Study program: Geoinformation Technologies

Qualification: PhD

General Information	
University	Armenian National Agrarian University (ANAU)
Course title	**Land Management Technologies**
The responsible lecturer	Professor Gurgen Yeghiazaryan yeghiazaryangurgen@gmail.com Associate Professor Nane Khudaverdyan naneharmeni@gmail.com
Course type	Elective
Course Goal	Technologies Study of the RA land fund, classify it by categories, types of lands, and subjects of ownership. Carrying out land accounting: measurement and registration.
Prerequisites and co-requisites (if applicable):	Higher geodesy and digital technologies

Duration and ECTS Credits	**In credits (ECTS)**	**In hours**	**Semester**
	5	150 (40 auditorium + 110 individual)	Fall

Learning Outcomes	After completing this course, the students should be able to: - present the RA land fund, land using zones, their spatial areas, - classify of land fund by categories, types of land, operational significance and property subjects, - transform land types, carry out demarcation, delimitation and allocate land according to purpose, - implement an allocation of infrastructure, based on the professional directions of agricultural production and project linear and spatial structures from the condition of efficient land use organization,

		• carry out economic assessment of land use, determine the cost of agricultural production as a result of land organization, bring out profitability and repayment terms of capital investments.
Syllabus (List of lessons)	**Module 1**	**Land resources of RA and zonal peculiarities of their location**
		Analysis of the land resources of the republic Description of land use zones Description of land use zones
	Module 2	**Organization of targeted land use, their classification according to operational significance**
		Classification of land fund by purpose Land organization according to functional significance Detection of land change based on spatial analysis of land
	Assignment #1	Everyone will submit a report on land use statistics by location features
	Module 3	**Organization of land types (arable lands, perennial plantations, grasslands, pastures and other lands)**
		Methods of organizing arable lands Analysis of actual land use management indicators Development of measures to increase the efficiency of arable land use
	Assignment #2	Organize arable lands, perennial plantations, grasslands, pastures and other lands
	Module 4	**Placement of production infrastructures, organization of linear-spatial structures**
		Allocation of infrastructure in land management projects Comparison of linear structures in land management projects Development of optimal land use efficiency schemes
	Assignment #3	Submit a report on optimal infrastructure allocation schemes
	Module 5	**Land use efficiency assessment**

		Study of land use efficiency indicators
		Influence of geometric parameters on land use efficiency
		The Impact of Land Management on Land Use Efficiency
	Assignment #5	Develop a business plan for efficient land use using the example of a farm
Short description	Study the administrative-territorial units of the Republic of Armenia. Account for the land fund. Allocate the land fund according to the purpose. Organize land transformation and land use according to the production branches of the economy.	
Recommended textbooks and links (in order of relevance):	**Required text and materials** Metanjyan, VA and Babayan, HA, (1987), In the practice of topography on the basis of geodesy /textbook, first part/. Yerevan University Press, Yerevan, p. 72. Sayadyan, H.Y. (2005) Methodical instructions for studying the subject "Modeling-optimization of forestry processes" and conducting practical trainings. Publishing House of the Armenian Agricultural Academy. Yerevan, page 25. Aerospace methods in nature conservation and forestry. Collegium of authors: Managing editors: Sukhikh, N.I. Sinitsyn, S.G. - M.: "Forest industry", 1979.-287 p. Sokolov, O.V. (1972), Classification of forest maps, Proceedings of НИИГАиК, vol. 27. Tsvetkov, M.A. (1950), Forest maps and methods of their compilation, M.-L. Bettinger, P. & Michael G. Wing., Geographic Information Systems: Applications in Forestry and Natural Resources Management. McGrawHill Higher Education Publication. NY, USA. p.230. Dykstra, D.P., (1997), Information Systems in forestry. Unasylva 189, Vol.48, 10-15p. Steven Franklin, E., Remote sensing for sustainable forest management. Lewis publishers. 2001. p. 407.	

	Thuresson, T., Drakenberg, B., Ter-Ghazaryan, K., (1999), A sample based forest resource assessment of the forests possible for exploitation in Armenia. Report for the Ministry of Nature Protection of Republic of Armenia.
	Links for the assessments and learning http://rst.gsfc.nasa.gov/start.html http://www.vtt.fi/tte/research/tte1/tte14/virtual http://www.esri.com http://www.dataplus.ru
Assessment methods and criteria	Final exam with 100% and 20-point grade. To successfully complete this course, students must achieve a passing grade of 50% or higher on the overall course and on the mandatory final project (individual work). Under final project students should develop a research proposal. **Evaluation factors (%) and their actual score on a 100-point scale**

№	**Factor:**	**%**
1	Attendance	15
2	Individual work	40
3	Final exam	45

Course evaluation scale according to the ECTS evaluation system

Evaluation	Accumulated points (%)	ECTS/ATC Grade	20 point scale	ANAU Grade
Pass	90-100	A	18-20	5
	80-89	B	16-17	4
	70-79	C	14-15	4
	60-69	D	11-13	3
	50-59	E	8-10	3
Fail	0-49	F/FX*	0-7	2