

## Course description

### Tempus project EcoBRU

Course name
<b>Ecological Land Use of Agricultural Lands</b>

Expected lecturer qualifications
Teachers of colleges, training specialists in land management and cadastre

Lecturer	Educational institution
<b>Course Director: associate professor Boris V. Seleznev</b>  <b>Other team members: associate professor Eugenia I. Baranova</b>	Federal State Budget Educational Institution of Higher Education "Siberian State University of Geosystems and Technologies"

Deficit definition
Insufficient level of ecological competences of those college graduates, whose professional activity involves operations with land resources

Required space in the training	Course level	Course type
Obtaining professional competences	basic	distant

Target group	Duration	Languages
Teachers of colleges and other professional educational institutions	30 hours	Russian

Conditions
<b>Conditions:</b> software and technical support for distance education  <b>Other requirements (if applicable)</b>

Ladder Points (1 un.=30 h)	Total hours	Class work	Independent work (h)
0,5	15		15

Topicality for EcoBRU**
Special vocational scientific education: importance of land resources as non-renewable means of production; main environmental problems of land use, organisation of rational land use.
The specific link with the professional activity: carrying out intraeconomic land management works taking into account



principles of ecological land use.

### Course objectives

- to expand competences in understanding of the importance of land resources as not renewable means of production;
- to understand and know the processes and the phenomena leading to degradation of agricultural lands;
- to apply the principles of intraeconomic land management for ensuring ecological land use on the basis of existing standards, norms and rules when carrying out actions for land fertility reproduction within a separate landowning.

	<b>Educational objectives of the course (see list of verbs used for educational objectives formulating)</b>	<b>Methods and forms of educational process organization</b>	<b>Monitoring forms and evaluation</b>
<b>Special knowledge</b>	To represent historical experience of agriculture and the role of natural factors in the region of future professional activity	Self-study of theoretical material with off-line consultations of the teacher	Over-all ranking (testing)
<b>Methodological and didactic competence</b>	To differentiate the land use problems leading to decrease in soil fertility within the district, region, or municipality where land tenure is located	Checking tasks for fixing of theoretical material	Over-all ranking (checking of tasks)
<b>Interdisciplinary competence, social competence</b>	To apply the principles of ecological land use on the particular land plots, as basis for preservation of regional land resources	The course work "The organization of rational land use on the land plot"	Over-all ranking (estimation of obtained results of course work, following control points)

<b>Themes / Content</b>	<b>Class work</b>	<b>Hours and tasks for independent work</b>
Land management as a system of actions aiming the regulation of land relations / Historical background and experience of agriculture. Ecological and legal organization of rational land use. Preservation and improvement of natural landscapes. Activities for restoration and increase of fertility of soils.		Studying of theoretical material (electronic methodical manuals). (2 hours)
Basic principles of intraeconomic land management / Priority of the solution of nature protection tasks. Maximum accounting of ecologic and economic properties of the territory. An integrated approach to the organization of the territory.		Studying of theoretical material (electronic methodical manuals). (2 hours)
Basic environmental problems of land use / Processes and the phenomena reducing fertility of soils. Non-prevented natural processes (earthquakes, landslide processes, floodings and bogging). Natural processes which can be prevented (destruction of coast of the rivers, etc.). Natural processes caused by irrational economic activity (washout of soils caused by superficial drain, salinization due to excess watering, sand drift of soils, etc.). The negative phenomena connected with economic activity (pollution of soils, the undue use of fertilizers and pesticides, consolidation of soils agricultural tools and by cars,		Sampling of soils and definition of physical and chemical characteristics of soils of the land plot for detailed course work



an intensive pasture of cattle, etc.)		
Definition and meaning of land inspection and protection / Production control. Activities for protection of lands: preservation of soils and their fertility, integrated indicators of quality of the land plots on fertility, technological properties, location. Taking into consideration local natural factors at an assessment of fertility of soils.		Course work "The organization of rational land use on a land site" (6 hours)

Forms of control and assessment			
Control form	Percentage ratio	Dates	Criteria of assessment
Over-all ranking	75		
Course work	25		

Terms and conditions of access to monitoring and assessment of knowledge (exam)
Carrying out of tests and course work

Document type certifying the successful course visiting (Certificate?)
Certificate

Organizational guidelines
<p><b>Place:</b> Siberian State University of Geosystems and Technologies, work place of the teacher</p> <p><b>The recommended number of participants:</b> 10-15</p>

Literature and educational materials				
Author	Year of publishing	Title	Pages number	Place of publication, publisher or an online link
<b>Basic literature</b>				
Petrova N.N.	2011	Land Use: manual	216	Moscow: Academia
Shilov I.A.	2013	Ecology: textbook	512	Moscow: Yuright
<b>Additional resources</b>				

Sincerely yours,

Igor A. Musikhin

Vice Rector for International Affairs

