**Courses of Distinct Program in Ruminants Medicine, Surgery and Theriogenology**

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| **Title:** Anatomy of Ruminants and camels  | **Credit hours** |
| **Code Number: PMS** 126 | **Lectures**  | **Practical** |
| **Prerequisite courses:** - | 1 | 1(2) |
| **Course Contents:**Topographic anatomy of different systems and special anatomy of organs in cattle, buffaloes, sheep, goats and camels. |

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| **Title:** Physiology of digestion in ruminants | **Credit hours** |
| **Code Number: PMS** 216 | **Lectures**  | **Practical** |
| **Prerequisite courses:** - | 1 | 1(2) |
| **Course Contents:**Princibles metabolism of different constituents of feed of ruminants and their metabolism products in rumen and role of microfauna and microflora in metabolism. |

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| **Title:** Biochemistry and molecular biology in ruminants | **Credit hours** |
| **Code Number: PMS** 217 | **Lectures**  | **Practical** |
| **Prerequisite courses:** - | 1 | 1(2) |
| **Course Contents:**A broad understanding of biochemistry and molecular biology in ruminants and their application for improvement of ruminant’s production.  |

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| **Title:**  Ruminants and camel welfare | **Credit hours** |
| **Code Number: PMS** 227 | **Lectures**  | **Practical** |
| **Prerequisite courses:** | 2 | 2(3) |
| Course Contents:Study of management of both ruminants and acamels under grazing and intensive production and welfare of both and camels under racing condition.. |

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| **Title:** Ruminants Nutrition | **Credit hours** |
| **Code Number: PMS** 317 | **Lectures**  | **Practical** |
| **Prerequisite courses:**221 | 1 | 1(2) |
| **Course Contents:**Principles of nutrition and veterinary dietetics of Ruminants; Chemical composition and evalua­tion of feedstuffs; Assimilation and utilization of nutrients. Nutrients inadequacy; Feeding standards and Nutrients' requirements. Classification of feedstuffs; Feed supplements & additives. Feed processing. Commercial feeds and feed laws of Ruminants. |

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| **Title:** Pharmacology of ruminants | **Credit hours** |
| **Code Number: PMS** 327 | **Lectures**  | **Practical** |
| **Prerequisite courses:** 221, 222 | 1  | 1(2) |
| **Course Contents:**Pharmacology of ruminants including drugs affecting the metabolism in rumen and fermentation efficiency with special reference to feed additives and their effects. |

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| **Title:** Ruminants pathology  | **Credit hours** |
| **Code Number: PMS** 418 | **Lectures**  | **Practical** |
| **Prerequisite courses:** 311, 212 | 1 | 1(2) |
| **Course Contents:** Pathology of main diseases affect rumen, mammary glands, respiratory and urinary systems and recenr histopathological techniques and recent applications in confirmation of affection and diseases on level of tissues and organs. |

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| **Title:** Camel Medicine | **Credit hours** |
| **Code Number: PMS** 428 | **Lectures**  | **Practical** |
| **Prerequisite courses:** 411 | 1 | 1(2) |
| **Course Contents:** Clinical examination, adaptation mechanisms, digestive, respiratory, urinary , skin, mammary glands and racing diseases, metabolic and deficiency diseases in adults and camel calves.. |

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| **Title:**  Veterinary vaccination  | **Credit hours** |
| **Code Number: PMS** 429 | **Lectures**  | **Practical** |
| **Prerequisite courses:** 411 | 1 | 1(2) |
| **Course Contents:**Vaccination programs of small and large ruminants and camels and epidemiology of indemic diseases.. |

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| **Title:** Intensive production medicine | **Credit hours** |
| **Code Number: PMS** 518 | **Lectures**  | **Practical** |
| **Prerequisite courses:** 411 | 1 | 1(2) |
| **Course Contents**Diseases cauced by Intensive production and their clinical singns, causes, epidemiology, diagnosis and treatment .  |

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| **Title:** Ultrasonography and endoscopy (Medicine) | **Credit hours** |
| **Code Number: PMS** 528 | **Lectures**  | **Practical** |
| **Prerequisite courses:** 411 | 1 | 1(2) |
| **Course Contents**Princibles of ultrasonography and endoscopy and application of diagnostic imaging using both tools in different systems affection and diagnostic and prognostic aids. |

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| **Title:** Ruminants Surgery | **Credit hours** |
| **Code Number: PMS** 529 | **Lectures**  | **Practical** |
| **Prerequisite courses:** 423 | 1 | 1(2) |
| **Course Contents:**Surgery of limbs and rumen , abomasum, castration and minor surgery in farm ruminants and camels. |