**ANS 1204 LIVESTOCK PRODUCTION AND MANAGEMENT**

**1. COURSE OUTLINE**

**Facilitator:** Dr. Denis Mpairwe, B.Sc. Agric., M.Sc. Agric., PhD.

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**Course Type:** CORE (Bachelor of Agriculture and Rural Innovation - External)

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

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

**COURSE DESCRIPTION:**

This course covers the application of general livestock management principles in the production and management of major domestic animals. It emphasizes the importance of livestock farming and the principles of sustainable livestock management (feeds/feeding, breeds/breeding, animal health and livestock economics): Dairy cattle management including importance of dairy farming; calf management; heifer management; cow management and milk production, sampling and testing; Beef cattle production and management including traction animals; pig management, sheep and goat management, rabbit management. Management of hides and skins.

**2. COURSE OBJECTIVES:**

The **overall objective** of this course is to present an overview, discussion and practical skills to students that will model them into professionals that will provide technical expertise in a range of appropriate skills and techniques needed by those who manage livestock in an efficient way that increases economic return and reduces risk to producers of different operational sizes and enhances environmental quality.

The **specific objectives** are to:

1. Provide the students with technical skills (hands-on) and theoretical background about livestock management procedures;
2. Equip students with competences for delivery of services to practitioners engaged in livestock management and for those actively working in production of livestock,
3. Equip students with knowledge and skills of assessing economic and environmental issues affecting sustainable livestock farming.

**3. EXPECTED OUTPUTS**

* 1. Students should be in position to identify career opportunities and requirements for successful employment.
	2. Students should be able to compare different livestock enterprises and to integrate scientific knowledge into production systems while considering market demands.

**4. RECOMMENDED REFERENCES FOR READING**

* + 1. Richard A. Battaglia 2001. Handbook of livestock management, 3rd Edition, Prentice-Hall, Inc., Upper Saddle River, New Jersey 07458, USA, 620pp.
		2. McNitt, J.I. 1983. Livestock Husbandry Techniques, Granada Publishing Limited, London, 280pp.
		3. Faulkner, D.E. 1956. Notes on Animal Health & Industry for Africans.
		4. Herbert S.K. Nsubuga 1979. Livestock and Poultry Farming in Uganda Publishing Department, Uganda Bookshop, Kampala.
		5. Pagot, J. 1993. Animal Production in the Tropics and Subtropics, The Macmillan Press LTD. 517pp.
		6. Devendra, C. and McLeroy, G.B. 1982. Goat and Sheep Production in the Tropics, Intermediate Tropical Agriculture Series, Toppan Printing Co. (S) Pte. Ltd. Singapore, 271pp.
		7. NAADS Goat Production Manual (see: <http://www.naads.or.ug/manualsLists.php?category=Goat%20Production%20Manual>)
		8. NAADS Pig Production Manual (see: <http://www.naads.or.ug/manualsLists.php?category=Pig%20Production%20Manual>)
		9. Owen, E., A. Kitalyi, N. Jayasuriya and T Smith (Editors) (2005). Livestock and wealth creation: Improving the husbandry of animals kept by resource-poor people in developing countries. UK: NottinghamUniversity Press
		10. Devendra, C. and McLeroy, G.B. 1982. Goat and Sheep Production in the tropics. Longman Scientific & Technical

**5. COURSE CONTENT**

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| TOPIC | CONTENT | METHOD OF INSTRUCTION / Time allocated | TOOLS / EQUIPMENT NEEDED |
| Introduction to livestock management | * Role of livestock to economic development
* Principles of livestock management
* Aspects which affect livestock management
* Concepts of stress and distress
* Distressful management procedures
* Animal restraint
* Factors influencing livestock distribution and abundance
* Livestock production systems
 | Interactive lecture (1 hrs)Lecture (1 hr) | Chalk / BB or Markers / Flip charts |
| Dairy cattle management | * Review dairy production systems in Uganda and discuss the importance of dairy industry to the economy
* Calf management,

Calf management practicals (housing, castration, hoof trimming, disbudding/dehorning)* Heifer management, and
* Cow/milk management

