UCL Université catholique de Louvain

LBRAI2103

2015-2016

Rural sociology and land use

3.0 credits	30.0 h	1q

Teacher(s) :	Bertin Pierre ;
Language :	Français
Place of the course	Louvain-la-Neuve
Inline resources:	iCampus
Prerequisites :	Plant biology, plant physiology, plant production, phytiatry, genetics acquired during the Bachelor of bioengineer and the first year of MS of bioengineer or equivalent. *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.*
Main themes :	Analysis of the ecological and agronomical specificities of the intertropical and subtropical environments Analysis of the physiological and ecophysiological features of tropical crops : hydrous, thermal and nutritional factors, light, abiotic stresses, phenology : growth and development cycle of some model crops, growth and development of harvested organ. Critical study and evaluation of the agricultural practices on the basis of the above criteria.
Aims :	a. Contribution of the activity with regards to the referential of leaning outcomes Control a pool of scientific knowledge (M.1.1, M.1.2, M.1.4, M.1.5) Control a pool of knowledge in the fied of bioengineering and management (M.2.1, M.2.2, M2.4) Apply a rigorous and innovative scientific approach (M.3.2 à M.3.4 et M.3.6 M.3.9) Concept and implement a complete and innovative approach of engineer (M.4.1 à M.4.7) Communicate (M.6.1, M.6.3 et M.6.5) Act responsbly (M.7.1 à M.7.3) b . Specific formulation for this activity AA program (maximum 10) At the end of this activity, the student will be able to : · analyse the specificities of tropical and subtropical environments and the constraints on agricultural production factors (climate, soil, economy) ; · control agricultural practices specific to each crop (sowing, shading, types of cuttings, grafting, genetic crosses...) ; · identify key phenological stages of the different crop under study; · compare the adequation of several cultures to defined pedo-climatic scenarii; · examine production modalities as a function of physiological and pedo-climatic constraints; · analyse the diversity of productions as a function of the biological and genetical aspects of the crop; . evaluate the relevance of production systems as a function of environmental and socio-economical constraints and of production objectives. *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".*
Evaluation methods :	Oral examination with previous written preparation. Synthesis questions, figure analysis, punctual questions
Teaching methods :	Theoretical lessons aiming at systematize the outcomes, followed by a practical approach based on interactive documet analysis, videos, personal experience of the teacher and of the students themselves
Content :	Environmental aspects in the tropical background : climatology, pedology, phytogeography and consequencies on production. Crop ecophysiology in tropical envirmonment : hydrology, photoperiod, thermal regime, phenology, mineral nutrition and consequences for cultural practicies. Study of crop diversity : investigation of several crops representing a large range of ecological and practical situations (growing cycle, harvested organ) : cereals (maize, sorghum, pearl millet), annual pulses (groundnut, soybean, common bean), annual tubers (yam, sweet potato), perennial crops cultivated as annual ones (cassava, cotton plant) perennial crops (tea, coffee, cocoa, hevea trees).
Bibliography :	Mandatory instruction material Syllabus and powerpoint slides available on icampus Videos of AFD (Louvain Coopération), freely available AFD website Additional lectures see slides

Faculty or entity in charge:	AGRO

Programmes / formations proposant cette unité d'enseignement (UE)

Intitulé du programme	Sigle	Credits	Prerequis	Acquis d'apprentissage
Master [120] in Forests and Natural Areas Engineering	BIRF2M	3	-	🔍
Master [120] in Agricultural Bioengineering	BIRA2M	3	LBIRA2109 **and** LBIRA2108	🔍