

COURSE: **ANIMAL BREEDING** SSD AGR/17

ACADEMIC YEAR: **2016/17**

TYPE OF EDUCATIONAL ACTIVITY: **CHARACTERIZING**

TEACHER: **RANDO Andrea**

e-mail: **andrea.rando@unibas.it**

website:

phone: **0039 0971 205025**

mobile (optional):

Language: **Italian**

ECTS: <b>8 CFU of Lessons</b> <b>1 CFU of Exercises</b>	n. of hours: <b>64 hours of Lessons</b> <b>16 hours of Exercises</b>	Campus: <b>Potenza</b> Dept./School: <b>Scuola di Scienze Agrarie, Forestali, Alimentari, ed Ambientali (SAFE)</b> Program: <b>Tecnologie Agrarie</b>	Semester: 1
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#### EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

Students will be acquainted with the biological bases of animal productions and analysis methods of their variability. This way, they will be able to identify strategies to be used for genetic improvement. At the end of the course, students will be aware of domestic animals, their taxonomy, productions and reproduction; biological bases of animal productions; environmental effects; animal productions in Italy and EU; breeders associations and their roles, the Italian system of functional controls; elements of population and quantitative genetics; criteria of selection, evaluation of sires and dams, selection schemes; the breeder equation; breeding and inbreeding.

#### PRE-REQUIREMENTS

Students must have acquired and assimilated the concepts on the structure of the cell provided by the course of "Botany" and the course "Anatomy and physiology of domestic animals" and on general genetics.

#### SYLLABUS

**BLOK 1 (8hours)** methods necessary to study the structure of animal populations with particular reference to density, structural traits and life-time statistics.

**BLOK 2 (8hours)** Herdbooks and their organization. Demography factors affecting animal breeding. Animal populations dynamics.

**BLOK 3 (16hours-exercises)** knowledge of morphology and productions of the different bovine, ovine, caprine and swine breeds.

**BLOK 4 (8hours)** traits under selection in different species.

**BLOK 5 (8hours)** introduction to quantitative genetics and methods to estimate the different components of the variance.

**BLOK 6 (8hours)** mating systems and their effect on animal populations.

**BLOK 7 (8hours)** different methods of selection and estimation of R.

**BLOK 8 (8hours)** examples of different selection methods in different species.

**BLOK 9 (8hours)** examples of different selection methods in different species.

#### TEACHING METHODS

The course is organized as follows:

- Theoretical lessons (64 ore);
- Classroom and Laboratory tutorials (16 ore)

#### EVALUATION METHODS

Oral examination.

#### TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

- Genetica Animale Applicata – Giulio Pagnacco – Casa editrice Ambrosiana.

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- Genetica e Genomica – Gianni Barcaccia e Mario Falcinelli – Liguori Editore.
  - Notes distributed by teacher
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#### INTERACTION WITH STUDENTS

Tutorial hours:

Tuesdays, Wednesdays and Thursday from 17.00 to 19.00; professor room.

In addition to weekly reception, the professor is available any time for a contact with students, by e-mail.

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#### EXAMINATION SESSIONS (PROVISIONAL)<sup>1</sup>

Febbraio 2017	16	Giugno 2017	15	Novembre 2017	16
Marzo 2017	16	Luglio 2017	20	Dicembre 2017	14
Aprile 2017	20	Settembre 2017	14	Gennaio 2018	18
Maggio 2017	18	Ottobre 2017	19	Febbraio 2018	15

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SEMINARS BY EXTERNAL EXPERTS    YES     NO

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#### FURTHER INFORMATION

Examination board: Chairman prof. ANDREA RANDO

Member prof. PAOLA DI GREGORIO

Substitute member prof. ADRIANA DI TRANA

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