

Academic Year/course: 2022/23

## 66231 - Ecodesign and life cycle analysis

### Syllabus Information

**Academic Year:** 2022/23

**Subject:** 66231 - Ecodesign and life cycle analysis

**Faculty / School:** 110 - Escuela de Ingeniería y Arquitectura

**Degree:** 531 - Master's in Chemical Engineering

**ECTS:** 3.0

**Year:**

**Semester:** Second semester

**Subject Type:** Optional

**Module:**

### 1. General information

### 2. Learning goals

### 3. Assessment (1st and 2nd call)

### 4. Methodology, learning tasks, syllabus and resources

#### 4.1. Methodological overview

The methodology followed in this course (**Ecodesign and life cycle assessment**) is oriented towards achievement of the learning objectives. It is based on participation and the active role of the student favors the development of communication and decision-making skills. A wide range of teaching and learning tasks are implemented, such as lectures, guided assignments, computer lab session, autonomous work, and tutorials.

Students are expected to participate actively in the class throughout the semester.

Classroom materials will be available via Moodle. These include a repository of the lecture notes used in class, the course syllabus, as well as other course-specific learning materials.

Further information regarding the course will be provided on the first day of class.

#### 4.2. Learning tasks

The course includes 3 ECTS organized according to:

- Lectures (19 hours). The professor will explain the theoretical contents of the course and solve illustrative applied problems. The professor will propose some exercises and cases for solving by students in class. Lectures will be complemented by problem-solving sessions and computer lab sessions. Although it is not a mandatory activity, regular attendance is highly recommended.
- Problem solving and case studies sessions (7 hours).
- Computer lab sessions (4 hours). The student will learn the application of softwares to Life Cycle Assessment.
- Evaluation (3 hours).
- Study (31 hours). Students are expected to study theory, solve problems, prepare works and oral presentations. Also tutorials are included, where the professor will assist students with their questions and doubts related to guided assignments.
- Guided assignments (11 hours). Students will complete assignments, problems and exercises related to concepts seen in problem-solving sessions and lectures.

### **4.3. Syllabus**

The course will address the following topics:

Topic 1. Ecodesign concept: Contribution to sustainability through product design. Legal requirements in the eco-design of product.

Topic 2. Product environmental statement: Self-environmental statement and eco-labeling.

Topic 3. Ecodesign methodology. Tools.

Topic 4. Life cycle assessment (LCA): Methodology, databases, tools. Implementation of the LCA for eco-design.

### **4.4. Course planning and calendar**

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course, will be provided on the first day of class and the website <https://moodle.unizar.es/add/>

### **4.5. Bibliography and recommended resources**

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=66231&>