**UNIVERSITY OF SARGODHA**

**DEPARTMENT OF ANIMAL SCIENCES**

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COURSE OUTLINE Spring 2020

Course Title: **Fundamentals of Livestock production**

Course Code:ANSC-5105

Credit Hours: 3(2-1)

Instructor: **Dr. Imtiaz Hussain**

Email: **imtiaz.hussain@uos.edu.pk**

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| DESCRIPTION & OBJECTIVES |

Livestock are [domesticated](https://en.wikipedia.org/wiki/Domesticated) [animals](https://en.wikipedia.org/wiki/Animal) raised in an agricultural setting to produce [commodities](https://en.wikipedia.org/wiki/Commodity) such as [food](https://en.wikipedia.org/wiki/Food), [fiber](https://en.wikipedia.org/wiki/Fiber), and [labor](https://en.wikipedia.org/wiki/Labour_%28economics%29). The term is often used to refer solely to those raised for food, and sometimes only farmed [ruminants](https://en.wikipedia.org/wiki/Ruminant), such as [cattle](https://en.wikipedia.org/wiki/Cattle) and [goats](https://en.wikipedia.org/wiki/Goats). In recent years, some organizations have also raised livestock to promote the survival of [rare breeds](https://en.wikipedia.org/wiki/Rare_breed_%28agriculture%29). The breeding, maintenance, and slaughter of these animals, known as [animal husbandry](https://en.wikipedia.org/wiki/Animal_husbandry), is a component of modern [agriculture](https://en.wikipedia.org/wiki/Agriculture) that has been practiced in many cultures since humanity's transition to [farming](https://en.wikipedia.org/wiki/Farming) from [hunter-gatherer](https://en.wikipedia.org/wiki/Hunter-gatherer) lifestyles. Animal husbandry practices have varied widely across cultures and times. Originally, fences or enclosures did not confine livestock, but these practices have largely shifted to [intensive animal farming](https://en.wikipedia.org/wiki/Intensive_animal_farming), sometimes referred to as "factory farming". These practices increase yield of the various commercial outputs, but have led to increased concerns about [animal welfare](https://en.wikipedia.org/wiki/Animal_welfare) and [environmental impact](https://en.wikipedia.org/wiki/Environmental_impact). Livestock production continues to play a major economic and cultural role in numerous rural communities.

The key objectives/outcomes of this course are;

* To impart basic and applied knowledge of Livestock management

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| INTENDED LEARNING OUTCOMES |

Students will have basic understanding of livestock management, good knowledge of local breeds of our domestic animals. Taxonomical understanding and relations of domestic animals will help students to clear their view about evolution and phylogenetic. Students will have complete understanding about housing and management of dairy animals.

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| CONTENTS |

**Theory**

Role of livestock, its importance and production trends. Land-crop-livestock relationships. Livestock species and breeds. Zoological classification of domestic animals. History of domestication. General management practices, farm housing and sanitation, manure handling and waste disposal and pollution control. Livestock production systems. Livestock housing systems, pre-requisite for housing of farm animal, Planning and facilities for housing of farm animals. Housing and management of dairy animal, milking herd, dry stock, and replacement calves. Milking parlor, types and designs and equipment, Housing and management of small ruminants (sheds and shelters). Plans for economical housing under different climatic conditions. Transportation and welfare of animals.

**Practical**

Identification of breeds of farm animals; Methods of identification; Measuring physiological norms; Body measurements for weight estimation; Preparing animals for shows; Score card; Record keeping; Exercises on measurements and facilities for housing; equipment of cattle/buffalo and sheep/goats; Visit to livestock farms and shows.

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| READINGS |

* Banerjee, G. C. 1998. A Textbook of Animal Husbandry. Oxford and IBH Publ, Co., New Delhi, India.
* Khan, B. B., M. Yaqoob, M. Riaz, M. Younas and A. Iqbal. 2004. Livestock Management Manual. Department of Livestock Management, University of Agriculture, Faisalabad.
* Shah, S.I. 1994. Animal Husbandry. National Book Foundation, Islamabad, Pakistan.

