UCL Université catholique de Louvain

LFSAB1509

2015-2016

Project 4 (in Computer Science)

4.0 credits	22.5 h + 22.5 h	2q

Teacher(s) :	Deville Yves ; Lainez Marc (compensates Deville Yves) ;
Language :	Français
Place of the course	Louvain-la-Neuve
Inline resources:	> http://icampus.uclouvain.be/claroline/course/index.php?cid=lfsab1509
Prerequisites :	*The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.*
Main themes :	For example, depending of the precis topic of the project: -- mobile computing, -- programming using a object-oriented language, -- networking and communication, -- graphic interface, -- event-driven programming, -- client-server
Aims :	Contribution of the course to the program objectives Regarding the learning outcomes of the program of Bachelor in Engineering, this course contributes to the development and the acquisition of the following learning outcomes: ' LO 1.1, 1.2 ' LO 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7 ' LO 3.1, 3.2 ' LO 4.1, 4.2, 4.3, 4.4, 4.5 Given the learning outcomes of the "Bachelor in Engineering" program, this course contributes to the development, acquisition and evaluation of the following learning outcomes: ' S1.I5 ' S2.1-4 ' S4.1-3 ' S5.1-6 ' S6.1, S6.3 Specific learning outcomes of the course The skills addressed by « Project 4 » include on one hand transverse skills, common to all projects 4, and on the other hand disciplinary, technical skills that are specific to each engineering specialty. Transversal learning outcomes: Projects 4 aim at providing students with transversal skills close to the practice of engineering jobs within a multi-disciplinary context : ' analyse and improve existing systems ; ' analyse experimental data with a critical mind ; ' make the distinction between reality and models used to describe or modify it ; ' deal with the notion of uncertainty in the project approach, its conception and the obtained results. The project will allow for a trial-and-error approach, typically adopted by young engineers at the beginning of their careers. Disciplinary learning outcomes: At the end of the course, students will be able to ' apply simultaneously and consistently the knowledge and skills acquired in different areas of computer science: mobile computing, java programming, networking and communication, graphic interface, event-driven programming, client-server. Some of these skills will be acquired through this project. ' identify and perform the various stages of software design. ' manage the planning of an IT project ' understand the architecture of a software in ordre to make informed choices to change or improve it; ' think critically about the project and its deliverables, in particular the relevance of the software, the analysis and design of the system, but also the management of the planning within the group. ' show off the software developed by the group through a demonstration and its distribution as an open source product. *The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".*

Evaluation methods :	Students will be evaluated both orally in group and individually through a written examination (organised simultaneously for all Projects 4) on the basis of the above mentioned objectives. An evaluation grid is provided at the beginning of the course. Students present and defend their project in front of a jury composed of all teachers, completed by other tutors having contributed to the project supervision. The evaluation will focus on the software developed, its documentation, a project report and the oral presentation of the project including a demonstration of the software.
Teaching methods :	-- The project will be done by group of students (4-5 students per group) -- Students will be encouraged to communicate in English on a technical theme, orally and/or in writing.
Content :	-- The software to be defined and designed will be linked to mobile computing. It will be implemented on a Smartphone or an Android type tablet. -- The project will be opened. Each group will develop its own project and propose a schedule as well as intermediate steps. -- An Agile Programming approach (iterative and incremental development) may be considered. -- An open source approach will be followed, allowing a wide distribution of the software.
Other infos :	This course is part of the set of courses « Project 4 » of the programme of bachelor in engineering. Projects 4 share common transversal objectives, but exist under different versions oriented towards specific disciplinary objectives, corresponding to the majors/minors of the programme. Each student chooses either the project related to his/her major or to his/her minor (if available). Students should have acquired competences in the matters covered by the following courses: LSINF1252 computer systems, LSINF1225 design and implementation of a small-scale application, LSINF1121 algorithmics and data structures, LINGI1341 computer networks
Faculty or entity in charge:	INFO

Programmes / formations proposant cette unité d'enseignement (UE)

Intitulé du programme	Sigle	Credits	Prerequis	Acquis d'apprentissage
Bachelor in Computer Science	SINF1BA	4	LSINF1225 **and** LMAT1111F **and** LMAT1111E **and** LSINF1140 **and** LSINF1101 **and** LSINF1102 **and** LSINF1103	🔍
Bachelor in Engineering	FSA1BA	4	-	🔍