. Defending a project: Persuasion Techniques
6. Listening to other projects
7. Asking questions for other projects
8. Synergies between groups: Assessment by peers.

Full-or-part-time: 42h
Theory classes: 10h
Laboratory classes: 7h
Self study : 25h

Internacionalization in the INTERNET era

Description:
1. Globalization
2. Local-global dichotomy
3. Emerging Markets
4. Geopolitics
5. Company Ethics: Social Responsibility
6. Information Flow: Global Media

Full-or-part-time: 23h
Theory classes: 4h
Laboratory classes: 4h
Self study : 15h

Now What?: Professional Options for the Chemical Enginner

Description:
1. Self-assessment
2. Professional Options in Chemical Engineering
3. Job Interviewing
4. Professional networking: INTERNET resources, 2.0 resources.

Full-or-part-time: 18h
Theory classes: 4h
Laboratory classes: 4h
Self study : 10h

GRADING SYSTEM

Evaluation Percentage
Written Assignments 15
Active Class Participation 30
Exam 25
Project 30

EXAMINATION RULES.

Class attendance is absolutely required and will be monitored by the lecturer. Students are expected to actively participate in the classroom by asking questions, working in groups and generally taking part in the activities planned for that particular day. Attendance Policy requires students to attend a minimum of 85% of classes.

- If the student fails to hand in a particular assignment within the deadline, he will get a zero in that particular assignment.

- Note that plagiarism will not be tolerated under any circumstance and will be severely penalized. By plagiarism we understand any form of copying, either from peers or directly from the Internet without citations. Work has to be original and not copied literally unless you are quoting someone.

Assignments will usually be handed in through the Atenea campus, unless otherwise stated.

RESOURCES

Hyperlink:
- Academic Skills Center
- Program in Writing and Humanistic Studies. MIT.
- http://ocw.mit.edu/courses/sloan-school-of-management/15-996-cross-cultural-leadership-fall-2004/-
http://ocw.mit.edu/courses/sloan-school-of-management/15-969-dynamic-leadership-using-improvisation-in-business-fall-2004/-
http://ocw.mit.edu/courses/sloan-school-of-management/15-351-managing-innovation-and-entrepreneurship-spring-2008/-
http://www.what-are-good-leadership-skills.com/activities-for-leadership-workshops.html-
http://ublib.buffalo.edu/libraries/projects/cases/ubcase.htm#teaching-
http://www.upc.edu/slt/apren-angles-altres-idiomes/recursos-a-la-xarxa