**ANS 2202 WILDLIFE MANAGEMENT (2 CU)**

**Degree Programme: B.Sc.Land Use Management (Elective)**

 **B.Sc. Agric. (Animal Option) (Elective)**

**Instructors: Dr. D. Mpairwe, PhD,**

 **Dr. Joachine Idibu, BVM, M.Sc. Animal Science.**

**Course Duration:** 2 CU (15 lecture and 30 practical hours)

**Course Description**

The course deals with the **concepts and practice** of wildlife population conservation and management, including methods to access population size, survival rates and how to use this information to assess the viability of animal populations with matrix projection models. The course generally introduces students of Animal Science and Land Use Management to Wildlife concepts. The topics covered include: Basic principles of wildlife management. Values of wildlife. Introduction to wildlife biology and ecology. Wildlife-Livestock interactions in rangeland areas. The tourism potential of wildlife. Wildlife -humans interaction in gazetted, non-gazetted and buffer areas, Wildlife conservation in Uganda/ East Africa (Status and types). Problems of wildlife conservation in Uganda. Community conservation. Integrating sustainable utilisation and preservation. Techniques used for estimating the size of populations and estimating survival parameters and exploring the impact of changes in demographic parameters on wildlife population using simple models. Gender issues in wildlife conservation programs with reference to relevant case studies. Relevant international (e.g. United Nations) and national conventions policies and laws. Study visits to relevant examples in Uganda.

**Objectives:**

To equip students with a working knowledge of:

1. Range land ecology including the physical environment, flora, fauna and vegetation changes.
2. Measurement of plant and animal abundance as well as assessment of range conditions.
3. Management techniques for both animals and vegetation in the wild.
4. Wild animal – Domestic animal – Human population interactions and their implications.

**REFERENCES**

**H. F. Heady and E. B. Heady (2000)** Range and Wildlife management in the tropics. Intermediate Tropical Agriculture Series. Longman, New York.

**M. E. Adams (1999)** Agricultural extension in Developing countries.Intermediate Tropical Agriculture Series. Longman, New York.

