

2 credits	25.0 h	Q1
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Teacher(s)	Baret Philippe coordinator ;Draye Xavier ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	Quantitative and population genetics (LBRAI 2101) Section A: Population Genetics (2 ECTS) Genetic structure of a single population (Mendelian population, genotypic and gene frequencies). Genotypic and gene frequencies in populations in equilibrium (Hardy-Weinberg Law). Systematic factors (mutation, selection, migration) and dispersive factors (fixation or loss of alleles, inbreeding) determining the population variation. Characterization of genetic polymorphism and measurement of diversity within and between populations. Part B: Quantitative Genetics (1 ECTS) Extending Mendelian genetics genetic to quantitative traits. Study of phenotypic variance with statistical determination of the share due to environmental and phenotypic differences in genotype. Heritability of quantitative traits and breeding strategies for transfer and accumulation of alleles. Identifying QTLs (quantitative traits loci) Part C: Structure of genomes and comparative genomics (1 ECTS) Presentation / reminders on genetic information structure (repeated sequences, gene families, genome structure). Genetic mapping extended to over three genes and introduction to physical mapping. Genomics and Evolution: structural genomics and comparative genomics.
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	The assessment is made on the basis of a written examination with a question defended orally.
Teaching methods	The course takes the form of lectures alternating theory and practical examples
Inline resources	Moodle
Other infos	This course can be given in English.
Faculty or entity in charge	AGRO

<b>Programmes containing this learning unit (UE)</b>				
Program title	Acronym	Credits	Prerequisite	Aims
Additionnal module in Biology	<a href="#">LBIOL100P</a>	2		