

Faculty of Veterinary Science (PCE)

ANIMAL GENETICS AND BREEDING
Course Structure – at a Glance

| CODE | COURSE TITLE | CREDITS |
|---------|--|---------|
| AGB 601 | ANIMAL CYTOGENETICS AND IMMUNOGENETICS | 2+1 |
| AGB 602 | MOLECULAR GENETICS IN ANIMAL BREEDING | 2+1 |
| AGB 603 | POPULATION AND QUANTITATIVE GENETICS IN ANIMAL BREEDING | 2+1 |
| AGB 604 | SELECTION METHODS AND BREEDING SYSTEMS | 3+1 |
| AGB 605 | BIOMETRICAL TECHNIQUES IN ANIMAL BREEDING | 3+1 |
| AGB 606 | CONSERVATION OF ANIMAL GENETIC RESOURCES | 2+0 |
| AGB 607 | CATTLE AND BUFFALO BREEDING | 2+1 |
| AGB 608 | SMALL FARM ANIMAL BREEDING (SHEEP, GOAT, SWINE AND RABBIT) | 2+0 |
| AGB 609 | POULTRY BREEDING | 2+1 |
| AGB 610 | LABORATORY ANIMAL BREEDING | 1+0 |
| AGB 691 | MASTER'S SEMINAR | 1+0 |
| AGB 699 | MASTER'S RESEARCH | 20 |
| AGB 701 | RECENT ADVANCES IN ANIMAL GENETICS | 2+0 |
| AGB 702 | RECENT TRENDS IN ANIMAL BREEDING | 2+0 |
| AGB 703 | ADVANCES IN BIOMETRICAL GENETICS | 2+1 |
| AGB 704 | ADVANCES IN SELECTION METHODOLOGY | 2+1 |
| AGB 705 | BIOINFORMATICS IN ANIMAL GENETICS AND BREEDING | 2+0 |
| AGB 706 | ADVANCES IN MOLECULAR CYTOGENETICS | 2+0 |
| AGB 707 | UTILISATION OF NON-ADDITIVE GENETIC VARIANCE IN FARM ANIMALS | 2+1 |
| AGB 791 | DOCTORAL SEMINAR I | 1+0 |
| AGB 792 | DOCTORAL SEMINAR II | 1+0 |
| AGB 799 | DOCTORAL RESEARCH | 45 |

LIVESTOCK PRODUCTION AND MANAGEMENT

Course Structure - at a Glance

| CODE | COURSE TITLE | CREDITS |
|---------|--|---------|
| LPM 601 | CATTLE AND BUFFALO PRODUCTION AND MANAGEMENT | 2+1 |
| LPM 602 | SHEEP AND GOAT PRODUCTION AND MANAGEMENT | 2+1 |
| LPM 603 | SWINE PRODUCTION AND MANAGEMENT | 1+1 |
| LPM 604 | LABORATORY ANIMAL PRODUCTION AND MANAGEMENT | 1+1 |
| LPM605 | SHELTER MANAGEMENT | 1+1 |
| LPM 606 | PRINCIPLES OF ENVIRONMENTAL HYGIENE AND WASTE MANAGEMENT | 2+0 |
| LPM 607 | CLIMATOLOGY AND ANIMAL PRODUCTION | 1+0 |
| LPM 608 | POULTRY FARM AND HATCHERY MANAGEMENT | 2+1 |
| LPM 609 | FARM ANIMAL BEHAVIOR | 1+0 |
| LPM 610 | INTEGRATED LIVESTOCK FARMING SYSTEM | 2+1 |
| LPM 611 | EQUINE PRODUCTION AND MANAGEMENT | 1+1 |
| LPM 612 | WILD LIFE MANAGEMENT AND CONSERVATION | 2+0 |
| LPM 613 | LIVESTOCK BUSINESS MANAGEMENT | 1+1 |
| LPM 691 | MASTER'S SEMINAR | 1+0 |
| LPM 699 | MASTER'S RESEARCH | 20 |
| LPM 701 | ADVANCES IN CATTLE AND BUFFALO PRODUCTION AND MANAGEMENT | 3+0 |
| LPM 702 | ADVANCES IN SHEEP AND GOAT PRODUCTION AND MANAGEMENT | 2+1 |
| LPM 703 | ADVANCES IN SWINE PRODUCTION AND MANAGEMENT | 2+1 |
| LPM 704 | ADVANCES IN LABORATORY ANIMAL PRODUCTION AND MANAGEMENT | 1+0 |
| LPM 705 | ADVANCES IN POULTRY PRODUCTION MANAGEMENT | 2+1 |
| LPM 706 | ADVANCES IN ENVIRONMENTAL MANAGEMENT | 1+1 |
| LPM 707 | ADVANCES IN EQUINE MANAGEMENT | 2+0 |
| LPM 791 | DOCTORAL SEMINAR I | 1+0 |
| LPM 792 | DOCTORAL SEMINAR II | 1+0 |
| LPM 799 | DOCTORAL RESEARCH | 45 |

