Università degli Studi della Basilicata
Scuola di Ingegneria

COURSE: **Basics of Roads, Railways and Airports**

TEACHER: **Michele Agostinacchio**

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Language: **Italian**

ECTS: **9**	n. of hours: **90**	Academic year: **2014-15**	Campus: **Potenza**	Semester: **I**

TOPICS

Road Networks, visibility distances, planimetrical development of the road axis, profile of the road axis, cross section design, speed diagrams, road intersections. Rail infrastructure. Overview of airport infrastructure.

TEACHING METHODS

[X] Theoretical lessons
[ ] Tutorials in classroom
[ ] Tutorials in laboratory
[X] Project works
[X] Technical visits
Other activities (please specify)

TEXTBOOKS

Agostinacchio M., Ciampa D., Olita S., "*Strade Ferrovie Aeroporti*" III Edizione, EPC Srl, Roma.
Agostinacchio M., Ciampa D., Olita S., "*La Progettazione delle Strade*" II edizione, EPC Libri, Roma.
Ferrari P., Giannini F., "*Ingegneria Stradale*" Vol. 1, ISEDI.
Tesoriere G., "*Strade Ferrovie Aeroporti*", Vol. 1, UTET.

ON-LINE EDUCATIONAL MATERIAL

web address:

LEARNING OUTCOMES

Acquisition of the theories and techniques addressed in the planning, design, and adjustment, of road rail and airport infrastructures, into a functional relationship to the human factor and road safety.

REQUIREMENTS

None.

EVALUATION METHODS

[ ] Intermediate verifications
[ ] Written examination
[X] Discussion of a project work
[ ] Practical test
[X] Oral examination
Other methods (please specify)

DETAILED CONTENT

The road transport. The road network and the traffic categories. The vehicle and the road. Visibility distances. Planimetrical development of the road axis: straights, circular curves, clothoid. Profile of the road axis: vertical dip and bump. Speeds diagram and plano-altimetric coordination. Road cross section. Mountain roads. Road intersections. Overview of road circulation in condition of continuous flow. Road section design. Overview on the road waiting phenomena and applications to the road design. Drafting of the road project. The motion resistances of railway vehicles. The gauge of the track. The curve motion dynamic and the superelevation of the outer rail. The parabolic curves. Plants for the railway movement. High speed. Elements for the airports design.

SEMINARS BY EXTERNAL EXPERTS YES [ ] NO [X]

FURTHER INFORMATION

The didactic organization provides for 90 total hours. The certificate of attendance of didactic activities is ex-officio satisfied at the end of the semester in which they are located.