UCLouvain

lbira2109f

2017

3 credits	35.0 h + 7.5 h	Q1

Teacher(s)	Bertin Pierre ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	Part A The impact of agro-ecosystem on the environment, the impact of climate change on agro-ecosystem . The sustainability of agro-ecosystems : its definition , its objectives, assessment and the means of its implementation on environmental and socio-economic plans. Part B evolutionary dynamics of agricultural systems . Origin of agriculture and cultivated or farmed species . Conditions for the functioning of agricultural systems : tools , labor , replacement fertility , plant-animal interactions. Methodology for studying the dynamics of farming systems, their balance or malfunction : economic, social and political causes of the ecological genesis , evolution and collapse systems in history. New balances.
Aims	*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	Written exam dealing with interdisciplinary issues, where the student will have to demonstrate analytical and critical thinking based on acquired knowledge during the instruction
Teaching methods	Lectures based on practical examples, case studies, guided questions Field trips (visiting agricultural companies, farmers and agronomic trials) Modeling exercises. Depending on the season, taking measurements on farm. Scientific publications from generic or specialized international journals, UN/NGO/offical reports, book chapters, documentaries and video presentations of renown scientists
Content	Part A Principles of agrosystems functioning and comparison of agro-ecological and natural ecological systems. The evolution and amplification of the impacts of agricultural activities since the advent of humanity. Industrialization and anthropogenic Climate Change : Contribution of agriculture and reciprocal effects. Definition of the holistic and complex sustainability of agrosystems. The interconnection of environmental, economic, social and ethical dimensions. Improving sustainability : assessment tools'Tools for tactical and strategic operations and social, economic, cultural and ethical tools. Part B Domestication of plants and animals. Transition from predation to agriculture. Nomadic agriculture and settlement agriculture. Hydraulic systems. Mountain agriculture. Fallow systems. No-fallow systems. Mechanization, genetic improvement. Transport and globalization.
Inline resources	Moodle
Bibliography	**S** upport(s) de cours obligatoires Syllabus et montages powerpoint disponibles sur Moodle Séminaires et conférences Supports complémentaires Mazoyer et Roudard, 2002. Histoire des agricultures du monde FAO, 2001. Systèmes d'exploitation agricole et pauvreté
Other infos	In cases where the students do not master the French language, the instruction for these students will be replaced by a literature review on a topic related to the issues developed above, to be defined with the instructor. This course can be given in English
Faculty or entity in charge	AGRO

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Master [120] in Forests and Natural Areas Engineering	BIRF2M	3		