Course guide
205272 - 205272 - Sports Engineering

Last modified: 04/06/2024

Unit in charge: Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 710 - EEL - Department of Electronic Engineering.

Degree: BACHELOR'S DEGREE IN AUDIOVISUAL SYSTEMS ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN TEXTILE TECHNOLOGY AND DESIGN ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN AEROSPACE TECHNOLOGY ENGINEERING (Syllabus 2010). (Optional subject).
BACHELOR'S DEGREE IN AEROSPACE VEHICLE ENGINEERING (Syllabus 2010). (Optional subject).
BACHELOR'S DEGREE IN INDUSTRIAL DESIGN AND PRODUCT DEVELOPMENT ENGINEERING (Syllabus 2010). (Optional subject).
BACHELOR'S DEGREE IN INDUSTRIAL TECHNOLOGY ENGINEERING (Syllabus 2010). (Optional subject).

Academic year: 2024 **ECTS Credits:** 3.0 **Languages:** English

LECTURER

Coordinating lecturer: RAUL FERNANDEZ GARCIA

Others: RAUL FERNANDEZ GARCIA

TEACHING METHODOLOGY

master classes and Project Based Learning

LEARNING OBJECTIVES OF THE SUBJECT

The subject focuses on the development and prototyping of ICT applications in sports.

STUDY LOAD

Type	Hours	Percentage
Hours large group	30,0	40.00
Self study	45,0	60.00

Total learning time: 75 h

CONTENTS

Basics of Physical Activity and Sports

Description:
In this module students will learn the basics of physical activity. The physical capabilities and physiological parameters of sportsperson will be explained.

Full-or-part-time: 4h
Theory classes: 2h
Self study : 2h

Instrumentation of physiological parameters

Description:
The focus of this module is the development of electronics equipment to measurement the main physiological parameters

Full-or-part-time: 4h
Theory classes: 2h
Self study : 2h

Instrumentation of physical capabilities

Description:
The focus of this module is the development of electronics equipment to measurement the physical capabilities.

Full-or-part-time: 4h
Theory classes: 2h
Self study : 2h

Technological equipment during sport practice

Description:
The main technological equipment used to evaluate the sportsperson during the sport practice will be explained

Full-or-part-time: 4h
Theory classes: 2h
Self study : 2h

Technological equipment for arbitration

Description:
The technologies used for referees during the sport practices will be studied in detail.

Full-or-part-time: 4h
Theory classes: 2h
Self study : 2h

Development of a sport technology prototype

Description:
Definition of specifications.
Hardware planning
Firmware programming
Prototype construction.
Validation

Full-or-part-time: 55h
Theory classes: 20h
Self study : 35h

GRADING SYSTEM

The final grade depends on the following assessment criteria:

25 % Atenea quiz
25 % Prototype functionally
25 % Prototype report
25 % Presentation

RESOURCES

Other resources:
Resources provided in ATENEA