

TEACHING DISCIPLINE: Topography and Cadastre (Specialization Horticulture, Ith Year of study, IIth Semester)

Credit value (ECTS): 5

Course category: mandatory

Course holder: Lecturer Ph. D. Oprea RADU

Discipline objectives (course and practical works)

The course aims at acquiring knowledge regarding the instruments and methods used in topographic surveys, methods of calculation, editing and use of topographic-cadastral maps and plans. The second part presents the basic notions, the component parts and the way of introducing the cadastre.

During practical and project works, the students will learn how the instruments used in planimetric, levelling and tachymetric surveys work; they will go through the methods used for the calculation of surfaces, for carrying out topographic-cadastral maps, as well as cadastral numbering by territorial units.

Contents (syllabus)

Course (chapters/subchapters)
Topography
1. General notions: the object and the component parts of topography; the importance of topography for agriculture; units of measurement used in topography; topographic elements of the land; angular and linear elements measured on the land; basic topographic calculations; trigonometric circle and topographic circle; coordinate systems and axes; numerical and graphical topographic scales.
2. Planimetrics: marking topographic points; signalling topographic points; distance measuring equipment on the direct route; angle measuring equipment; horizontal angle measurement; vertical angle measurement; planimetric surveys through traversing; planimetric surveys through radial traversing; surface calculation; carrying out topographical plans.
3. Levelling: general notions; types of levelling; levelling support networks; geometric levelling; geometric levelling surveys using the traversing method; relief representation on maps and plans; slope.
4. Tachymetry: general notions; classic tachymeters; self-reducing tachymeters; electronic tachymeters; carrying out the digital topographic plan.
Cadastre
5. General notions: definition, goal and objectives; classification of Romanian Land Fund; right of ownership; property forms.
6. Cadastre component parts: technical cadaster; economical cadaster; juridical cadaster.

Practical works
Alignments and direct distance measurement
Angle measuring instruments
Optical angle and distance measuring
Geometric levelling instruments and levelling surveys
Topographical maps and plans
Project works
Tachymetric surveys using the radial traversing method
Relating the points from the support and elevation network
Tracing contour lines on the topographic plan
Cadastral numbering of sectors, real estates and plots
Area calculation: of sectors, real estates and plots
Preparation of technical documents of the cadastre

Bibliography

1. Leu I. N., Budiu V., Moca V., Ritt C., Ciolac Valeria, Ciotlu Ana, Negoescu I., 2003 - *Topografie generală și aplicată – Cadastru*. Editura Universul, București.
2. Moca V., Radu O., Huanu Cr., 2016 - *Topografie și desen tehnic*. Editura „Ion Ionescu de la Brad” Iași.
3. Osaci-Costache Gabriela, 2008 - *Topografie-cartografie*. Editura Universitară, București.
4. Radu O., 2015 – *Cadastru și cartea funciară*. Editura „Ion Ionescu de la Brad”, Iași.
5. ****Anexa la Ordinul nr. 979/05.08.2016 - Specificații tehnice de realizare a lucrărilor sistematice de cadastru pe sectoare cadastrale în vederea înscrierii imobilelor în cartea funciară finanțate de Agenția Națională de Cadastru și Publicitate Imobiliară.*
6. ****Legea Cadastrului și a Publicității Imobiliare nr.7/1996*, din 13 martie 1996, republicat în Monitorul Oficial al României, Partea I, Nr. 720 din 24 septembrie 2015, cu amendamentul din 30 iunie 2016, București.

Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Exam	Written	60
	Presence	10
	Tests	10
	Practice application	20
Project	Correctness of the project preparation	60
	Presence	10
	Tests	30

Contact

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