ANIMAL REPRODUCTION, GYNAECOLOGY & OBSTETRICS
Course Structure – at a Glance

| CODE | COURSE TITLE | CREDITS |
|---------|--|---------|
| VOG 601 | GENERAL GYNAECOLOGY | 3-1 |
| VOG 602 | FEMALE INFERTILITY | 3-1 |
| VOG 603 | VETERINARY OBSTETRICS | 2-2 |
| VOG 604 | ANDROLOGY & MALE INFERTILITY | 3-1 |
| VOG 605 | SEMEN PRESERVATION AND ARTIFICIAL INSEMINATION | 2-1 |
| VOG 606 | REPRODUCTIVE BIOTECHNOLOGY | 2-1 |
| VOG 607 | CLINICAL PRACTICE I | 0-3 |
| VOG 608 | CLINICAL PRACTICE II | 0-3 |
| VOG 691 | MASTER'S SEMINAR | 1-0 |
| VOG 699 | MASTER'S RESEARCH | 20 |
| VOG 701 | ADVANCES IN GYNAECOLOGY | 2-1 |
| VOG 702 | ADVANCES IN OBSTETRICS | 3-1 |
| VOG 703 | ADVANCES IN ANDROLOGY | 2-1 |
| VOG 704 | ADVANCES IN REPRODUCTIVE BIOTECHNOLOGY | 1-1 |
| VOG 705 | ADVANCES IN SEMEN PRESERVATION | 1-1 |
| VOG 706 | CLINICAL PRACTICE I | 0-3 |
| VOG 707 | CLINICAL PRACTICE II | 0-3 |
| VOG 790 | SPECIAL PROBLEM | 0-2 |
| VOG 791 | DOCTORAL SEMINAR I | 1-0 |
| VOG 792 | DOCTORAL SEMINAR II | 1-0 |
| VOG 799 | DOCTORAL RESEARCH | 45 |

