Reproduction and Fertility - a Species Approach

Overview

This module will enable you to gain a comprehensive insight into the physiology of reproduction and the management and manipulation of fertility to optimise animal productivity.

Subject areas: general principles of reproduction; introduction to reproductive anatomy and physiology; control of breeding; fertilisation, conception and pregnancy; reproductive disorders and disease; embryo transfer and assisted reproduction; reproduction management.

Students will be required to specialise in three of the following: cattle; small ruminants; pigs; camelids, rabbits and poultry; equids.
### INDICATIVE STUDY CALENDAR

<table>
<thead>
<tr>
<th>Unit No</th>
<th>Unit Title</th>
<th>Week no. of course</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Module 1 - General Reproduction</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Unit 1 | i. Anatomy of the Reproductive System  
ii. The Ovarian Cycle | 1-2 |
| Unit 2 | i. Hormonal Control of the Oestrous Cycle  
ii. Signs and Detection of Oestrus | 3 - 4 |
| Unit 3 | i. The Male  
ii. Embryonic Development | 5 - 6 |
| Unit 4 | i. Artificial Insemination  
ii. Control of Ovulation | 7 - 8 |
| Unit 5 | i. Fertilisation, Conception and Pregnancy  
ii. Parturition and the Puerperium | 9 - 10 |
| Unit 6 | i. Embryo Transfer and Assisted Reproduction  
ii. Reproductive Management | 11 - 12 |
| | TMA (from module 1) | 13 - 15 |
| **Module 2 - Bovine Reproduction and Fertility** | | |
| Unit 7 | i. Anatomy of the Reproductive System and Clinical Examination  
ii. Normal Breeding Practice  
iii. Normal Pregnancy, Parturition and Puerperium  
iv. Zebu Cattle and Water Buffalo | 16 -30 , Choice of 3 species |
| | | modules, 4 weeks per |
| Unit 8 | i. Abnormal Pregnancy and Dystocia  
ii. Retention of the Fetal Membranes and the Abnormal Puerperium  
iii. Infertility in the Bull  
iv. Zebu Cattle and Water Buffalo | module + revision |
| Unit 9 | i. Fertility, Subfertility and Infertility in the Female  
ii. The Artificial Control of Reproduction  
iii. Zebu Cattle and Water Buffalo | |
| **Module 3 - Small Ruminant Reproduction** | | |
| Unit 10 | Reproductive Anatomy and Physiology | |
| Unit 11 | i. Fertilisation, Conception and Pregnancy  
ii. Control of Breeding  
iii. Reproductive Disorders and Diseases | |
| Unit 12 | i. Assisted Breeding and Embryo Transfer  
ii. Management and Reproductive Performance | |
| **Module 4 - Pig Reproduction** | | |
| Unit 13 | i. Anatomy of the Reproductive Tract  
ii. The Breeding life of the Pig; Birth to Mating | |
| Unit 14 | i. The Breeding Life of the Sow; Conception to Parturition  
ii. The Breeding Life of the Sow; The Postparturient Period | |
| Unit 15 | i. Manipulation of Reproduction  
|         | ii. Recording for Reproductive Performance |

**Module 5 - Equine Reproduction**

| Unit 16 | i. The Structure and Physiology of the Reproductive System  
|         | ii. Clinical Examination  
|         | iii. Management of Mating and Coital Behaviour  
|         | iv. The Donkey |

| Unit 17 | i. Pregnancy, Parturition and the Puerperium  
|         | ii. Infertility and Subfertility in the Mare  
|         | iii. The Donkey |

| Unit 18 | i. Dystocia, Retained Fetal Membranes, Parturient and Post-Partum Disorders  
|         | ii. Male Infertility  
|         | iii. Manipulation of Reproductive Function  
|         | iv. Fetal Sexing |

**Module 6 - Poultry, Camelid and Rabbit Reproduction**

| Unit 19 | i. Anatomy and Physiology of the Male and Female Reproductive System  
|         | ii. Breeding Poultry Management  
|         | iii. Embryogenesis  
|         | iv. Incubation |

| Unit 20 | i. An Introduction to the Camelid Family  
|         | ii. Reproductive Physiology of the Camelids  
|         | iii. Improving Reproductive Efficiency |

| Unit 21 | Reproduction and Fertility in the Farmed Rabbit |

|  | TMAs (from species options) | 30 - 34  
|  | Revision and Examination preparation | 33 - 35  
|  | Examination | 36  
