

## 66213 - Environmental Management in Industry

### Syllabus Information

**Academic Year:** 2019/20

**Subject:** 66213 - Environmental Management in Industry

**Faculty / School:** 110 -

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

**ECTS:** 6.0

**Year:** 1

**Semester:** First semester

**Subject Type:** Compulsory

**Module:** ---

### 1.General information

#### 1.1.Aims of the course

#### 1.2.Context and importance of this course in the degree

#### 1.3.Recommendations to take this course

### 2.Learning goals

#### 2.1.Competences

#### 2.2.Learning goals

#### 2.3.Importance of learning goals

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

#### 3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

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

#### 4.1.Methodological overview

The methodology followed in this course is oriented towards achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as

- Lectures to develop the theoretical bases of the course and solving some model problems
- Practice sessions (cases). The kinds of problems, cases and visits to industries are the effective complement to the lectures. They allow to verify understanding of the contents and also to present a more practical and applied approach.
- Special sessions (visits to companies ...).
- An assignment and its public defense.
- Continuous work and student participation.

#### 4.2.Learning tasks

The course includes the following learning tasks:

- Lectures (25 hours). The theory of the course syllabus will be taught and problems will be solved.
- Practice sessions (20 hours). In these classes, problems will be solved by students under the supervision of the

professor. Problems or cases will be related to the theoretical part explained in lectures.

- Special sessions (15 hours). Complementary activities in the form of visits to industries, experts' talks, thematic seminars, etc.
- Assignment (25 hours). Individual or preferably a group work on the different subjects proposed by teachers or by the students.
- Autonomous work and study (49 hours). It is recommended to study continuously throughout the semester.
- Tutorials (10 hours).
- Assessment (6 hours). There will be a final global exam where the theoretical and practical contents learnt by the student will be assessed.

### **4.3.Syllabus**

The course will address the following topics:

#### **SECTION 1. INTRODUCTION**

- Topic 1. Distribution of competences between administrations
- Topic 2. Regulation of business-administration relations

#### **SECTION 2. ADMINISTRATIVE AUTHORIZATIONS**

- Topic 3. Regime of administrative authorizations and requirements: waste, air, waste and soil
- Topic 4. Integrated Environmental Authorizations
- Topic 5. Promotion of environmental activities: environmental taxes and environmental investment certificates

#### **SECTION 3. BEST AVAILABLE TECHNIQUES (BAT)**

- Topic 6. Environmental impact of industries in various sectors. Application of Best Available Techniques (BAT)

#### **SECTION 4. MANAGEMENT SYSTEMS**

- Topic 7. Environmental management systems: EMAS and ISO 14001

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

The assignment will be presented in a public session during the last sessions of the course.

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 or please refer to the EINA website.

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

[http://biblos.unizar.es/br/br\\_citas.php?codigo=66213&year=2019](http://biblos.unizar.es/br/br_citas.php?codigo=66213&year=2019)