VETERINARY MICROBIOLOGY
Course Structure – at a Glance

| CODE | COURSE TITLE | CREDITS |
|---------|--|---------|
| VMC 601 | BACTERIOLOGY - I | 3+1 |
| VMC 602 | BACTERIOLOGY - II | 3+1 |
| VMC 603 | VETERINARY MYCOLOGY | 1+1 |
| VMC 604 | GENERAL VIROLOGY | 2+1 |
| VMC 605 | SYSTEMATIC ANIMAL VIROLOGY | 3+1 |
| VMC 606 | PRINCIPLES OF IMMUNOLOGY | 2+1 |
| VMC 607 | VACCINOLOGY | 2+0 |
| VMC 608 | DIAGNOSTICS OF INFECTIOUS DISEASES | 1+2 |
| VMC 609 | TECHNIQUES IN MICROBIOLOGY AND IMMUNOLOGY | 0+3 |
| VMC 691 | MASTER'S SEMINAR | 1+0 |
| VMC 699 | MASTER'S RESEARCH | 20 |
| VMC 701 | ADVANCES IN BACTERIOLOGY | 2+1 |
| VMC 702 | ADVANCES IN MYCOLOGY | 2+1 |
| VMC 703 | BACTERIAL GENETICS | 2+1 |
| VMC 704 | MICROBIAL TOXINS | 2+1 |
| VMC 705 | MOLECULAR DETERMINANTS OF BACTERIAL PATHOGENESIS | 2+1 |
| VMC 706 | ADVANCES IN VIROLOGY | 2+1 |
| VMC 707 | MOLECULAR AND GENETIC ASPECTS OF VIRAL PATHOGENESIS | 2+1 |
| VMC 708 | STRUCTURE FUNCTION RELATIONSHIP OF DNA AND RNA VIRUSES | 3+0 |
| VMC 709 | ONCOGENIC VIRUSES | 2+0 |
| VMC 710 | SLOW VIRAL INFECTIONS AND PRIONS | 2+0 |
| VMC 711 | MOLECULAR IMMUNOLOGY | 2+1 |
| VMC 712 | ADVANCES IN CELLULAR IMMUNOLOGY | 2+1 |
| VMC 713 | CYTOKINES AND IMMUNOMODULATORS | 2+0 |
| VMC 714 | ADVANCES IN VACCINOLOGY | 2+0 |
| VMC 715 | ADVANCES IN IMMUNODIAGNOSTICS | 1+1 |
| VMC 716 | MODERN IMMUNOTECHNOLOGY | 1+2 |
| VMC 717 | CURRENT TOPICS IN INFECTION AND IMMUNITY | 3+0 |
| VMC 718 | VETERINARY MICROBIAL BIOTECHNOLOGY | 2+1 |
| VMC 790 | SPECIAL PROBLEM | 0+2 |
| VMC 791 | DOCTORAL SEMINAR I | 1+0 |
| VMC 792 | DOCTORAL SEMINAR II | 1+0 |
| VMC 799 | DOCTORAL RESEARCH | 15 |

VETERINARY CLINICAL MEDICINE, ETHICS AND JURISPRUDENCE

Course Structure – at a Glance

| CODE | COURSE TITLE | CREDITS |
|---------|--|---------|
| VCM 601 | RUMINANT CLINICAL MEDICINE -I | 2+0 |
| VCM 602 | RUMINANT CLINICAL MEDICINE -II | 2+0 |
| VCM 603 | EQUINE CLINICAL MEDICINE | 2+0 |
| VCM 604 | CANINE AND FELINE CLINICAL MEDICINE | 2+0 |
| VCM 605 | SWINE CLINICAL MEDICINE | 1+0 |
| VCM 606 | AVIAN MEDICINE | 1+0 |
| VCM 607 | ZOO, WILD & LABORATORY ANIMAL MEDICINE | 2+0 |
| VCM 608 | CLINICAL DISEASES OF ANIMAL SPECIES*OF REGIONAL IMPORTANCE | 1+0 |
| VCM 609 | PRODUCTION DISEASES | 2+0 |
| VCM 610 | DISEASES OF ANIMALS CAUSED BY TOXICANTS | 1+0 |
| VCM 611 | VETERINARY FORENSIC MEDICINE | 1+1 |
| VCM 612 | CLINICAL DIAGNOSTIC TECHNIQUES | 0+2 |
| VCM 613 | VETERINARY EMERGENCY MEDICINE | 0+2 |
| VCM 614 | CLINICAL PRACTICE I | 0+3 |
| VCM 615 | CLINICAL PRACTICE II | 0+3 |
| VCM 691 | MASTER'S SEMINAR | 1+0 |
| VCM 699 | MASTER'S RESEARCH | 30 |
| VCM 701 | ADVANCES IN GASTROENTEROLOGY | 2+0 |
| VCM 702 | ADVANCES IN CARDIOPULMONARY MEDICINE | 2+0 |
| VCM 703 | ADVANCES IN NEUROLOGICAL AND UROLOGICAL DISORDERS | 2+0 |
| VCM 704 | ADVANCES IN ENDOCRINE AND DERMATOLOGICAL DISORDERS | 2+0 |
| VCM 705 | ADVANCES IN PRODUCTION DISEASES | 2+0 |
| VCM 706 | ADVANCES IN PAEDIATRICS AND GERIATRICS | 1+0 |
| VCM 707 | ADVANCES IN VETERINARY DIAGNOSTICS | 1+2 |
| VCM 708 | ADVANCES IN VETERINARY THERAPEUTICS | 1+2 |
| VCM 709 | ADVANCED CLINICAL PRACTICE I | 0+2 |
| VCM 710 | ADVANCED CLINICAL PRACTICE II | 0+2 |
| VCM 711 | ADVANCED CLINICAL PRACTICE III | 0+2 |
| VCM 790 | SPECIAL PROBLEM | 0+2 |
| VCM 791 | DOCTORAL SEMINAR I | 1+0 |
| VCM 792 | DOCTORAL SEMINAR II | 1+0 |
| VCM 799 | DOCTORAL RESEARCH | 45 |

