

## 29820 - Fluid Mechanics

### Syllabus Information

**Academic Year:** 2019/20

**Subject:** 29820 - Fluid Mechanics

**Faculty / School:** 110 - Escuela de Ingeniería y Arquitectura  
326 - Escuela Universitaria Politécnica de Teruel

**Degree:** 440 - Bachelor's Degree in Electronic and Automatic Engineering  
444 - Bachelor's Degree in Electronic and Automatic Engineering

**ECTS:** 6.0

**Year:** 3

**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 the achievement of the learning objectives. The learning process combines theory, problems and lab sessions. We encourage the continued study of the subject throughout the semester and the discussion of issues and less clear aspects as they arise.

A wealth of subject-specific material is available on the *Anillo Digital Docente*.

#### 4.2.Learning tasks

The course includes the following learning tasks:

1. Theory lectures and problem-solution strategy: 30 hours
2. Practical cases: 20 hours (EINA) / 25 (EUPT)
3. Lab sessions: 10 hours (EINA) / 5 hours (EUPT)
4. Study: 83 hours
5. Exams: 7 hours

#### 4.3.Syllabus

The course will address the following topics:

1. Introduction
2. The fundamental equations of Fluid Mechanics
3. Canonical flows
4. Dimensional analysis and similarity
5. Flow in duct systems
6. Boundary layers and aerodynamics

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

Theory, problems and tutorials and lab sessions are in the timetables published by the School. A detailed calendar is published early in the term.

The teachers' office hours are published in the University's Anillo Digital Docente.

All the other activities are planned at the beginning of the term and published in the University's Anillo Digital Docente.

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

[http://biblos.unizar.es/br/br\\_citas.php?codigo=29820&year=2019](http://biblos.unizar.es/br/br_citas.php?codigo=29820&year=2019)