**SSL 1101 NATURAL REOURCES AND DEVELOPMENT (3 C.U.)**

**LECTURER.** Victor A. Ochwoh (PhD) Full time staff

**Course Type**: **CORE (B.SC LUM)**

**Course Credits (CU)**: **3 CU i.e. 45 Contact Hours per semester**

**Course Duration**: **15 Topics (45 hours) i.e. 30 LH, 30 PH**

**1. COURSE DESCRIPTION**

Concepts of natural resources and development. Renewable and non-renewable natural resources. Resource management (Ecological, Economical, Social, Humane, Adaptable). The role of humans in resource management and mismanagement. Gender dynamics in natural resource management (e.g. gender relations, issues of access and control at individual, household and community level). An overview of the natural resources of Uganda. The contribution of natural resources to development

**2. COURSE OBJECTIVES**

The overall objective of this course is to enable a student be able to use integrated natural resources skills in improving livelihoods

The **specific objectives** are to enable student to:

1. Manage natural resources both renewable and non-renewable natural resources
2. Implement proper resource management skills that are ecologically, economically, and socially acceptable.

**3. RECOMMENDED REFERENCES FOR READING**

1. MUKIIBI, J.K. (Editor), 2001. Agriculture in Uganda, Vol.1 General Information. National Agricultural Research Organisation (NARO). Fountain Publisher
2. YOST, D. & H ESWARAN, 1990. Major Land Resource Areas Of Uganda Report Submitted To Usaid/Kanipala.
3. TROEH, F.R., HOBBS, J.A., DONAHUE, R.L., 1999. Soil and Water Conservation for Productivity and Environmental Protection. Prentice-Hall, Inc., New Jersey.
4. SSERUNKUUMA, D., PENDER, J., NKONYA, E., 2001. Land Management in Uganda. ARIS, Kawanda. pp.65.
5. BASHASHA, B. 2001. The evolution and characteristics of farming systems in Uganda. MakerereUniversity. Mimeo.
6. TENYWA, M.M., BEKUNDA, A.M., LUFAFA, A., TULYA, G., 1999. Participatory Soil Fertility and Land Management in Uganda: Challenges and Opportunities. SWCSU Technical Report No. 2. 1999, Kampala, Uganda. Pp.82.
7. ANNONIMOUS. 2004. The National Soils Policy for Uganda. NEMA, Kampala. Pp.67.
8. ANNONIMOUS. 2004. The National Lands Policy for Uganda. NEMA, Kampala
9. SSALI, H., 2000. Soils Resources of Uganda and Their Relationship to Major Farming Systems. A Resource Paper for the Project on Policies to Major Farming systems. A Resource Paper for the Project on Policies for Improved Land Management in Uganda. ARIS, Kawanda. pp.56.
10. WORTMANN, C.S.&ELEDU, C.A. 1999. Uganda’s Agroecological Zones: A guide for planners and policy makers. Kampala, Uganda. Centro International do Agricultural Tropical (CIAT).
11. BEKUNDA, MATEETE, A. & WOOMER, PAUL, L. 1996. Organic resource management in banana-based cropping systems of the Lake Victoria basin, *Uganda. Agriculture ecosystems and environment 59.*
12. FAO/IJNEP, 1990. A suggested national soils policy for Uganda. Unpublished sectoral paper.
13. KAMUGISHA, J.R. 1993. Management of National Resources and Environment in Uganda; policy and legislation landmarks, 1890-1990. Published by SIDA’s Regional Soil Conversation Unit.
14. UNEP. 1987: Natural Resources and Environment in Uganda: Strategies for environmental survey.

