
COURSE: SISTEMI DI ELABORAZIONE DEI DATI TERRITORIALI SSD ING-INF/05

ACADEMIC YEAR: 2019/2020

TYPE OF EDUCATIONAL ACTIVITY: Basic

TEACHER: GABRIELE NOLE'

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mobile (optional):

Language: Italian

ECTS: 6 (6 lessons,
(4 of lesson and
2 of exercises /
laboratory)n. of hours: 56
(32 of lesson and 24 of
exercises / laboratory)Campus: **Potenza**
Dept./School: **Dipartimento di
Scienze**Semester:
from
01 Oct. 2019 to 20 Jan. 2020

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

- *The course will provide the fundamental principles of GIS and Open Data.*
 - *More particularly, the course provides to the students the useful notions to analyze the main characteristics of a geographical area using GIS technologies, highlighting the critical issues.*
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PRE-REQUIREMENTS

- Basic computer knowledge
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SYLLABUS

1. Principles of cartography, EPSG codes and Introduction to Geographic Information Systems
 2. Google earth: editing, search paths, navigation
 3. Introduction to QuantumGIS
 4. The vector and raster data (symbolology, properties, editing)
 5. Online Converters of geographic data
 6. Integration of data: QuantumGIS and Google earth
 7. Geographic data and WEB: Geoportale Nazionale, RSDI
 8. The system of Plugins in Quantum GIS: research, installation and use of some plugins
 9. Metadata and Interoperability
 10. Managing a CAD file, extraction of contour lines
 11. Digital Terrain Analysis
 12. Notes on the use of app for geoinformation
 13. Hydrological analysis
 14. Layout
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TEACHING METHODS

The course includes many hours of reading on the theoretical aspects, and many hours of training on geographic information systems and applications of Land Suitability analysis.

EVALUATION METHODS

Oral examination, Discussion of a project work

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

- *Beniamino Murgante, L'informazione geografica a supporto della pianificazione territoriale, FrancoAngeli*
 - *Laurini R. Thompson D. Fundamentals of Spatial Information Systems ISBN-13: 978-0124383807 ISBN-10: 0124383807*
 - *David W. Rhind e Michael Frank Goodchild, Geographic Information Systems and Science*
 - <http://www.ggistutorials.com/it/index.html#>
 - <https://www.youtube.com/playlist?list=PLc5INoe6kboYIX4vz4Zciw2hZSb7rdL17>
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The main educational resources are shared in website

INTERACTION WITH STUDENTS

Theoretical lectures and exercises.

EXAMINATION SESSIONS (FORECAST)¹

7 February 2020, 21 February 2020, 17 April 2020, 15 May 2020, 12 June 2020, 19 June 2020, 03 July 2020, 17 July 2020,
18 September 2020, 02 October 2020, 30 October 2020, 20 November 2020, 11 December 2020

SEMINARS BY EXTERNAL EXPERTS YES NO

FURTHER INFORMATION

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