University of the Balearic Islands

Teaching guide

Subject identification

Subject	21744 - Programming Projects Laboratory
Credits	2.4 de presencials (60 hours) 3.6 de no presencials (90 hours) 6 de totals (150 hours).
Group	Group 2, 1S, GEIN, GIN2 (Campus Extens)
Teaching period	1st semester
Teaching language	Spanish

Professors

Lecturers	Horari d'atenció als alumnes					
	Starting time	**Finishing time**	**Day**	**Start date**	**Finish date**	**Office**
José María Buades Rubio josemaria.buades@uib.es	10:30h	11:30h	Friday	29/09/2014	15/02/2015	Anselm Turmeda 208 (2ª Planta)
	10:30h	11:30h	Friday	16/02/2015	31/07/2015	Anselm Turmeda 208 (2ª Planta)

Contextualisation

The course Programming Projects Laboratory is part of the branch of computation. The main objective of the course is to carry out a complete programming project from scratch and coming to get a product ready for run in a real system.

Achieving IT project involves the development of software from a detailed description. Sometimes, this detailed description is not enough and perfect. A computer project will be developed in this course, bringing out the most common problems faced by a project implementing a software.

Specifically, we apply the concepts taught in other subjects: Programming, Algorithms, Data Structures, Database and Software Engineering.

Requirements

This is an advanced training course, and student must have knowledge of various topics.

Essential requirements

Advanced knowledge of programming.

Knowledge of Algorithms, Data Structures and Databases.

Recommendable

Notions of English readed is recommended, because most of literature is in that language.

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Compilers notions is advisable.

Skills

Its skills are descripted at "Acuerdo del Consejo de Universidades"

Specific

* CI301: Ability to have a thorough understanding of the fundamental principles and models of computation and know how to apply to interpret, select, assess, model, and create new concepts, theories, practices and technological developments related to computer science..
* CI303: Ability to evaluate the computational complexity of a problem algorithmic strategies that can meet lead to its resolution and to recommend, develop and implement one that guarantees the best performance according to the requirements..

Generic

* CTR01: Capacity for analysis and synthesis of organization, planning and decision making..
* CTR02: Capacity for critical analysis and proposing and implementing new solutions..
* CTR03: Ability to acquire new knowledge independently..
* CTR04: Ability to search for resources and information management in the field of computing..
* CTR05: Ability to work in multidisciplinary teams and multilingual..
* CTR06: Leadership, initiative, entrepreneurship and efficiency in demanding environment based on creativity, quality and adaptation to new situations..
* CTR07: Ability to communicate concepts of computing orally and written in different areas of action..
* CTR08: Ability to, at a medium level, understand, speak and write in English..
* CTR09: Ability to develop interpersonal skills, and commitment to social, ethical, environmental and fundamental rights, especially the values of equality and capacity..

Basic

* You may consult the basic competencies students will have to achieve by the end of the degree at the following address: http://www.uib.eu/study/grau/Basic-Competences-In-Bachelors-Degree-Studies/

Content

In order to acquire this knowledge, a programming project in C # will be made. Develop this project will involveaccess to database and create a friendly user interface.

Theme content

Module 1. C# Language

Module 2. User Interface

Module 3. Database Connection

Module 4. Report Generation

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Teaching methodology

This section describes in-class and distanceactivitiesdvheduledon the course in order to develop and assess the skill set forth above.

In order to promote autonomy and personal work, the subject is part of the Campus Extens project, dedicated to flexible distance learning, which incorporates the use of telematics in teaching. Thus, by tele-education platform Moodle, students will be available to communicate onlinethe teacher, a calendar with interesting news, electronic documents, Internet links and the proposed practice of self-employment.

Workload

The following table shows the distribution of hours according to different in-classand distance (or self) activitiesplanned and its equivalency toECTS (1 ECTS = 25 hours of student work).

In-class work activities

Modality	Name	Typ. Grp.	Description	Hours
Theory classes	Lectures	Large group (G)	Through the expository method, the teacher will establish the theoretical and practical foundations for the achievement of the subject.	15
Laboratory classes	Classroom	Medium group (M)	Small practical problems will arise to consolidate the theoretical aspects in turn will be used to carry out the final work.	30
Laboratory classes	Project Development	Medium group (M)	The student will advance in the development of the project in a leaded way.	15

At the beginning of the semester a schedule of the subject will be made available to students through the UIBdigital platform. The schedule shall at least include the dates when the continuing assessment tests will be conducted and the hand-in dates for the assignments. In addition, the lecturer shall inform students as to whether the subject work plan will be carried out through the schedule or through another way included in the Campus Extens platform.

Distance education work activities

Modality	Name	Description	Hours
Group or individual self-study	Memorandum	The student must perform a report about the work progress.	80
Group or individual self-study	Project Development	In order to consolidate the aim of the course skills, student will go forward on the implementation of software development project in a highly leaded way initially, gradually student will take more autonomy to the student, which should make decisions to solve problems that will appear.	10

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Specific risks and protective measures

The learning activities of this course do not entail specific health or safety risks for the students and therefore no special protective measures are needed.

Student learning assessment

The skills set out in thiscourse will be assessed by evaluating the project carried out by the student. The table in this section describes, for each evaluation procedure, assessment criteria and their weight in the rating of the course evaluation.

The student will obtain a numerical score between 0 and 10 for each evaluation activity, which will be weighted according to their weight, in order to obtain the overall rating of the course.

Students who have not obtained a rating greater than or equal to 5, both the final exam and practice (recoverable activities) will be able to recover them in the recovery period.

If plagiarism is detected work (source code or documentation) or part of it will involve the direct failure of the entire course for those students involved beyond recovery.

Project Development

Modality	Laboratory classes
Technique	Papers and projects **(non-retrievable)**
Description	The student will advance in the development of the project in a leaded way.
Assessment criteria	Development of small practices where students demonstrate that has acquired the theoretical concepts explained.
	Skills avaluated:CI301, CTR03, CTR04, CTR06, CTR07, CTR08 y CTR09.

Final grade percentage: 25%

Memorandum

Modality	Group or individual self-study
Technique	Papers and projects **(retrievable)**
Description	The student must perform a report about the work progress.
Assessment criteria	Development of a management software.
	Skills avaluated:CI301, CI303, CTR01, CTR02, CTR03, CTR04, CTR05, CTR06, CTR08 y CTR09.

Final grade percentage: 50% with minimum grade 5

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Project Development

Modality	Group or individual self-study
Technique	Student internship dissertation **(retrievable)**
Description	In order to consolidate the aim of the course skills, student will go forward on the implementation of software development project in a highly leaded way initially, gradually student will take more autonomy to the student, which should make decisions to solve problems that will appear.
Assessment criteria	Performing a programming project, well documented.
	Skills avaluated:CTR01, CTR02, CTR07 y CTR08.

Final grade percentage: 25% with minimum grade 5

Resources, bibliography and additional documentation

The course will be taught using Campus Extens and ad hoc material available (in English).

As additional support please consult the following references.

Basic bibliography

Documentation will be available at Campus Extens.

Complementary bibliography

* Tom Archer. "Inside C#", Redmond, WA : Microsoft Press, 2002.
* Mickey Williams."Microsoft Visual C# (core reference) ", Redmond, Wash. : Microsoft Press, 2002.
* Rebecca M. Riordan. "Microsoft ADO.Net Step by Step",Redmond, Washington : Microsoft Press, 2002.

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