



Year : 2018/19

## **62237 - Knowledge Management and Semantic Web**

### **Syllabus Information**

<b>Academic Year:</b>	2018/19
<b>Subject:</b>	62237 - Knowledge Management and Semantic Web
<b>Faculty / School:</b>	110 -
<b>Degree:</b>	534 - Master's in IT Engineering
<b>ECTS:</b>	3.0
<b>Year:</b>	2
<b>Semester:</b>	First semester
<b>Subject Type:</b>	Optional
<b>Module:</b>	---

### **General information**

#### **Aims of the course**

#### **Context and importance of this course in the degree**

#### **Recommendations to take this course**

#### **Learning goals**

#### **Competences**

#### **Learning goals**

#### **Importance of learning goals**

#### **Assessment (1st and 2nd call)**

#### **Assessment tasks (description of tasks, marking system and assessment criteria)**

#### **Methodology, learning tasks, syllabus and resources**

#### **Methodological overview**

Our learning methodology includes both face-to-face and other activities. Face-to-face activities include:

- Theory sessions

- Practice sessions
- Tutorials
- Examination (a final project)

Non face-to-face activities include:

- Autonomous work
- Autonomous study
- Other activities (invited talks, seminars, selected background readings, videos...)

## Learning tasks

This is a 3 ECTS course (corresponding to a dedication of 75 h) organized in the following way:

- 30 h of face-to-face activities (including theory and practice sessions).
- 45 h of other activities (mainly, autonomous work to prepare the final project).

## Syllabus

1. Introduction
  - Data, information, knowledge
  - Ontologies and knowledge representation languages
  - Semantic Web
  - Linked Data
2. Reasoners
  - Description Logics
  - Tractable languages
3. Multilingual ontologies
  - Multilingual knowledge representation
  - Linguistic Linked Data

4. Applications
  - Semantic data analysis
  - Ontologies alignment
5. Managing knowledge on mobile devices
  - Mobile computing
  - Advantages and problems
6. Managing uncertainty on knowledge
  - Fuzzy ontologies and reasoners
  - Applications

## **Course planning and calendar**

Further information concerning the timetable and classroom will be provided at the EINA website. The specific timetable of theory and practice sessions will be announced well in advance at EINA (<http://eina.unizar.es>) and Moodle (<http://moodle2.unizar.es>) websites. The deadline to submit the final task will be provided on the first day of class.

## **Bibliography and recommended resources**