Universidad Zaragoza

Year : 2019/20

66216 - Production and Quality Management

Syllabus Information

Academic Year: 2019/20
Subject: 66216 - Production and Quality Management
Faculty / School: 110 -

Degree: 531 - Master's in Chemical Engineering

ECTS: 4.5
Year: 1
Semester: Second 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)

The assesment of the subject is made up of two different parts corresponding to Production Management and Quality Management. The student's final grade will result from the weighted average of the marks obtained in each part, taking into account that the weight in the final note of Production Management will be 40% and that of Quality Management will be 60%. In any case, to be able to make media between both parties, it will be necessary that the student has obtained a grade equal to or higher than 4.0 (about 10.0) in each of them. In case of not meeting that condition, the final grade will be that of suspense 4.0.

The assesment activities that will be applied with the same percentages to each of the two parts, Production Management and Quality Management are described below.

Option 1: Continuous evaluation that includes:

1. Group work on the practical cases proposed during the development of the subject: (50% of the final grade of each one of the parts of the subject).

In the part of Quality Management: average of the individual evaluation of every practical case.

In the part of Production Management:

- Assessment of group work: 30% of the final grade of Production Management

- Presentation and debate orally: 15% of the final note of Production Management

- Direct observation of the performance of the work teams: 5% of the final note of Production Management.

2. Eexam at the end of the course. This test will consist of questions and theoretical-practical questions (50% of the final grade of each of the parts of the subject)

Option 2: Overall evaluation:

Exam described in option 1, second point, which will be assessed with 50% of the final grade, to which will be added the

resolution of a practical case that will be assessed with 50% of the final grade.

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

The proposed methodology enhances continuous work and analysis skills and it focuses on the most practical content of the course. With the whole group of students, the most theoretical contents will be taught and some additional assignments will be discussed. These sessions will provide them with knowledge and capabilities in order to conduct the different case studies. The cases were selected for the students to apply along the course different techniques around production planning and control as well as quality management. The assessment is mainly focused on the practical elements of the course.

4.2.Learning tasks

The course includes the following learning tasks:

Section 1. Production planning and control

- Lectures (6 hours). The main theory will be taught and problems will be solved accordingly.
- Case study discussion and practice sesions (4 hours). Those will be based on the theory developed in the lectures.
- Laboratory sessions (5 hours). The student will deep into the different concepts explained in lectures.
- Practical assignment (7 hours). This is the average time devoted to solve the practical assignment proposed to the student as autonomous work outside the class.
- Tutorials (1 hour). Individual meeting to follow-up the evolution of the practical assignments.
- Study (25 hours). It refers to the average time devoted to self-learning and exam preparation.
- Assessment (3 hours). It includes examination and presentation of case studies.

Section 2. Quality management

- Lectures (9 hours). The theory of the proposed topics will be taught.
- Practice sesions (6 hours). In these classes the problems or practical cases will be solved by students supervised by the professor. Problems or cases will be related to the theoretical part explained in lectures.
- Laboratory sessions (10 hours). The student will consolidate the contents developed in the lectures.
- Implementation of practical cases (8 hours). Individual or in group.
- Tutorials (1.5 hours).
- Study (20 hours).
- Assessment (2 hours).
- Visits to companies (5 hours).

4.3.Syllabus

The course will address the following topics:

Section 1. Production planning and control

1. Introduction to Production planning and control (2h)
2. Supply chain management (2h)
3. Demand management (1h)
4. Inventory management (1h)
5. Production planning and control techniques (4h)
6. Business process re-engineering (1h)
7. Health and safety applied to production settings (1h)

- Assessment (1h)
- Presentation of practical assignments (2h)

Section 2. Quality management

1. Introduction to Quality Management Systems (14h)
2. Functions in industrial quality assurance (4h)
3. Quality measurement: methods and equipment for inspection and test (5h)
4. Integration of Management Systems (2h)

- Assessment (2h)

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 or please refer to the EINA website.

4.5.Bibliography and recommended resources

http://biblos.unizar.es/br/br_citas.php?codigo=66216&year=2019