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| COURSE SCHEDULE |
| **Weeks** | **Topic and Readings** | **Dates** |
| 1 | Role of livestock, its importance and production trends. Land-crop-livestock relationships. Shah, S.I. 1994. Animal Husbandry. National Book Foundation, Islamabad, Pakistan. | 2-03-20203-03-20206-03-2020 |
| 2 | Livestock species and breeds. Zoological classification of domestic animals. History of domestication. Banerjee, G. C. 1998. A Textbook of Animal Husbandry. Oxford and IBH Publ, Co., New Delhi, India. | 9-03-202010-03-202013-03-2020 |
| 3 | Livestock species and breeds.Shah, S.I. 1994. Animal Husbandry. National Book Foundation, Islamabad, Pakistan. | 16-03-202017-03-202020-03-2020 |
| 4 | Livestock species and breeds.Shah, S.I. 1994. Animal Husbandry. National Book Foundation, Islamabad, Pakistan. | 23-03-202024-03-202027-03-2020 |
| 5 | General management practices, farm housing and sanitation, manure handling and waste disposal and pollution control.Shah, S.I. 1994. Animal Husbandry. National Book Foundation, Islamabad, Pakistan. | 30-03-202031-03-20203-04-2020 |
| 6 | Livestock production systems. Shah, S.I. 1994. Animal Husbandry. National Book Foundation, Islamabad, Pakistan. | 6-04-20207-04-202010-04-2020 |
| 7 | Livestock housing systems, pre-requisite for housing of farm animal, Planning and facilities for housing of farm animals.Khan, B. B., M. Yaqoob, M. Riaz, M. Younas and A. Iqbal. 2004. Livestock Management Manual. Department of Livestock Management, University of Agriculture, Faisalabad. | 13-04-202014-04-202017-04-2020 |
| 8 | Livestock housing systems, pre-requisite for housing of farm animal, Planning and facilities for housing of farm animals.Khan, B. B., M. Yaqoob, M. Riaz, M. Younas and A. Iqbal. 2004. Livestock Management Manual. Department of Livestock Management, University of Agriculture, Faisalabad. | 20-04-202021-04-202024-04-2020 |
| **9** | **Mid Test** |  |
| 10 | Housing and management of dairy animal, milking herd, dry stock, and replacement calves. Banerjee, G. C. 1998. A Textbook of Animal Husbandry. Oxford and IBH Publ, Co., New Delhi, India.Shah, S.I. 1994. Animal Husbandry. National Book Foundation, Islamabad, Pakistan. | 4-05-20205-05-20208-05-2020 |
| 11 | Milking parlor, types and designs and equipment,Banerjee, G. C. 1998. A Textbook of Animal Husbandry. Oxford and IBH Publ, Co., New Delhi, India.Shah, S.I. 1994. Animal Husbandry. National Book Foundation, Islamabad, Pakistan. | 11-05-202012-05-202015-05-2020 |
| 12 | Milking parlor, types and designs and equipment,Banerjee, G. C. 1998. A Textbook of Animal Husbandry. Oxford and IBH Publ, Co., New Delhi, India.Shah, S.I. 1994. Animal Husbandry. National Book Foundation, Islamabad, Pakistan. | 18-05-202019-05-202022-05-2020 |
| 13 | Housing and management of small ruminants (sheds and shelters). Plans for economical housing under different climatic conditions.Banerjee, G. C. 1998. A Textbook of Animal Husbandry. Oxford and IBH Publ, Co., New Delhi, India.Shah, S.I. 1994. Animal Husbandry. National Book Foundation, Islamabad, Pakistan. | 25-05-202026-05-202029-05-2020 |
| 14 | Housing and management of small ruminants (sheds and shelters). Plans for economical housing under different climatic conditions.Banerjee, G. C. 1998. A Textbook of Animal Husbandry. Oxford and IBH Publ, Co., New Delhi, India.Shah, S.I. 1994. Animal Husbandry. National Book Foundation, Islamabad, Pakistan. | 1-06-20202-06-20205-06-2020 |
| 15 | Housing and management of small ruminants (sheds and shelters). Plans for economical housing under different climatic conditions.Banerjee, G. C. 1998. A Textbook of Animal Husbandry. Oxford and IBH Publ, Co., New Delhi, India.Shah, S.I. 1994. Animal Husbandry. National Book Foundation, Islamabad, Pakistan. | 8-06-20209-06-202012-06-2020 |
| 16 | Transportation and welfare of animals.Banerjee, G. C. 1998. A Textbook of Animal Husbandry. Oxford and IBH Publ, Co., New Delhi, India.Shah, S.I. 1994. Animal Husbandry. National Book Foundation, Islamabad, Pakistan. | 15-06-202016-06-202019-06-2020 |
| **17** | **Final term** |  |

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| RESEARCH PROJECT |

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| ASSIGNMENT CRITERIA |

Sessional: 08

Mid-term: 12

Final Exam: 20

Practical: 20