*Domestic animals of regional importance e.g. Camel in Haryana, Yak in Eastern India, Elephant in South India

VETERINARY SURGERY AND RADIOLOGY
Course Structure – at a Glance

| CODE | COURSE TITLE | CREDITS |
|---------|---|---------|
| VSR 601 | PRINCIPLES OF SURGERY | 2-0 |
| VSR 602 | CLINICAL PRACTICE - I | 0-3 |
| VSR 603 | CLINICAL PRACTICE - II | 0-3 |
| VSR 604 | SMALL ANIMAL ANAESTHESIA | 2-1 |
| VSR 605 | LARGE ANIMAL ANAESTHESIA | 2-1 |
| VSR 606 | DIAGNOSTIC IMAGING TECHNIQUES | 2-1 |
| VSR 607 | VETERINARY OPHTHALMOLOGY AND DENTISTRY | 1-1 |
| VSR 608 | SMALL ANIMAL SOFT TISSUE SURGERY | 2-1 |
| VSR 609 | LARGE ANIMAL SOFT TISSUE SURGERY | 2-1 |
| VSR 610 | ORTHOPAEDIC AND LIMB SURGERY | 2-1 |
| VSR 691 | MASTER'S SEMINAR | 1-0 |
| VSR 699 | MASTER'S RESEARCH | 20 |
| VSR 701 | CLINICAL SURGICAL PRACTICE - I | 0-2 |
| VSR 702 | CLINICAL SURGICAL PRACTICE - II | 0-2 |
| VSR 703 | CLINICAL SURGICAL PRACTICE - III | 0-2 |
| VSR 704 | ANAESTHESIA OF WILD AND LABORATORY ANIMALS | 1-1 |
| VSR 705 | ADVANCES IN ANAESTHESIOLOGY | 2-1 |
| VSR 706 | ADVANCES IN DIAGNOSTIC IMAGING TECHNIQUES | 2-1 |
| VSR 707 | NEUROSURGERY | 2-1 |
| VSR 708 | EXPERIMENTAL SURGICAL TECHNIQUES IN ANIMALS | 1-1 |
| VSR 789 | SPECIAL PROBLEMS IN ANAESTHESIA | 0-2 |
| VSR 790 | SPECIAL PROBLEMS IN SURGERY | 0-2 |
| VSR 791 | DOCTORAL SEMINAR I | 1-0 |
| VSR 792 | DOCTORAL SEMINAR II | 1-0 |
| VSR 799 | DOCTORAL RESEARCH | 45 |