**4. COURSE CONTENT, METHODS OF INSTRUCTION, TOOLS AND EQUIPMENT REQUIRED**

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| **TOPIC** | **CONTENT** | **METHOD OF INSTRUCTION/ Time allocated** | **TOOLS / EQUIPMENT NEEDED** |
| * Definitions of natural resources and development
 | * What are resources / natural resources
* What is land?
* Other Definitions/uses of the word Land
* What is land evaluation?
* What are the land properties used in evaluation?
* Agricultural development
* The Green Revolution vs Industrialization
* The underlying conditions for agricultural development in industrialized and developing countries
 | * Interactive lecture (3 hrs)
 | Chalk / BB or Markers / Flip charts |
| * Renewable and non-renewable natural resources.
 | * Types of Natural Resources/Renewable and Non-Renewable
* Major components of the environment
* Natural resources as parts of value to humans
* Component: soil; water; animals air; oil and minerals
* Utilized to perform: productions; cultural; physical; economic; social
 | * Interactive lecture (3 hrs)
 | Chalk / BB or Markers / maps |
| Resource Management (Ecological, Economical, Social, Humane, Adaptable | Some basic differences between developed and developing countries important for agricultural planning purposes. The concept of sustainable agriculture (Ecological, Economical, Social, Humane, Adaptable)World agriculture: the record to date:Trends in tropical agriculture (Economic and Ecological aspects) | Interactive lecture (3 hrs) | Chalk / BB or Markers / Flip charts |
| Role of humans in resource management and mismanagementFirst Continuous Assessment Exam | * Excessive use of external inputs (HEIA)
* Low-external-input agriculture (LEIA)
* Implications of Low-external-input agriculture (LEIA) for
* agricultural sustainability
* Using external inputs in LEIA areas: necessity and limits Focus of conventional agricultural research and extension
* Sources of additional options for LEIA

New directions in conventional agricultural science | Interactive lecture (3 hrs)One Hour exam | Chalk / BB or Markers / maps |
| * Gender dynamics in natural resource management
 | Gender:Gender awareness Gender perspective Gender issues:Gender roles: (Reproductive, Productive and Community roles) Gender links to Natural resource Management. Decision making, control and access of natural resources at different levels | Interactive lecture (3 hrs) | Chalk / BB or Markers / Flip charts |
| * An overview of the natural resources of Uganda
* Majorland resource area map (MLRA) of Uganda
* Soil Moisture and Temperature regimes of Uganda**.**
* Vegetations of Uganda
* Soils:
* Majorland resource areas units of Uganda
* Utilization of the MLRA information of Uganda

Second Continuous Assessment Exam | * MLRA map of Uganda: Introduction
* How was the data collected and entered for creation of this map?
* Implications of the soil moisture and temperature map of Uganda
* Range of soil moisture and temperature regimes in Uganda determines the country’s plant species.
* The three vegetation categories of Uganda
* Ugandan soils according to Harrop, 1970 and Tukahirwa, 1988 is divided into 18 divisions.
* The country is divided into 23 major Land Resource Areas
1. Best areas of cropland in the country
2. Crops best suited to particular regions.
3. Information for achieving self sufficiency in most crops.
4. Areas of production of both field crops and high value crops for export.
5. Evaluation of appropriate farming systems technology for sustainable Agriculture
6. Guidance on planning i.e., needs for more intensive soil survey in selected areas, laboratory data and research.
 | Interactive lectures (1 hr)Interactive lectures (2 hrs)Interactive lectures (2 hrs)Interactive lectures (2 hrs)Interactive lectures (2 hrs)Interactive lectures (2 hrs)Interactive lectures (2 hrs)One hour Exam | Chalk / BB or Markers / Flip charts |
| Farm management | * Kabanyolo (MURIK):
 | Field practical (3 hrs) |  |
| Sustainable use of Land Resources | * Kawanda (KARI):
 | Field practical(3 hrs) |  |
| Land Planning Unit | * NARO (Entebbe):
 | Field practical(6 hrs) |  |
| Sustainable use of Natural Resources | * NEMA (Kampala):
 | Field practical(3 hrs) |  |
| Mis-managed/Well-managed , Reclaimed Swamps/Natural Resources  | Mbalala/Mabira/Lugazi Kyengera/Mpigi Kampiringisa | Field practical(6 hrs) |  |
| Resource Mapping: MURIK | MUARIK  | Field practical(9 hrs) |  |

**5. SUMMARY OF TIME NEEDED**

Interactive lecture 30 hrs

Field visit/class practical 10 hrs

Seminar 05 hrs

Evaluation 02 hrs

(Continuous assessments in week 6 and week 12)

**6. OVERALL COURSE EVALUATION**

Continuous Assessment Test 20%

Class practicals, Field work 20%

Final examination 60%