




2 credits

22.5 h + 7.5 h

Q1

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| Teacher(s) | Jacquemart Anne-Laure coordinator ;Lutts Stanley ; |
| Language : | French |
| Place of the course | Louvain-la-Neuve |
| Prerequisites | <i>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.</i> |
| Main themes | <p>Module 1 (Q1: 15h -7.5) : Plant ecology. Principal plant strategies along their life cycles are described from germination to seed dispersal, through growth, survival and reproduction. Clonal strategy is compared to sexual reproduction. Seed dispersal, dormancy and soil seed bank are overviewed. All these strategies are then compiled in practical context of plant invasions. One practical field demonstration is conducted at the Centre de Marbaix (experimental farm) to demonstrate the concepts of Agro-environmental schemes, eutrophication, water purification by plants '1</p> <p>Module 2 (Q2: 7.5 h) The 5 classical plant hormones, namely auxins, gibberellins, cytokinins, ethylene and abscisic acid, are studied in detail. The specific functions of other molecules involved in plant growth and development, but also in plant defence against biotic invaders, are viewed. The major role of photoperiodism in plant development is analysed in depth using the control of floral transition as an example. Basic concepts on photomorphogenesis and endogenous biological rhythms are overviewed as well as the biochemical and physiological basis of vernalization and bud dormancy. The mechanisms of resistance of plants to environmental constraints are schematically presented.</p> <p>Module 3 (Q3: 15h-7.5h) Principles, methods and history of plant systematics (Spermatophytes) are presented mainly in the light of the new development of plant taxonomy due to integrated methods in phylogeny (APG). Brief description of a selected choice of families and presentation in each case of a few typical species of interest for ecology, agriculture or horticulture are overviewed during theoretical courses. Morphology and organisation of the vegetative (leaves, stems, roots) and generative (flowers, inflorescences and fruits) apparatus are explained during practical courses and with a web application. Practical courses include exercises of plant determination with a flora and training with the help of a specially dedicated web site..</p> |
| Aims | <i>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".</i> |
| Bibliography | <p>S <u>upport(s) de cours obligatoires</u></p> <p>Diapositives du cours en ligne sur iCampus</p> <p>Syllabus</p> |
| Faculty or entity in charge | AGRO |

| Programmes containing this learning unit (UE) | | | | |
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| Program title | Acronym | Credits | Prerequisite | Aims |
| Master [60] in Environmental Science and Management | ENVI2M1 | 2 | |  |
| Bachelor in Bioengineering | BIR1BA | 2 | LBIR1251 |  |
| Master [120] in Environmental Science and Management | ENVI2M | 2 | |  |