ANIMAL NUTRITION
Course Structure – at a Glance

| CODE | COURSE TITLE | CREDITS |
|-------------|--|----------------|
| ANN 601 | ANIMAL NUTRITION ENERGY AND PROTEIN | 3+0 |
| ANN 602 | ANIMAL NUTRITION MINERALS, VITAMINS AND FEED ADDITIVES | 3+1 |
| ANN 603 | FEED TECHNOLOGY | 1+1 |
| ANN 604 | FEED CONSERVATION, STORAGE AND QUALITY CONTROL | 2+2 |
| ANN 605 | RUMINANT NUTRITION | 2+1 |
| ANN 606 | NON-RUMINANT NUTRITION | 1+1 |
| ANN 607 | NUTRITION OF COMPANION/LABORATORY, WILD AND ZOO ANIMALS | 2+1 |
| ANN 608 | RESEARCH TECHNIQUES IN ANIMAL NUTRITION | 1+3 |
| ANN 609 | NON CONVENTIONAL FEED STUFF AND TOXIC CONSTITUENTS/ANTIMETABOLITES IN ANIMAL FEEDSTUFF | 2+1 |
| ANN 691 | MASTER'S SEMINAR | 1+0 |
| ANN 699 | MASTER'S RESEARCH | 20 |
| ANN 701 | MODERN CONCEPTS OF FEEDING RUMINANTS AND FORAGE UTILIZATION | 3+0 |
| ANN 702 | MODERN CONCEPTS OF FEEDING MONOGASTRIC ANIMALS | 2+0 |
| ANN 703 | NUTRITION AND RUMEN FERMENTATION | 1+1 |
| ANN 704 | ADVANCES IN MICRONUTRIENTS | 1+0 |
| ANN 705 | ADVANCED TECHNIQUES IN NUTRITION AND RESEARCH | 1+2 |
| ANN 706 | ADVANCES IN FEED TECHNOLOGY | 1+1 |
| ANN 707 | CLINICAL NUTRITION | 1+1 |
| ANN 708 | NUTRIENT AND DRUG INTERACTION | 2+0 |
| ANN 709 | NEW FEED RESOURCES AND TOXICANTS IN ANIMAL FEEDING | 2+0 |
| ANN 791 | DOCTORAL SEMINAR I | 1+0 |
| ANN 792 | DOCTORAL SEMINAR II | 1+0 |
| ANN 799 | DOCTORAL RESEARCH | 45 |

