

Academic Year: ( 2023 / 2024 )

Review date: 05-06-2021

Department assigned to the subject: Systems Engineering and Automation Department

Coordinating teacher: MARTINEZ BORJA, ALBERTO PEDRO

Type: Electives ECTS Credits : 3.0

Year : 1 Semester : 2

## OBJECTIVES

The main objectives are:

- Obtain a first knowledge on unmanned air systems (UAS) including platforms, data links, ground segment and payloads,
- Design and size a UAS for a specific set of requirements
- Implement a SWOT analysis

## DESCRIPTION OF CONTENTS: PROGRAMME

1. Types & Missions
2. Main systems and future trends
3. Conceptual design / Architecture (air and ground segments)
4. Data Links (LOS & SATCOM)
5. Payloads (EO/IR, SAR, ELS,...)
6. SWOT Analysis

## LEARNING ACTIVITIES AND METHODOLOGY

- Basic concepts based on instructor experience on real systems design.
- Team Challenge: UAS design for specific set of requirements
- Students Support: 1 hour per week.

## ASSESSMENT SYSTEM

Learning is based on the execution and class presentation of a real design project.

Class attendance and active contribution will be appreciated.

% end-of-term-examination:	0
% of continuous assessment (assignments, laboratory, practicals...):	100

## BASIC BIBLIOGRAPHY

- US - DOD Unmanned Systems Integrated Roadmap 13-38, US DOD, 2013