

In view of the health context linked to the spread of the coronavirus, the methods of organisation and evaluation of the learning units could be adapted in different situations; these possible new methods have been - or will be - communicated by the teachers to the students.


3 credits

45.0 h

Q2

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| Teacher(s) | Nieberding Caroline ;Wesselingh Renate ; |
| Language : | French |
| Place of the course | Louvain-la-Neuve |
| Main themes | Knowledge of ecology is essential in understanding species distributions, and the first part of the course (A) teaches elementary ecology for those students who do not have this knowledge yet. The second part of the course (B) looks at both historical and ecological explanations for present-day distributions, and the practical work aims to illustrate the diversity in species composition in different biogeographical zones in Belgium. |
| 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> |
| Evaluation methods | <p>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</p> <p>First theoretical part (Introduction to ecology): 2 individual and 1 group report to be handed in in the first weeks of the semester and a written exam at the end of this part of the course. Each report and the exam count for 25% of the score, but each partial score should be > 7/20 in order to pass. One partial score of 7 or less leads automatically to a final score of 7/20, even if the calculated average is higher.</p> <p>Second theoretical part (Biogeography): written exam with open questions, a separate series of questions for each section. For both sections a score of 8/20 or more should be obtained in order to pass, if one of the partial scores is less than 8/20, a 7/20 will be given for the whole part. Only if a 8/20 or more has been obtained for both sections, the average of the two scores will be calculated to give the final score for this part.</p> <p>For the whole course, the final note is calculated as follows: 1/3 score Intro + 2/3 score Biogeography. Again, both parts of the course must be passed with a score of 8/20 or higher to validate the course. If the score for one of the parts is less than 8/20, the final score is 7/20 or less, even if the weighted average is higher.</p> <p>Partial dispensation can be obtained for successful parts (10/20 or more) between exam sessions of the same academic year, after a written request by email and validation by return email from the course holders.</p> |
| Teaching methods | <p>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</p> <p>Both theoretical parts consist of lectures, and 3 papers have to be written for the first part.</p> |
| Content | <p>The partial course LGEO1332A contains the two theoretical parts of the complete course LGEO1332, without the practical work.</p> <p>First theoretical part: Introduction to ecology (15h, for students without prior knowledge of ecology) treats basic elements of the ecology of individuals, populations, and ecosystems. This part of the course consists of 6h of lectures and 3 written reports, one each week, to describe the ecology of a plant species (a different species for each student), the other species that interact with it, and its habitat.</p> <p>The second theoretical part, Biogeography (30h), is divided into two sections:</p> <p>Historical biogeography (15h, Caroline Nieberding)</p> <p>Historical factors that influence present-day distributions: continental drift, climate change, mass extinctions; global distribution of diversity at higher taxonomic levels; phytogeographical kingdoms and zoogeographical provinces; centres of origin; vicariance; long-distance dispersal; ice ages; Quaternary phylogeography; glacial refugia; diversification.</p> <p>Ecological biogeography (15h, Renate Wesselingh)</p> <p>Patterns of biodiversity: counting species, gradients of biodiversity, hotspots, diversity in time (succession, climax), richness and diversity.</p> <p>Patterns of distribution: geographical range, methods to represent distribution ranges on maps, effects of scale, limits to distributions, overcoming the barriers, types of connections, relictual distributions, endemism, dispersal, invasions, migration, the ecological niche, niche overlap, fundamental and realized niche.</p> <p>Communities and ecosystems: community richness, alpha, beta, gamma, and delta richness, diversity index, closed and open communities, plant growth forms, plant formations, biomes, zonal vegetations, arid regions, interzonal vegetations, predictive models.</p> <p>Island biogeography : types of islands, arriving on an island, species-area relationships, surviving on an island, the Theory of Island Biogeography, evolution and speciation on islands, adaptive radiation, insularity syndromes.</p> |

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| Inline resources | Moodle website for LGEO1332 |
| Bibliography | Cox, C.B. & P. D. Moore (2005). Biogeography, an ecological and evolutionary approach (7th edition). Blackwell Publishing |
| Other infos | There are no prerequisites for this course. The first theoretical part of the course (15 hours) provides the necessary knowledge of ecology for the rest of the course. Students who already have a basic knowledge of the principles of ecology are advised to take the partial course LGEO1332B instead, which only includes the second theoretical part. |
| Faculty or entity in charge | GEOG |

| Programmes containing this learning unit (UE) | | | | |
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| Program title | Acronym | Credits | Prerequisite | Aims |
| Master [120] in History of Art and Archaeology : General | ARKE2M | 3 | |  |