VETERINARY AND ANIMAL HUSBANDRY EXTENSION

Course Structure -- at a Glance

| CODE | COURSE TITLE | CREDITS |
|---------|---|---------|
| AHE 601 | FUNDAMENTALS OF VETERINARY AND ANIMAL HUSBANDRY EXTENSION | 2-1 |
| AHE 602 | COMMUNICATION FOR LIVESTOCK DEVELOPMENT | 1-1 |
| AHE 603 | DIFFUSION AND ADOPTION OF ANIMAL HUSBANDRY PRACTICES | 2-1 |
| AHE 604 | EXTENSION TECHNIQUES AND AUDIO VISUAL AIDS | 2-1 |
| AHE 605 | ANIMAL HUSBANDRY PROGRAMME PLANNING AND EVALUATION | 2-1 |
| AHE 606 | RESEARCH METHODOLOGY IN VETERINARY AND ANIMAL HUSBANDRY EXTENSION | 2-1 |
| AHE 607 | SOCIAL PSYCHOLOGY AND GROUP DYNAMICS | 2-1 |
| AHE 608 | ANIMAL HUSBANDRY DEVELOPMENT PROGRAMMES | 1-0 |
| AHE 609 | DEVELOPMENTS IN THE CONCEPT OF EXTENSION | 1-0 |
| AHE 610 | HUMAN RESOURCE MANAGEMENT IN ANIMAL HUSBANDRY SECTOR | 2-1 |
| AHE 611 | GENDER AND LIVESTOCK DEVELOPMENT | 1-0 |
| AHE 612 | INFORMATION AND COMMUNICATION TECHNOLOGY IN LIVESTOCK DEVELOPMENT | 1-1 |
| AHE 691 | MASTER'S SEMINAR | 1-0 |
| AHE 699 | MASTER'S RESEARCH | 20 |
| AHE 701 | ORGANIZATIONAL MANAGEMENT | 3-0 |
| AHE 702 | FARM JOURNALISM AND PUBLIC RELATIONS | 2-1 |
| AHE 703 | ADVANCED RESEARCH TECHNIQUES IN SOCIAL RESEARCH | 3-1 |
| AHE 704 | TRAINING FOR HUMAN RESOURCE DEVELOPMENT | 2-1 |
| AHE 705 | POLICIES AND REGULATIONS IN LIVESTOCK SECTOR | 2-0 |
| AHE 706 | EDUCATIONAL TECHNOLOGY | 2-1 |
| AHE 707 | DYNAMICS OF CHANGE | 2-0 |
| AHE 708 | ORGANIZATIONAL COMMUNICATION | 2-1 |
| AHE 790 | SPECIAL PROBLEM | 0-2 |
| AHE 791 | DOCTORAL SEMINAR I | 1-0 |
| AHE 792 | DOCTORAL SEMINAR II | 1-0 |
| AHE 799 | DOCTORAL RESEARCH | 45 |

COMPULSORY NON-CREDIT COURSES

(Compulsory for Master's programme in all disciplines; Optional for Ph.D. scholars)

| CODE | COURSE TITLE | CREDITS |
|-----------------------|---|---------|
| PGS 501 | LIBRARY AND INFORMATION SERVICES | 0+1 |
| PGS 502 | TECHNICAL WRITING AND COMMUNICATIONS SKILLS | 0+1 |
| PGS 503 (e-Course) | INTELLECTUAL PROPERTY AND ITS MANAGEMENT | 1+0 |
| PGS 506 (e-Course) | DISASTER MANAGEMENT | 1+0 |

Course Contents

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|---------|----------------------------------|-----|
| PGS 501 | LIBRARY AND INFORMATION SERVICES | 0+1 |
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Objective

To equip the library users with skills to trace information from libraries efficiently, to apprise them of information and knowledge resources, to carry out literature survey, to formulate information search strategies, and to use modern tools (Internet, OPAC, search engines etc.) of information search.

Practical

Introduction to library and its services; Role of libraries in education, research and technology transfer; Classification systems and organization of library; Sources of information- Primary Sources, Secondary Sources and Tertiary Sources; Intricacies of abstracting and indexing services (Science Citation Index, Biological Abstracts, Chemical Abstracts, CABI Abstracts, etc.); Tracing information from reference sources; Literature survey; Citation techniques/Preparation of bibliography; Use of CD-ROM Databases, Online Public Access Catalogue and other computerized library services; Use of Internet including search engines and its resources; e-resources access methods.

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|---------|---|-----|
| PGS 502 | TECHNICAL WRITING AND COMMUNICATIONS SKILLS | 0+1 |
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Objective

To equip the students/scholars with skills to write dissertations, research papers, etc.

To equip the students/scholars with skills to communicate and articulate in English (verbal as well as writing).

Practical

Technical Writing - Various forms of scientific writings- theses, technical papers, reviews, manuals, etc; Various parts of thesis and research communications (title page, authorship contents page, preface, introduction, review of literature, material and methods, experimental results and discussion); Writing of abstracts, summaries, précis, citations etc.; commonly used abbreviations in the theses and research communications; illustrations, photographs and drawings with suitable captions; pagination, numbering of tables and illustrations; Writing of numbers and dates in scientific write-ups; Editing and proof-reading; Writing of a review article.