

ACADEMIC YEAR: 2016-2017

COURSE: **TECHNOLOGY FOR ANIMAL BREEDING**

TYPE OF EDUCATIONAL ACTIVITY: Characteristic

TEACHER: **Prof. Emilio GAMBACORTA**

e-mail: emilio.gambacorta@unibas.it

web:

phone : 0971 205073

mobile (optional): 320 4371144

Language: Italian

ECTS: 6 (5 Lectures + 1 practicals)	n. of hours: 56 (40h lesson and 16h tutorials/practice)	Campus: Potenza Dept./School: Scuola di Scienze Agrarie, Forestali, Alimentari ed Ambientali (SAFE) Program: L 25 Agricultural technology	Semester: I
--	---	--	-------------

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

The course will allow you to see the animal of zootechnical interest in the context of the production realities, after the acquisition of knowledge about the anatomical, physiological and genetic studies of the same. At the end of the course the student will highlight the knowledge on the factors involved in livestock enterprises, he will know the trend of the productive expressions and the change of the qualitative aspects of the products. Moreover, the student will have skills in the definition of the efficiency of the animal of zootechnical interest.

The main provided knowledges are:

- the importance of animal productions on the trade balance;
- knowledge of environmental factors of breeding and classification of livestock systems;
- morpho-functional characteristics of zootechnical animals in relation to their productive aptitudes;
- basic knowledge of galactopoiesis, lactogenesis and milk ejection;
- basic knowledge of miopoiesis;
- qualitative characteristics of milk and changes during lactation;
- knowledge of the concept of meat formation and its qualitative aspects

At the end of the course students will be able to:

- assess the aptitude or productive specialization of the animal of zootechnical interest;
- assess the aptitude to grazing of herbivores;
- assess the production efficiency for milk and meat;
- define the energy costs of production in the livestock production unit.

○

PRE-REQUIREMENTS

Is necessary to have acquired and assimilated the knowledge provided in the course of "Anatomy and Physiology of the domestic animals" and elementary concepts of "animal genetics".

SYLLABUS

The group is divided in 6 teaching blocks.

Block 1. (8h, lectures):

- importance of animal productions also in relation to the trade balance ;
- morpho-functional characteristics of genetic types of zootechnical interest and their distribution;
- methods for assessing the aptitude in zootechnical productions.

Block 2. (8h, lectures)

- lactogenesis and galactopoiesis, in relation to the genetic and environmental factors;
- milk ejection and milking systems;

-
- implementation of case studies.

Block 3. (8h, lectures)

- principles of miopoiesis and meat quality, in relation to the genetic and environmental factors;
- production chain of meat.

Block 4. (8h, lectures)

- basic elements about nutrition and feeding of animals in livestock production;
- rationing techniques;
- implementation of case studies.

Block 5. (8h, lectures)

- elements for reproductive efficiency definition;
- factors of efficiency variation of animals in breeding;
- breeding systems and characterizing factors;
- acquisition of knowledge on breeding technologies.

Block 6. (16h, Practical activity)

In the classroom: vision, description and consideration on Genetic Types covered during the course; implementation of case studies.

In the laboratory: chemical analysis of meat, milk and feed composition; physical analysis: color, drip loss, texture ecc.. There will be some in-depth seminars on specific topics and technical visits to livestock farms.

TEACHING METHODS

The course is based on 6 teaching blocks and it includes 40 h lectures and 16 h practical tutorials, concerning exercises in the classroom, laboratory and technical visits to livestock farms and food processing industries. There will be some in-depth seminars on specific topics.

EVALUATION METHODS

The assessment will be made through continued interaction with students during the lessons. The examination consists in an oral presentation and regards the various topics discussed and dealt with during the course.

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

ANTONGIOVANNI M., e GUALTIERI M., *Nutrizione e alimentazione animale*. Edagricole, Bologna, 1998.

BALASINI D., - *Zootecnica Speciale*. Edagricole, Bologna, 1990.

BRANDANO P., *ZOOTECNICA SPECIALE I*, http://www.uniss.it/dipartimenti/dip_zootecnica/

GRAU R., *Scienza della carne*. Edagricole, Bologna, 1984.

PARIGINI BINI R., *Le razze bovine*. Patron, Bologna, 1983

PARIGINI BINI R., SAMEDEA, DE MARCO A., *Zootecnica speciale dei bovini*, vol. I e II. Patron, Bologna, 1989

SUCCI G., *La vacca da latte*. Città Studi, Milano, 1993.

- o Dispense proposte dal Docente

<https://iaassassari.com/dispense/...agro-zootecniche/zootecnica-speciale-i-ruminanti/><https://www.google.it/>

INTERACTION WITH STUDENTS

At beginning of the course the lecturer will explain to students the pre-requirements needed, the educational goals, the expected learning outcomes, the course syllabus (structure/organization), the evaluation methods and the reference textbooks. Subsequently the students who will attend assiduously the course are asked for their surname, name, telephone number, registration number and E-mail. Simultaneously it is given indication that the teacher contacts are provided on the UNIBAS website.

The lecturer will be available to receive students on Monday and Wednesday (16.00-19.00) in his study and/or even in other days, preferably after an E-mail contact.



EXAMINATION SESSIONS (FORECAST)¹

*15/02/2017, 15/03/2017, 12/04/2017, 18/05/2017, 21/06/2017, 19/07/2017, 20/09/2017, 18/10/2017,
15/11/2017, 20/12/2017, 18/01/2018, 21/02/2018, 21/03/2018, 18/04/2018*

SEMINARS BY EXTERNAL EXPERTS SI NO

EVALUATION COMMITTEE

Prof. Emilio Gambacorta (President), Prof.ssa Annamaria Perna (member), Prof. Pierangelo Freschi (replacement member).

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