



COURSE: Physiology and Pathology of Reproduction

ACADEMIC YEAR:2016/2017

TYPE OF EDUCATIONAL ACTIVITY: Affine

TEACHER: Prof. Raffaele Boni

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Language: Italian

ECTS: 6 (lessons e
tutorials/practice)

n. of hours: 56
(40+16) (lessons e
tutorials/practice)

Campus: Potenza
Dept./School: School of agriculture,
forestry, food and environmental
sciences
Specialization Course in Agricultural
Science and Technology

Semester: II
Year: I

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

Knowledge: The course aims to provide basic knowledge on the physiology of animal reproduction, to analyze environmental and genetic factors as well as major diseases that affect the reproductive efficiency as well as to describe advanced reproductive technologies applied to farm animals.

Skills: After completing this course, students will be able to evaluate the reproductive efficiency of animals raised, to identify and resolve with the help of other professionals, any reproductive problems and to optimize the production efficiency of livestock farms.

PRE-REQUIREMENTS

Bachelor degree in agricultural sciences

Knowledge of anatomy and physiology of domestic animals

Knowledge of livestock sciences

SYLLABUS

Anatomy of the genital tract (4 front + 4 hours lab hours). Folliculogenesis and Oogenesis (4 hours). Spermatogenesis, collection, evaluation and conservation of semen (4 front hours +2 lab hours). sexual cycle (4 hours). Puberty (1 hour). Causes of infertility. Anoestrus (physiological and pathological causes) (5 hours). Major infectious-parasitic diseases of the genital tract (4 hours). Pregnancy and delivery (2 hours). Pregnancy diagnosis (2 hours). Reproductive programming (2 hours). Synchronization and induction of estrus (2 hours). Use instrumental insemination (2 hours). fertility indexes (2 hours). Overview of new technologies in animal breeding (4 hours). Field testing the acquired knowledge (10 hours).

Educational objective: 1 credit

To acquire a detailed understanding of the anatomy of the genital tract, the basal folliculogenesis and cyclic mechanisms of development and maturation of the female gamete.

Educational objective: 2nd Credit

To acquire knowledge on the mechanisms of spermatogenesis, learn how to perform the collection, evaluation and conservation of semen in the different livestock species.

Educational objective: 3rd credit

To acquire knowledge on the dynamics of the sexual cycle, the attainment of puberty, the embryonic and fetal development, pregnancy and delivery as well as the diagnosis of pregnancy.

Educational objective: 4th credit

To acquire knowledge on reproductive programming. Estrus synchronization and induction. Use of instrumental insemination. Fertility indexes.

Educational objective: 5th credit

To acquire knowledge on the causes of infertility. Anestrus (physiological and pathological causes). Major infectious-parasitic diseases of the genital tract. Overview of new technologies applied to animal reproduction.

Educational objective: 6th credit

*Application and assessment of the knowledge acquired through exercises that will concentrate on:
Post-mortem examination of the genital tract and egg collection.*

Evaluation in the laboratory of semen quality.

TEACHING METHODS

Theoretical lessons, Classroom tutorials, Laboratory tutorials, Technical visits.

The course consists of 40 hours of lectures and 16 hours of laboratory exercises and field-testing. During the exercises, students will be asked to analyze the considered case studies.

EVALUATION METHODS

Oral examination. General questions will be chosen randomly among the topics covered in the course. In-depth questions and connections with other topics will help to check the level of knowledge acquired.

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

- o Seren E. Riproduzione negli animali d'allevamento (di Hafez & Hafez). Libreria Universitaria (ed) Bologna
 - o Notes and course handouts will be released by the teacher
 - o Sali G. Manuale di teriogenologia bovina. Essegi-Edagricole, Bologna.
 - o Elli M: Manuale fatto di riproduzione bovina. Giraldi Editore
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INTERACTION WITH STUDENTS

reception in study days / scheduled times.

- Skype and email contacts (at any time).

- Cellular service (at any time).

EXAMINATION SESSIONS (FORECAST)¹

The calendar is available online

SEMINARS BY EXTERNAL EXPERTS YES NO

EVALUATION BOARD

BONI RAFFAELE, GAMBACORTA Emilio, LANGELLA Emilia, Adriana C.L. DI TRANA, CECCHINI Stefano

¹ Subject to possible changes: check the web site of the Teacher or the Department/School for updates.