

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.

2 credits

30.0 h

Q2

Teacher(s)	Nieberding Caroline ;Wesselingh Renate ;
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	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	Due to the COVID-19 crisis, the information in this section is particularly likely to change. Written exam with open questions, a separate series of questions for each teacher. For both parts 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 (or less) will be given for the whole course. Only if a 8/20 or more has been obtained for both parts, the average of the two scores will be calculated to give the final score.. Partial dispensation can be obtained for successfully completed 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.
Teaching methods	Due to the COVID-19 crisis, the information in this section is particularly likely to change. Lectures.
Content	The partial course LGEO1332B contains the second theoretical part, Biogeography (30h), of the complete course LGEO1332. It is divided into two themes: Historical biogeography (15h, Caroline Nieberding) 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. Ecological biogeography (15h, Renate Wesselingh) Patterns of biodiversity: counting species, gradients of biodiversity, hotspots, diversity in time (succession, climax), richness and diversity. 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. 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. 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.
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	A basic knowledge of the principles of ecology (such as acquired in the UCLouvain courses LBIO1251 Ecology or LBIO1117 Écologie) is a prerequisite to follow the Biogeography course. Students without this prior knowledge are advised to take the partial course LGEO1332A (which includes an introduction to ecology) or the whole course LGEO1332 (which also includes field excursions).

Faculty or entity in charge	GEOG
-----------------------------	------

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Bachelor in Biology	BIOL1BA	2	LBIR1130 AND LBIO1110 AND LBIO1117	