

ACADEMIC YEAR: **2019-2020**

COURSE: **Buildings and rural planning**

TYPE OF EDUCATIONAL ACTIVITY: **Characteristic**

TEACHER: **Dott. Vincenzo De Luca**

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Language: **ITALIAN**

ECTS: n. 8 (n. 6 lessons and n. 2 tutorials/practice).	n. of hours: 80 (48 lessons and 32 tutorials/practice).	Campus: Potenza School: SAFE Program: LM 69 Science and Agricultural technology.	Semester: : II
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EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

The course deals with the basic elements of design and technical supervision of works concerning agro-industry constructions, buildings and infrastructure facilities for agriculture. The main objective of the course is to provide students with the basic knowledge needed for studying constructions, concerning strengthening structure, materials and relatives building technologies; for studying agricultural constructions, specifically architecture and functional aspects; for studying planning techniques specific for agricultural zone.

The main knowledge provided will be:

- *basics of construction science;*
- *basics of construction technique;*
- *technology of construction materials;*
- *criteria of structural design, functional and architectural design, specific for agricultural constructions.*

The main skills, ability to apply the learned knowledge, will be:

- *to solve basic problems of construction science and construction technique;*
- *acquisition of skills on construction materials: r.c., p.r.c., steel, wood, masonry;*
- *acquisition of skills on building types specifically addressed to agriculture;*
- *acquisition of skills on planning techniques for agricultural areas;*
- *acquisition of skills on design and supervision of works concerning agro-industry constructions, buildings and infrastructure facilities for agriculture;*
- *to develop communication and interpersonal skills, in a professional background with interlocutors more or less specialists, during the course, through exercises conducted on practical cases, on the proposed solutions.*

PRE-REQUIREMENTS

The student must have acquired the following basic knowledge:

- *mathematics: algebra and analysis;*
- *geometry;*
- *chemistry;*
- *physics.*

SYLLABUS

Basics of construction science. Statics of beams. Characteristics of the stress of beams. Trusses. Building materials: r.c., p.r.c., steel, wood, masonry. Dimensioning of load-bearing elements: r.c., p.r.c., steel, wood and masonry. Structural types. Foundations, elevated structures, floors, roofs, plates and shells. Agricultural buildings, buildings and structures for agricultural infrastructure. Technical planning for agricultural areas.

ECTS 1 (lectures)

Basics of construction science. Statics of beams.

ECTS 2 (lectures)

Characteristics of the stress of beams. Trusses.

ECTS 3 (lectures)

Building materials: r.c., p.r.c., steel, wood, masonry.

ECTS 4 (lectures)

Dimensioning of load-bearing elements: r.c., steel, p.r.c., wood and masonry.

ECTS 5 (lectures)

Structural types. Foundations, elevated structures, floors, roofs, plates and shells.

ECTS 6 (lectures)

Agricultural buildings, buildings and structures for agricultural infrastructure. Technical planning for agricultural areas.

ECTS 7 (exercises)

Exercises on construction science .statics of beams.

ECTS 8 (exercises)

Design of an agricultural building, graphical and written reports.

TEACHING METHODS

The course includes 80 hours of teaching with lessons and exercises. In particular it is provided 48 hours of lesson in classroom and 32 hours of exercise in classroom.

The course is organized as follows:

- o lectures on all subjects of the course (48 hours);
- o guided numerical exercises (32 hours);
- o individual exercise, assigned to each student, on a practical application of a geologist, accompanied by bibliographical research, graphical and written report (to be carried out during the hours of individual study of student, with review by the teacher during the hours of reception).

EVALUATION METHODS

The aim of the examination is to test the level of achievement of the previously mentioned educational goals.

The examination will take place in a unique moment, at the same day, and consists of:

- o an oral test in which the ability to link and compare different aspects, covered during the course and with the practical exercise, individually assigned to the student, will be evaluated.

The student passes the exam if achieves a mark of not less than 18/30.

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

Notes provided by the teacher during the course.

Text / reference:

- o Notes provided by the teacher
- o E. Viola. Esercitazioni di scienza delle costruzioni. Pitagora.
- o P. Foraboschi, Elementi di tecnica delle costruzioni - Progetto di massima delle strutture civili, Mac Graw Hill.
- o F. Iacobelli. Progetto e verifica delle costruzioni in muratura in zona sismica. EPC Libri.
- o A.A.V.V.. Manuale di progettazione edilizia. Hoepli

Specific topics may also be focused on texts suggested by the teacher, from time to time, during the course.

INTERACTION WITH STUDENTS

During the course, after describing the objectives, program and methods of verification, the teacher during the course will provide students the educational material.

Office hours: Wednesdays from 9:30 to 13:30 at the study of the teacher and Thursdays from 11:30 to 13:30 am at the study of the teacher.

In addition to weekly reception, the teacher is available at all times for a contact with the students, through his e-mail or phone vincenzo.deluca@unibas.it, phone 0971205438, mobile 3204371027.

EXAMINATION SESSIONS (FORECAST)¹

15/01/2020, 19/02/2020, 18/03/2020, 15/04/2020, 20/05/2020, 17/06/2020, 15/07/2020, 16/09/2020, 21/10/2020, 18/11/2020, 09/12/2020.

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



**SCUOLA DI SCIENZE
AGRARIE, FORESTALI,
ALIMENTARI
ED AMBIENTALI**

SEMINARS BY EXTERNAL EXPERTS NO

FURTHER INFORMATION
