

Centre	University College of Engineering of Vitoria-Gasteiz
Name of subject	26045 – Elasticity and Resistance of Materials
Qualification	Degree in Mechanical Engineering
Type	Compulsory
Credits	6 ECTS
Year	3
Term(s)	1st
Department	Mechanical Engineering
Language	Spanish and Basque

Outcomes / Objectives

Analysis of stress and strain states in resistant mechanical elements. Fundamentals of mechanical design and of the materials engineering application.

Syllabus

General theory of bending in all its conditions: pure, simple, compound, oblique, torsion.

Flexion-torsion and torsion-cutting.

Internal potential.

Energy theorems.

Plastic deformations. Limit state theories.

Methodology

Teaching Method

Face-to-Face Teaching Hours

Lectures	Seminars	Classroom practice	Lab. practice	Computer sessions	Clinical practice	Workshops	Industrial workshops	Field practice
63		18	9					

Student Hours of Non Face-To-Face Activities

Lectures	Seminars	Classroom practice	Lab. practice	Computer sessions	Clinical practice	Workshops	Industrial workshops	Field practice
94,5		27	13,5					

Bibliography

Basic Bibliography

- Joseba García Melero. Resistencia de Materiales. Editorial: UPV-EHU

In-depth Bibliography

- Manuel Vazquez. Resistencia de Materiales. Editorial: Universidad Politécnica de Madrid
- Luis Ortiz Berrocal. Resistencia de Materiales. Editorial Mc Graw Hill
- Timoshenko. Resistencia de Materiales (2 tomos). Editorial: Espasa-Calpe

Websites

- <http://moodle.ehu.es>