

29978 - Challenges and consequences of the technical development

Syllabus Information

Academic Year: 2019/20

Subject: 29978 - Challenges and consequences of the technical development

Faculty / School: 110 - Escuela de Ingeniería y Arquitectura

Degree: 436 - Bachelor's Degree in Industrial Engineering Technology
440 - Bachelor's Degree in Electronic and Automatic Engineering
434 - Bachelor's Degree in Mechanical Engineering
558 - Bachelor's Degree in Industrial Design and Product Development Engineering
435 - Bachelor's Degree in Chemical Engineering
438 - Bachelor's Degree in Telecommunications Technology and Services Engineering
470 - Bachelor's Degree in Architecture Studies
476 -
430 - Bachelor's Degree in Electrical Engineering
581 - Bachelor's Degree in Telecommunications Technology and Services Engineering
439 - Bachelor's Degree in Informatics Engineering

ECTS: 4.0

Year: 4

Semester: 430 - Second semester

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476 - Second semester
558 - Second semester
581 - Second semester

Subject Type: Optional

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 the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as lectures, practice sessions, tutorials, and autonomous work and study.

This course aims to achieve a learning process based on enriching experiences, creating spaces for discussion and involving students in actual actions that stimulate decisions and conflict resolution.

4.2.Learning tasks

This course includes the following learning tasks:

- **Lectures.** A brief video or participatory debate will be introduced in those theoretical and practical sessions where new concepts are introduced. Then through brainstorming the students present their impressions on these concepts, thus creating a critical debate.
- **Practice sessions.** Lectures will be complemented by practice sessions.
- **Tutorials.** The tutorials can be used to review both knowledge and the work done by the student. To follow the course contents the student will have available the teaching material developed by the teachers.
- **Autonomous work and study.**

4.3.Syllabus

The course will address the following topics:

? Technique: Logic and consequences

? Technical progress: sustainable development, climate change and the consequences of technical development on the environment.

? Revolutions, digital eras and Industry 5.0

? The transformation of the space concept and reference systems.

4.4.Course planning and calendar

Lectures will be complemented by case studies, distributed along the course. All these activities will be supported through the Moodle platform, using the *Anillo Digital Docente* of the University of Zaragoza. There will be a deadline for the delivery of the course work.

The dates for presentations will be communicated to students at the beginning of the term, and by Moodle, considering the academic calendar of the EINA.

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 College of Higher Engineering and Architecture (EINA) website (<https://eina.unizar.es/>) and Moodle.

4.5.Bibliography and recommended resources

<http://psfunizar7.unizar.es/br13/egAsignaturas.php?id=8663>