

Academic Year: (2019 / 2020)

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Department assigned to the subject: Systems Engineering and Automation Department

Coordinating teacher: GARRIDO BULLON, LUIS SANTIAGO

Type: Compulsory ECTS Credits : 3.0

Year : 1 Semester : 2

OBJECTIVES

Ability to design and project automated production systems and advanced process control

DESCRIPTION OF CONTENTS: PROGRAMME

Computer control. Modeling and systems analysis using state variables. State Observers. State feedback control.

LEARNING ACTIVITIES AND METHODOLOGY

The training activities include:

- Lectures, where knowledge that students should acquire will be presented. To facilitate their development students receive class notes and have basic reference texts that facilitates follow lessons and develop further work.
- Resolution of exercises by the student self-assessment and will serve to acquire the necessary skills.
- Classes of problems, which are developed and discuss the problems that are proposed to students.
- Lab, where students experimentally verify the theoretical concepts and results seen in class.
- Lab in computer room where computer are resolved proposed problems.
- Lectures, classes resolution of questions in small groups, student presentations, individual tutorials and personal work, including research, tests and exams aimed at the acquisition of theoretical knowledge will involve 1.5 ECTS credits.
- Laboratory practices and kinds of problems in small groups, individual tutorials and personal work, including research, tests and exams aimed at the acquisition of practical skills related to the program will involve subjects 1.5 ECTS credits.

ASSESSMENT SYSTEM

% end-of-term-examination/test: 50

% of continuous assessment (assignments, laboratory, practicals...): 50

The evaluation of the course is based on continuous assessment model. Total student's grade will be derived from the evaluation of the different activities proposed in the course. It will consist of a theoretical part and a practical part.

Ongoing evaluation of the theoretical part is conducted through two sets, so that:

- * If both are approved, do not take the final exam. If the student still wants to present at the end to up note, the note tells which will exclusively serve in the end.
- * If a part is suspended, the student must go to the end with that part. With the note you get on the final exam (approved or suspended), is made with the approved partial average, and if the score is 5 or greater, have passed the theoretical part.
- * If the partials are suspended, it goes all the final exam and the note will directly serve the final theory.

And with regard to the practice, as is required with the theoretical part, will have to obtain a minimum of 5 to approve.

Weighting: Test of theory, 90%. Lab, 10%

% end-of-term-examination/test:	50
% of continuous assessment (assignments, laboratory, practicals...):	50

BASIC BIBLIOGRAPHY

- Tripathi Modern Control Systems: An Introduction, Jones & Bartlett Learning, 2010

ADDITIONAL BIBLIOGRAPHY

- NISE Control System Engineering, Wiley, 2018