

29718 - Materials: Technology

Información del Plan Docente

Academic Year	2016/17
Academic center	110 - Escuela de Ingeniería y Arquitectura
Degree	434 - Bachelor's Degree in Mechanical Engineering 330 - Complementos de formación Máster/Doctorado
ECTS	6.0
Course	---
Period	Indeterminate
Subject Type	ENG/Complementos de Formación, Compulsory
Module	---

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

5.2.Learning activities

5.3.Program

1. Forming of metals. Solidification and casting. Metal forming. Powder metallurgy.
2. Forming of polymers. Thermosets, thermoplastics, rubbers.
3. Forming of composite materials.
4. Forming of ceramics and glasses. Traditional ceramics. Advanced ceramics. Glass.

29718 - Materials: Technology

5. Joining technologies. The metallurgy of welding.
6. Oxidation and corrosion of metals. Degradation of polymers.
7. Brittle fracture of ceramics. Creep. Creep-fatigue interaction.
8. Failure analysis. Non destructive testing. Methodology.
9. Materials selection for mechanical design.

5.4.Planning and scheduling

5.5.Bibliography and recommended resources