Università degli Studi della Basilicata
Scuola di Ingegneria

COURSE: TECNIQUE OF ROAD RAILWAY AND AIRPORT WORKS			
ACADEMIC YEAR: 2016-2017			
TYPE OF EDUCATIONAL ACTIVITY: Characterizing			
TEACHER: Prof. Maurizio Diomedi			
e-mail: maurizio.diomedi@unibas.it		website:	
phone: +39 0971 205182		mobile (optional):	
Language: Italian			
ECTS: 9	n. of hours: 81	Campus: Potenza School of Engineering: Program: Master degree in Civil Engineering	Semester: 1th

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

Acquisition of the theories and techniques aimed at the design, construction and management of parking areas, road and railway tunnels, cycle tracks and all additional works such as the necessary road signs; acquisition of tools aimed at the planning and management of the maintenance of road infrastructure.

The main knowledge provided are:

- Standards for the design and realization of horizontal and vertical road signs;
- Road safety basics;
- Rules and techniques of traffic moderators design and pedestrian crossings;
- Elements of the flush design and multi-storey car parks and their insertion in the urban road network;
- Statement of the design and construction of bicycle paths;
- Works for the disposal of water from the road surface;
- Design and construction of a freight village;
- The road and rail tunnels: preliminary investigations, project phases, excavation and construction techniques;
- The planning of road maintenance;
- The underground and overground: construction techniques
- The conduct of public works.

The main skills trasferred are:

- The ability to design any type of parking, road signs, bicycle paths, disposal works of the waters from the road;
- Knowledge of all design and construction techniques to ensure road safety;
- Knowledge of design techniques and construction phase of the excavation of road and rail tunnels;
- The planning of road maintenance.

PRE-REQUIREMENTS

It is suggested to pass previously the exam of "*Basics of Roads, Railways and Airports*"

SYLLABUS

Classification of urban roads: organization of the road section in urban areas respect to Italian Standards; the design and construction of vertical and horizontal signals; Road safety passive and active; accident analysis;

The weak users and moderators of traffic; Design and construction of pedestrian crossings; Design of both one level and multi-level car parking; type of parking, design elements and insertion of parking in urban road network; technological systems in parking; design and construction of cycle paths; design and dimensioning of structures for road infrastructures water disposal; realization of different bridge joints; design and construction of a freight village; road and rail tunnels: preliminary investigations, project phases, excavation and construction techniques, technological systems of lighting and ventilation; street lighting; planning of road maintenance; Airport and railway maintenance; The metros: the metropolitan transport system in high-density areas, the civil works for underground and overground, construction techniques; The conduct of public works.

TEACHING METHODS

The course consists of 81 hours in total and includes in addition to theoretical lessons two design exercises: one of a multi-storey car park connected to the city streets and one of a bicycle lane trunk. These exercises will be developed in groups of two students.

EVALUATION METHODS

Oral examination to ascertain the knowledge and skills gained by the student. The questions are designed to test knowledge and understanding of the topics studied. The positive evaluation of guided exercises, developed during the course, constitutes a necessary condition for access the oral exam. The overall evaluation considers both the level achieved in exercises both in the oral test.

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

Course notes in PDF format provided by the professor

INTERACTION WITH STUDENTS

At the beginning of the course the teacher describes the objectives, program and methods of verification and simultaneously collects the list of students, who intend to enroll in the course, together with name, serial number and email.

During the course the teacher will provide the students teaching materials.

Prof. Diomedi receives students at his office on the 4th floor of the School of Engineering (Potenza, Campus Macchia Romana) on Wednesday at 11: 00 - 13: 00.

The Professor is always through his e-mail, and soon after each lesson.

EXAMINATION SESSIONS (FORECAST)[1]

15/02/2017, 15/03/2017, 26/04/2017, 17/05/2017, 21/06/2017, 19/07/2017, 20/09/2017, 18/10/2017, 15/11/2017, 13/12/2017

SEMINARS BY EXTERNAL EXPERTS YES □ NO □**X**

FURTHER INFORMATION

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