



ACADEMIC YEAR: 2018-2019

COURSE: SURVEY, MAPPING AND GEOGRAPHIC INFORMATION SYSTEMS

TYPE OF EDUCATIONAL ACTIVITY: Basic course

TEACHER: CARLO MANERA

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Phone: 0971 205405

Language: Italian

ECTS: (lessons /
tutorials/practice): 6

n. of hours:
38 hours of theory
lessons
18 hours of practice

Campus: Potenza
School: SAFE
Program: LT agricultural technology

Semester: II

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

The course provides the students with the fundamental knowledge of land surveying techniques and its representation, from metric to thematic, by means of cartographic support, and with the fundamental contents of GIS and its related applications for a new agricultural and forest land governance.

PREREQUIREMENTS

A solid background in mathematical analysis and geometry.

SYLLABUS

Lessons

Geodetic and topographical field. Measuring tools: level, theodolite, total station, G.P.S. Checks and adjustments. Survey and representation of rural buildings. Planimetric surveys: triangulations, intersections, open and closed traverse, altimeter surveys, measurements of the areas. Cartographic representations. The accuracy of data on cartographic media. Italian official cartography thematic maps. Digital mapping. Components of a GIS: procedures, types, attribute tables; metadata; spatial analysis. Applications.

Practices

Use of surveying instruments (squares, levels, total station) and reading topographic maps.

TEACHING METHODS

38 hours of theory lessons 18 hours of laboratory and field practices. During practices students will be asked execution of a planimetric survey detail and relative graphic restitution; survey and compensation of a closed traverse.

EVALUATION METHODS

Oral examination at the end of the course.

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

- Teaching material distributed in classroom
 - G. Bezoari, C. Monti, A. Selvini, Fondamenti di rilevamento generale – Topografia e Cartografia – vol. I, Hoepli, Milano 1989
 - Biasini, Galetto, Mussio, Rigamonti. La cartografia e i sistemi informativi per il governo del territorio. Franco Angeli Editore
 - Poletti. GIS metodi e strumenti per un nuovo governo della città e del territorio. Maggioli Editore

 - L. Biagi (2009): I Fondamentali del GPS, download gratuito dal sito <http://geomatica.com.polimi.it/fondamentaligps/>
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INTERACTIONS WITH STUDENTS

- office hours for consultation at the Professor office at planned days/hours
 - email, skype
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PLANNED EXAMINATION SESSIONS

Calendar online:

<https://unibas.esse3.cineca.it/Home.do>

Usually the third Wednesday of each month (except August)

EVALUATION BOARD

Carlo Manera
Pietro Picuno
Carlo Sivolella
Donato Castronuovo

SEMINARS BY EXTERNAL EXPERTS YES