Practical on milking, milk testing and processing* Artificial Insemination

Practical on AI: the students are transported to Entebbe at NAGRIC&DB | Interactive lecture (1 hrs)Lecture (1 hr)Practical (3 hrs)Lecture 1hr)Lecture (2hrs)Practical (3 hrs)* Practical / demonstrations to be conducted by technicians and experienced herdsmen

Handout on AIField trip 6hrs practical on AI: the students are transported to Entebbe at NAGRIC&DB. The staff of NAGRIC&DB conduct the practical on semen collection and preservation (stakeholders) | Burdizzo, surgical kits, elastrator bands, disinfectants, live animals (calves), etcLive milking animals, milk and milk testing reagents |
| Beef cattle management | * Importance of beef cattle in the economy of the country and household food security and poverty alleviation
* Importance of local cattle in beef production
* Breeds/breeding, feeds/feeding
* Diseases and disease control in beef herds
* Economics of beef production
* Practical: Field visit local tanneries and hides and skins stores, exporters (stakeholders)
 | Interactive lecture (2hrs)Hand out on beef cattle management | Chalk / BB or Markers / Flip chartsTransport |
| Range management | * Definition of rangelands and Characteristics of rangelands
* Range production systems (pastoralism, nomadism, etc)
* The components of a range ecosystem and their functional aspects
* Range vegetation changes in composition and productivity
* Factors which affect range vegetation changes
* Range degradation and its remedies
 | Interactive lecture (2hrs)Field trip to visit the rangelands of Uganda | Chalk / BB or Markers / Flip chartsTransport |
| 8. Sheep and goat management | * Importance of small ruminants in the economy of a country and household food security and poverty alleviation
* Characteristics of sheep and goat
* Environmental and economic factors affecting sheep and goat production
* Handling small ruminants, bruises and abscesses
* Breeds and breeding of sheep and goats
* Lambing / kidding and lamb/kid management
* General management of goats and sheep (identification, castration, hoof pairing/trimming, de-worming/drenching, tail docking, etc.)
* Diseases and pest control
* Economics of goat and sheep production
 | Interactive lecture (2hrs)Goat management practicals (6 hrs) | Chalk / BB or Markers / Flip chartsEar tags, notches, Burdizzo, surgical kits, elastrator bands, disinfectants, live animals |
| Pig management | * Pig breeds and breeding
* Moving and handling pigs
* Farrowing facilities and management
* Piglet management (iron, wolf teeth and castration)
* Pig vices
* Pig diseases and their control,
* Pig houses and facilities
* Economics of pig production
 | Interactive lecture (2hrs)Pig management practical (handling, housing, identification, castration) (3hrs) | Chalk / BB or Markers / Flip chartsTransport |
| Rabbit management | * Rabbit breeds and breeding
* Feeding
* Management (nesting, caring for the litter & weaning)
* Rabbit houses and facilities
* Rabbit handling
* Rabbit diseases and their control,
 | Interactive lecture (2 hrs)Rabbit management practical (handling, housing (3hrs) | Chalk / BB or Markers / Flip chartsTransport |
| Hides and skins | * Importance of hides/skins industry to the Ugandan economy.
* Care of hides/skins on Live animals
* Care of dry hides/skins
* Transportation of Hides/skins
* Purchase and marketing of hides/skins in Uganda.
 | Interactive lecture (2 hrs)Field visitStudents taken to visit local tanneries and hides and skins stores, exporters (stakeholders) | Chalk / BB or Markers / Flip chartsTransport |
| Traction Animals | * Different animal species used for animal traction
* How to select a good animal
* Training animals for traction
* How to manage animals used for traction
* Yoke manage
* Other uses of animal traction
 | Interactive lecture (2 hrs) | Chalk / BB or Markers / Flip charts |

**6. SUMMARY OF TIME NEEDED**

Interactive lectures covering theory 30 hrs

On-station field practicals, 20 hrs

Field visits 10 hrs

**7. OVERALL COURSE EVALUATION**

Continuous Assessment Examination 30%

Field trips, assignments and practicals 20%

Final examination 50%.