DEGREE CURRICULUM

PROGRAMMING AND COMMUNNICATIONS I

Academic year 2014-15

PROGRAMMING AND COMMUNICATIONS I 2014-15

Subject's general information

Subject name	Programming and Communnications I
Code	102133
Semester	1r Q Continued Assesment
Typology	Optative
ECTS credits	6
Theoretical credits	0
Practical credits	0
Department	Computer Science and Industrial Engineering
Modality	Presencial
Important information on data processing	Consult this link for more information.
Language	English
Degree	Degree in Automation and Industrial Electronic Engineering
E-mail addresses	carlesm@diei.udl.cat

PROGRAMMING AND COMMUNICATIONS I 2014-15

Carles Mateu i Piñol

Learning objectives

See competences section.

Competences

Strategic competences UdL:
- UdL2. Knowledge of an foreign language.
- UdL3. Knowledge of ICT.

Transversal competences EPS:
- EPS4. Have the learning abilities needed to start superior studies or improve the academic learning with a certain autonomous degree.
- EPS9. Ability to work in teams, both as a unidisciplinary and multidisciplinary.

Specific competences GEEIA:
- GEEIA3 Basic knowledge on using and programming computers, operating systems, databases and software with applications in engineering.
- GEEIA28. Applied knowledge of industrial computing and communications.
- GEEIA-EPS34. Knowledge of the fundamentals of computer systems and applications.

Subject contents

Course in english

- Introduction
- Variables, expressions and statements
- Conditional execution
- Functions
- Loops and Iterations
- Strings
- Files
- Lists
- Dictionaries
- Tuples
- Regular Expressions
- Network Programming (HTTP)
- Web Services
- RaspberryPI setup and configuration
- Databases (SQLite)

Methodology

Learning activities
Face to face activities (40%): The percentages associated to each one of the activities are computed over 100%

- Master class (42,5%)
- Problems (25%)
- Laboratory (25%)
- Tests and evaluation (7,5%)

Autonomous work (60%): The percentages associated to each one of the activities are computed over 100%

- Work (40%)
- Cases of study (10%)
- Study (40%)

Evaluation

3 separate items:

- Class Project: 3 deliverables, part of the same project. 60% weight.
- Small exercises (during the course) to assess some important milestones (max 4). 20% weight.
- Class oral presentation (API or library or technique). 20% weight.

Bibliography

Recursos de información.

Documentación de Python: http://docs.python.org/2.7/

Raspberry Pi: http://www.raspberrypi.org/

Bibliografia:

- Learn Raspberry Pi Programming with Python - Wolfram Donat - Apress. 2014
- Raspberry Pi: A Quick-Start Guide, 2nd Edition -Maik Schmidt - The Pragmatic Programmers, 2014
- Raspberry Pi Home Automation with Arduino - Andrew K. Dennis - Packt Publishing, 2013