

## 330412 - IAE - Informatics Applied to Engineering

Coordinating unit: 330 - EPSEM - Manresa School of Engineering  
 Teaching unit: 750 - EMIT - Department of Mining, Industrial and ICT Engineering  
 Academic year: 2019  
 Degree: BACHELOR'S DEGREE IN MINING ENGINEERING (Syllabus 2016). (Teaching unit Compulsory)  
 ECTS credits: 4,5 Teaching languages: Catalan, Spanish

### Teaching staff

Coordinator: Piney Da Silva, Jose Ramon

### Degree competences to which the subject contributes

Specific:

1. Basic knowledge on the use and programming of computers.
2. Operating systems, databases and computer programs with applications in engineering.

Transversal:

3. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 2. Using strategies for preparing and giving oral presentations. Writing texts and documents whose content is coherent, well structured and free of spelling and grammatical errors.
4. TEAMWORK - Level 2. Contributing to the consolidation of a team by planning targets and working efficiently to favor communication, task assignment and cohesion.
5. EFFECTIVE USE OF INFORMATION RESOURCES - Level 2. Designing and executing a good strategy for advanced searches using specialized information resources, once the various parts of an academic document have been identified and bibliographical references provided. Choosing suitable information based on its relevance and quality.
6. SELF-DIRECTED LEARNING - Level 2: Completing set tasks based on the guidelines set by lecturers. Devoting the time needed to complete each task, including personal contributions and expanding on the recommended information sources.

### Learning objectives of the subject

### Study load

Total learning time: 112h 30m	Hours large group:	0h	0.00%
	Hours medium group:	45h	40.00%
	Hours small group:	0h	0.00%
	Guided activities:	0h	0.00%
	Self study:	67h 30m	60.00%



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### Content

title english	Learning time: 11h 30m Theory classes: 3h Laboratory classes: 1h 30m Self study : 7h
Description: content english	
title english	Learning time: 14h 30m Theory classes: 4h Laboratory classes: 2h Self study : 8h 30m
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### Planning of activities

name english	Hours: 12h Theory classes: 12h
name english	Hours: 12h Theory classes: 12h
name english	Hours: 23h Self study: 10h Laboratory classes: 13h
name english	Hours: 15h Self study: 15h
name english	Hours: 20h Self study: 20h
name english	Hours: 21h Laboratory classes: 2h Theory classes: 4h Self study: 15h
name english	Hours: 9h 30m Theory classes: 2h Self study: 7h 30m

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### Bibliography

#### Basic:

Downey, Allen. Python for software design: how to think like a computer scientist. Cambridge: Cambridge University, 2009. ISBN 9780521725965.

Pilgrim, Mark. Dive into Python [on line]. 2nd. New York: Apress, 2009 [Consultation: 09/03/2018]. Available on: <<http://www.diveintopython3.net/>>. ISBN 9781430224150.

Guzdial, Mark; Ericson, Barbara. Introduction to computing & programming in Python: a multimedia approach. 2nd ed. Upper Saddle River [etc.]: Pearson/Prentice Hall, cop. 2010. ISBN 9780136060239.