**Bolen, eric G., Robinson, William (2002)**. Wildlife Ecology and Management. Prentice Hall.

**Caughley, G., A.R.E. Sinclair (1994)**. Wildlife Ecology and Management. Blackwell Scientific Publ.

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

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| **TOPIC** | **CONTENT** | **METHOD OF INSTRUCTION** | **TOOLS / EQUIPMENTS NEEDED** |
| **Principles of wildlife management** | * **Wildlife-the Concept**
* Define Wildlife Management
* Approaches to Wildlife Management (Preservation, Conservation, Management)
* Purpose of Wildlife Management -*Review of commercial, recreational, biotic, scientific, philosophical, educational, aesthetics, social and negative values of wildlife*
* **Naturally Associated Environments**
 | 2 interactive lectures (1 hr each) | Chalk/marker, writing board; LCD and computer |
| **Variety of advocates for wildlife** | * Laissez-faire groups, sentimentalists, protectionists, single and multiple use adherents
 | * 1 interactive lecture (1 hr)
 | Chalk/marker, writing board; LCD and computer |
| **Wildlife as a resource** | * Wildlife resources in Eastern Africa region
* Uganda’s wildlife and key issues affecting wildlife in Uganda (population pressure, encroachments, settlements, poaching, fishing villages, inadequate budgets, etc
 | 3 interactive lectures (1 hour each) | Chalk/marker, writing board; LCD and computer |
| **Introduction to wildlife biology and ecology** | * Ecology (Mutualism, Commensalisms, Competition, Predation, parasitism, herbivoury)
* Behavioural Ecology
* Population Ecology
* Community Ecology
* Ecosystem Ecology
* Interactions within a Community
* Competition
* Predation
* Parasitism
* Commensalism
* Mutualism
* The Food Web (Derital Web, Grazing Web, Trophic Levels)
* Energy Flow Imbalances
 | 3 interactive lectures (1 hr each) | Chalk/marker, writing board; LCD and computer |
| **Wildlife conservation** | * Introduction
* International Union for the Conservation of Nature (IUCN) classification of wild animal species
* Classification of conservation areas: Sanctuary, zoo, game reserve, national (game) parks, wildlife conservancy
* Conservation methods (Ex and In Situ
 | 3 interactive lecture (1 hr each) | Chalk/marker, writing board; LCD and computer |
| **Habitat Management** | * Introduction
* Classification of habitats
* Changes to Habitats (Physical, Biological, Pollution)
* Water for Wildlife and Siting Water Points
* Managing Trees,Deforestation
* And Afforestation
* Habitat and game assessment
* Wildlife grazing management
* Bush encroachment and fires
* Plant chemicals and toxinsManagement of toxic plants
 | 3 interactive lecture (1 hr each) | Chalk/marker, writing board; LCD and computer |
| **Wildlife, Human and Livestock interactions** | * Domestication of wild game species
* Community conservation
* Zoonotic diseases and their control
* Distributions and control of wild animals
* Nomadism and transhumance
 | 3 interactive lectures (1 hr each) | Chalk/marker, writing board; LCD and computer |
| **Policies and laws governing wildlife** | * Review of relevant policies and laws governing wildlife management (asses their cons and pros) with emphasis to Eastern Africa.
* Relevant international and national conventions and treaties on wildlife conservation
 | 2 interactive lecture (1 hr each) | Chalk/marker, writing board; LCD and computer |
| **Wildlife population dynamics and measurements** | * Factors affecting population size, growth, distribution and survival, including natural selection
* Techniques used for estimating the size of population and survival parameters
* Assessment of the impact of changes in demographic parameters on wildlife population using simple models
 | 3 interactive lectures (1 hr each) | Chalk/marker, writing board; LCD and computer |
| **Wildlife Management Techniques** | * Habitat Modification
* Fire
* Vegetation Management
* Predator Control
* Habitat Features
* Seeding
* Population Monitoring
* Captive Breeding and Release
* Culling and Cropping
* Control of pest or undesirable wildlife species
* Control Objectives
* Efficts of Control
* Control Techniques (Manipulating mortality, fertility, Genetiv Engineering, indirect methods)
 | 3 interactive lectures (1 hr. each) | Chalk/marker, writing board; LCD and computer |
| **Wild Animal Capture and Translocation** | * Physical restraint and handling of terrestrial and aquatic wildlife.
* Game translocation
 | 3 interactive lectures ( 1 hr each) | Chalk/marker, writing board; LCD and computer |
| **Captive wildlife management** | * Management of game in temporary captivity.
* Behaviour and adaptation in captive animals
* Behavioural problems and disorders among captive wildlife
* Stress in captive animals
 | 3 interactive lectures ( 1 hr. each) | Chalk/marker, writing board; LCD and computer |
| **Gender issues in wildlife management and conservation** | * Relevant case studies highlighting gender issues in wildlife management and conservation programs (Visit to Uganda Wildlife Authority or invited speaker from UWA
 | 6 hours tutorial or field tour | TransportChalk/marker, writing board; LCD and computer |
| **Field excursion** | * Problems of wildlife conservation in Uganda;
* Community conservation;
* Determining plant cover and game counts
 | 24 hours Field trip to conservation area and practical done | Transport, binoculars, range-finder, transects, drop pins counter, Chalk/marker, writing board |

**5. GENERAL DELIVERY APPROACH**

Interactive lectures covering theory 15 hrs

Field excursion to conservation areas 30 hrs (Three working days visiting various wildlife centres in Uganda and a half day visit at UWA).

**COURSE ASSESSMENT**

Will be in the form of:

1. A continuous assessment test about midway through the course (20%).

2. Assessment of excursion (20%).

**FINAL EXAM**

Given at end of course. Carries 60% of the final course marks.