

ROADS, EARTHWORKS AND VERTICAL SYSTEMATIZATION (Specialization LANDSCAPING, 4th Year of study, 2th Semester)

Credit value (ECTS): 2

Specialized discipline (mandatory)

Course holder:

Assist. dr. arch. Grecu Codrina

Discipline objectives (course and practical works)

- Students to use correctly the technical notions but also the theoretical concepts in the field of roads and earthworks
- Students to develop their ability to analyze and make decisions when designing landscape projects that include the proper use of the notions of roads, terraces and vertical systematization;
- Students will be able to design landscaping arrangements through technical drawing and computer-assisted drawing, using knowledge in the field of roads, earthworks and vertical systematization.

Contents (syllabus)

Course (chapters/subchapters)
1. Roads. Defining and making roads. Classifications. Road material. Foundation structures. Use of local resources.
2. Notions of road traffic. Study and design of routes. Level crossings and uneven. Geometric elements in road construction.
3. Bituminous road coatings. Types of asphalt mixtures. Properties, preparation and commissioning of asphalt mixtures. Light and heavy bituminous garments. Special clothing.
4. Rigid road clothes. Concrete road concrete. Implementation, treatment and protection of road cement concretes. Special rigid road clothing.
5. Provisional roads. Accessories works. Road quality control.
6. Excavation. General notions. The earth for the execution of earthworks. Characteristic types of transverse profiles.
7. Ensuring stability of earthworks. Hydrothermal regime of road earthworks.
8. Execution of earthworks under normal and special conditions.
9. Earthworks: excavations, earth fillings, supports walls.
10. Notions of vertical systematization of land in landscaping.

Practical works
1. Analysis of a project of landscaping, in which elements of roads, earthworks and vertical systematization appear.
2. Analysis and drawing of a landscaping project of a sloping land, individual garden, indicating in the plan and section the vertical systematization of the land but also the section profile of the access road. Requests: An A2-shaped board, comprising a site plan indicating the level shares of each platform created sc.1: 100, a section through the land along the slope and through the access road profile, sc. 1: 100, with indications on the plan and section regarding the functions, objects or material used, layers, infrastructure or built elements of the arrangement.

Bibliography

1. ANGELESCU M., 1996 - *Rețele edilitare urbane*, EDP, Bucure ti;
2. Dimache A, M nescu M., 2006 - *Rețele edilitare*, Ed. Matrix Rom, Bucure ti
3. Dorobanțu S. i colab., 1989 – *Drumuri. Calcul și proiectare*, Editura Tehnic , Bucure ti;
4. Giurconiu M. i colab., 2002 – *Construcții i rețele hidroedilitare*, Editura De Vest, Timi oara;
5. Lucaci Ghe., Costescu I., Blec F., 2000 – *Construcția drumurilor*, Editura Tehnic , Bucure ti;
6. Mateescu T., 1985 - *Lucrări tehnico edilitare*, Editura Gheorghe Asachi, Ia i;
7. Mateescu T., Burlacu A., 2012 - *Amenajari și sisteme de utilități urbane*, Ed. Matrix Rom, Bucure ti;
8. Moroldo D., 1999 - *Iluminatul urban. Aspecte fundamentale, soluții și calculul sistemelor de iluminat*, Ed. Matrix Rom, Bucure ti
9. erb noiu I., Antohe E., 1993 – *Management în construcții*, vol. 2 Studiul i proiectarea procesului de construcție, Universitatea Tehnica „Gh. Asachi” Ia i;
10. ***Colecția „Reglement ri tehnice pentru proiectarea i execuția lucr rilor de construcții”, Editura Matrix Rom Bucure ti, 2006;
11. *** Standarde i normative cu caracter obligatoriu, experimental i de recomandare.

Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Course	Exam	40%
	Course presence	10%
Practical works	Project	20%
	Practical works presence	20%

Contact

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