30211 - Computer Networks

Syllabus Information

Academic Year: 2020/21
Subject: 30211 - Computer Networks
Faculty / School: 110 - Escuela de Ingeniería y Arquitectura
326 - Escuela Universitaria Politécnica de Teruel
Degree: 330 - Complementos de formación Máster/Doctorado
       443 - Bachelor's Degree in Informatics Engineering
       439 - Bachelor's Degree in Informatics Engineering
ECTS: 6.0
Year: 2
Semester: First semester
Subject Type: Compulsory
Module: ---

1.General information

1.1.Aims of the course

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

2.Learning goals

2.1.Competences

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented such as:

1. Continuous study and work, starting from the first day.

2. The learning of concepts and methodologies for the analysis and design of computer networks during the lectures, in which the students' participation will be fostered.

3. The application of such knowledge in the classes of problem-solving. In these classes, students will play an active role in the analysis and design of specific layers of network architecture.

4. In the laboratory practical classes, the student will review network architecture, learn to program network applications, and study in detail various protocols of network architecture, local network configuration, and Internet organization.

5. The practical work will be carried out by developing a project of a network application proposed by the teachers.

4.2.Learning tasks

The course includes the following learning tasks:
Activity Type 1 (lectures): 30 hours
- Teach the course syllabus

In the School of Engineering and Architecture Campus Rio Ebro:

Activity Type 2 (class of problems): 15 hours
- Solve problems concerning the content of the lectures.

Activity Type 3 (practical classes): *15 hours*
- 6 sessions of laboratory practice network.

Activities type 6 (practical work): *12 hours*
- The student will do practical work-based programming network applications.

In the Polytechnic School Campus Teruel:
Activity Type 2 (kinds of problems): *16 hours*
- Solve problems concerning the content of the lectures.

Activity Type 3 (practical classes): *14 hours*
- 7 sessions of laboratory practice network.

Activities type 6 (practical work): *08 hours*
- The student will do practical work-based programming network applications.

4.3.Syllabus

The course will address the following topics:
- Introduce the idea of network architecture
- Basic physical principles that underpin
- Elements that provide point-to-point communication between two entities
- Networking and IP protocol
- Communication elements that provide end-to-end between two entities
- Orthogonal aspects such as congestion and quality of service
- Conceptual layers above the level of data transport

4.4.Course planning and calendar

In the School of Engineering and Architecture Campus Rio Ebro:
During the 15 weeks (3 hours/week):
- Development of lectures
- Development sorts of problems

During the 15 weeks (every other week, 2 hours / 2 weeks)
- Development laboratory practice sessions

Also, in specific weeks:
- Supervising practical work

In the Polytechnic School Campus Teruel:
The course is given for 15 weeks with the following distribution of activities:
During the 15 hours/week/week):
- Development of lectures
- Development sorts of problems

During the 15 weeks (every other week, 2 hours / 2 weeks)
- Development laboratory practice sessions. They must be submitted in writing the results of each practice. If delivered after the date set the highest score to get in practice will be: 7 points (three days later), 5 points (four to seven days later). After a week delivery will not be accepted.

4.5.Bibliography and recommended resources