UCL Université catholique de Louvain

# LBIO1114

*2012-2013*

# Introduction to biology

| 3.0 credits | 30.0 h + 7.5 h | 2q |
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| Teacher(s) : | Dumont Patrick ; Nieberding Caroline ; |
| Language : | Français |
| Place of the course | Louvain-la-Neuve |
| Main themes : | The cell and organelles<br>How physics and chemistry are implicated in the structure and function of the cell.<br>How cells are studied.<br>The programme and the nucleus; the membranes and compartments; the energy and syntheses; the movement and cell organisation.<br>The control of cell behaviour by extra- and intracellular signalling.<br>The transmission of the programme.<br><br>The integration of cells into a pluricellular organism.<br>The differentiation and variety of cells ensure the diversity of organism's functions (protection, motility, inputs and outputs of metabolism, coordination, reproduction)<br><br>The evolution guided the history of living things.<br>The origin of life, the major kingdoms and their diversity, the mechanisms of evolution.<br><br>The organisms are associated within the biosphere, with complex interactions.<br>Biosphere and diversity of environment, ecosystems and communities (food networks, energy pyramid, biogeochemical cycles), populations (growth, regulation, human population). |
| Aims : | The course consists in an initiation to fundamental concepts in biology, with examples of applications. It features the particularities of the approach in biology, facing the complexity and diversity of its objects.<br><br>*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".* |
| Other infos : | Prerequisites: none.<br>Reference books: N.A. Campbell, Biologie, De Boeck Université, 1995.<br>Teaching method: lectures with contribution of current media.<br>Practical works: exercises will illustrate biological subjects, with organism observation (plant or animal), from whole organism to cellular structure under microscope. Other sessions will evoke the intervention of student own discipline (p.e. physics) in an area of biology (personal research and results presentation).<br>Evaluation: oral examination with written preparation. |
| Cycle and year of study : | > Bachelor in Mathematics<br>> Master [120] in Environmental Science and Management<br>> Master [60] in Environmental Science and Management<br>> Bachelor in Information and Communication<br>> Bachelor in Philosophy<br>> Bachelor in Pharmacy<br>> Bachelor in Psychology and Education: General<br>> Bachelor in Economics and Management<br>> Bachelor in Motor skills : General<br>> Bachelor in Human and Social Sciences<br>> Bachelor in Sociology and Anthropology<br>> Bachelor in Political Sciences: General<br>> Bachelor in History of Art and Archaeology : General<br>> Bachelor in History<br>> Bachelor in Biomedicine<br>> Bachelor in Religious Studies<br>> Bachelor in Physics |
| Faculty or entity in charge: | SC |