UCL Université catholique de Louvain

LBIRC2107

2010-2011

Integrated exercises in applied chemistry and bioindustries

4.0 credits	45.0 h	2q

Teacher(s) :	Gaigneaux Eric ; Gerin Patrick (coordinator) ; Ghislain Michel ; Declerck Stephan ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	The integrated exercise require the students to synthesize the scientific and technological state of the art of a multidisciplinary subject relevant to bio-engineering on the basis bibliographical research. These exercises involve the use of bibliographic search methods, the identification of the relevant sources of information, the collection of the documents and of the relevant data, their understanding,their analysis, their structuring and their synthesis. The result of this synthesis is communicated as a written report and as an oral presentation, which must be understandable by a reader having a general scientific background, but not a specialised one. These exercises require the students to organize themselves as a team to be able to handle in a sufficiently complete way the various aspects of their subject.
Aims :	Know-how and skills - Capacity to integrate basic disciplines for understanding and mastering the scientific and technological aspects of a bio-engineering problem. - Capacity to seek, collect, analyze and synthesize bibliographical data on the subject. - Capacity to write a structured and critical review report presenting the state of the art on the subject; capacity to orally communicate the content of this review. - Capacity to work in team, which requires initiatives and organisation to take in charge and to carry out the project. Knowledge: - Operational knowledge of bibliographic research techniques. *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".*
Content :	The students have to describe the scientific and technological state of the art on multidisciplinary subjects (questions) in bio-engineering. The subjects are proposed by the teachers according to their fields of interest and competences. The tools that can be used at UCL for the bibliograpic research are presented to the students. The later have to gather as teams of 4-7 students and to organize their work : - to seek and gather the elevant information concerning their subject; - to analyze, structure and synthesize this information; - to write a structured and synthetic final report; - to present and defend orally this report. The students' work is completed under the weekly guidance of one teacher. At various stages, a common meetings is organised to train each students team to present a progress report and to learn about the progress of the other teams.
Other infos :	Precursory courses Knowledge and skills acquired through all the courses in science and engineering of the BIRC program. Supplemental courses Activities that exploit the skills acquired with the integrated exercices: Project in industrial chemistry, final work Evaluation Oral presentation and written report on the subject Support Bibliographic research tools available at UCL, with guidance by the teachers Teaching team As much as possible, the teacher team gathers peoples with competencies in the field of specialisation of the students (agro-food technology, bio-industry, chemistry-catalysis, environmental technology). Miscellaneous As much as possible, the proposed subject will correspond to the fields of specialisation of the students.
Cycle and year of study :	> Master [120] in Chemistry and Bio-industries
Faculty or entity in charge:	AGRO