



## GEO1332 Biogeography

[45h+24h exercises] 5 credits

**Teacher(s):** Michel Baguette, Renate Wesselingh  
**Language:** French  
**Level:** First cycle

### Aims

A study of the historical and actual causes of the geographic distributions of species and communities, as well as the dynamics of these distributions.

### Main themes

Introductory ecology (15h, only for geography students without previous knowledge of ecology) :

ecology of individuals (autecology), populations, communities and ecosystems. The course consists of 6h of lectures and 4 successive individual papers on a specific plant species, the species it interacts with and its habitat.

Biogeography (30h, for all students)

Historical biogeography

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; barriers to dispersal.

Descriptive biogeography

Geographic distribution of a single species: data, cartographic methods, effects of scale.

Flora and vegetation: factors explaining floristic species richness and diversity; biomes of the world; importance of precipitation and temperature in determining vegetation; phytogeographical regions and sectors of Europe; phytogeographical districts of Belgium; describing a vegetation: physionomical (growth form, stratification), ecological and phytosociological criteria; classification systems: CORINE.

Dynamic biogeography

Climax, succession; influence of human activities; the niche concept; the area-species relationship; island biogeography; communities; assemblages; landscapes; metaclimax; dispersal, migration, biological invasions.

### Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Prerequisite : Introductory Ecology (BIO1351/BIOL1210) for students enrolled in the UCL Biology program. For students in Geography, the first 15 hours of the course serve as a replacement of the Introductory Ecology course. Non-biology students from other UCL programs or from other universities who can prove a proficiency in basic ecology can receive a dispensation for this first part. The students concerned should contact the teachers at the start of the semester.

Evaluation: written examination.

Support: syllabus, PowerPoint presentations.

Field excursions: the 24h of field excursions are for the geography students only, the practical part of this course for biology students is included in the course BIO1352/BIOL2191.

### Other credits in programs

<b>ARCH13BA</b>	Troisième année de bachelier en sciences de l'ingénieur, orientation ingénieur civil architecte	(5 credits)
<b>GEOG13BA</b>	Troisième année de bachelier en sciences géographiques	(5 credits)