AHP 3106-1: RUMINANT LIVESTOCK PRODUCTION SYSTEMS 4.5 CREDIT HOURS

Purpose of Course
The course is intended to equip the trainee with knowledge, skills and attitudes that will enable him/her to understand the management of all ruminant animals regarding feeding, economic importance and utilisation of their products.

Expected Learning Outcomes of the course
At the end of this course the student will be able to:

1. Explain all unique routine management of all ruminant animals: cattle (both beef and dairy), goats and sheep.
2. Understand the milk, meat, wool and hide/skin production from cattle, goats, camel.

Course Content

Week	Content
1	1. Introduction to RUMINANT LIVESTOCK PRODUCTION SYSTEMS 2. Economic importance of cattle and goats in dairy and meat industry.
2	Cattle: Types and breeds; Origin, development, characteristics, improvement, reproductive physiology; feeding and nutrition;
3	1. Cattle - Breeding and; Recordkeeping; 2. Cattle - Disease control;
4	1. Introduction to the Sheep and Goat production system 2. Types and breeds; Origin, development, characteristics, improvement,
5	1. *Sheep and Goat* - Breeding and; Recordkeeping; **2.** *Sheep and Goat* - Disease control
6	3. *Sheep and Goat* - Types and breeds; Origin, development, characteristics, improvement,
7	4. *Sheep and Goat* - reproductive physiology; 5. *Sheep and Goat* - feeding and nutrition;
8	6. *Sheep and Goat* - Breeding and; Recordkeeping; 7. *Sheep and Goat* - Disease control.
9	8. *Products and handling:* - Milk synthesis, ejection and handling; 9. *Products and handling* - Growth and development in meat animals;
10	10. *Products and handling* - Health, hygiene and facilities for milk and meat production. *11. Products and handling* - Processing and marketing of dairy and beef products;
11	12. Economics of dairy and beef production. Significance of ruminant production on food safety, human nutrition and global development.

Mode of Delivery:
Lectures, discovery learning, problem-based learning, experiential learning, group-based learning, independent studies and e-learning.

Course Assessment

Type	**Weighting (%)**
Continuous Assessment Tests	50
Final Examination	50
Total	**100**

Core Reading Materials for the course

Course Textbooks

1. Taylor, R. E. and Bogart, R. (2008). Scientific Farm Animal Production - An Introduction to Animal Science (3rd Edition). Collier Macmillan.
2. Battaglia, R. (2016). Handbook of Livestock Management. (4th Edition).
3. Greenhalgh, J. F. D., Morgan, C. A., Edwards, R. and McDonald, R. (2012). Animal Nutrition. (6th Ed.).

Recommended Reference Materials

1. Animal Production Science
2. The Journal of Animal Science

Reference Textbook

1. Field, T. and Taylor, R. (2016). Beef Production Management and Decisions. (5th Edition)
2. Damron, W. S. (2008). Introduction to Animal Science. (4th Edn). Global, Biological, Social and Industry Perspectives: International Edition.

Reference Journals

1. Journal of Animal Production Research
2. Bulletin for Animal Health and Production in Africa
3. The Journal of Animal Production

MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS

2023/2024 ACADEMIC YEAR

THIRD YEAR FIRST SEMESTER

SCHOOL OF NATURAL RESOURCE, ENVIRONMENTAL STUDIES AND AGRICULTURE

BACHELOR OF SCIENCE IN ANIMAL HEALTH AND PRODUCTION

COURSE CODE: AHP 3106-1

COURSE TITLE: RUMINANT LIVESTOCK PRODUCTION SYSTEMS

DATE: 5/12/2023 **TIME: 0830-1130 HRS**

INSTRUCTIONS TO CANDIDATES

Answer **ALL** questions in are COMPULSORY

This paper consists of 2 printed pages. Please turn over

1 Discuss challenges and advancement in the livestock production sector. (20 marks)

2 a Describe five categories of farm machinery relating to livestock production. (10 marks)

b Discuss the causes of calf mortality in Kenya. (10 marks)

3 a Describe the factors to consider when feeding and managing heifers. (10 marks)

b Discuss any five (5) factors to consider when investing in the meat industry in Kenya. (10 marks)

4 a Name two wool sheep and 2 meat sheep breeds. (4 marks)

b Discuss the characteristics, merits and demerits of the Saanen goat. (6 marks)

c Discuss the opportunities for wool sheep and the wool industry in Kenya. (10 marks)

5 Discuss the milking process and the appropriate physiological aspects taken into considerations. (20 marks)

6 a Discuss the various phases involved in the feeding of dairy cows. (20 marks)

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