## Studying course: Forestry and Natural Resource Management

Subject: Agroforestry systems

Professor/professors: <u>Lukić S. Sara; Beloica R. Jelena; Nikolić Jokanović M. Vesna;</u> <u>Miljković M. Predrag</u>

## Status of the subject: elective

**ECTS: 5** 

# Condition: -

## Goal of the subject:

The main objective of this course is to enable students to acquire knowledge about agroforestry land use systems where forests develop in communities with agricultural production in a specific spatial distribution based on the principles of ecological and economic interactions between components: forests and agricultural crops and/or animals in system.

## **Result of the subject:**

Full ability to apply knowledge in this field in practice, as well as preparation for doctoral studies.

# **Content of the subject**

## Theoretical part:

The role and significance of the agroforestry systems as sustainable land use in land management; Agroforestry systems (Level I) (different combinations of land use patterns in agriculture and forest (forest plantations)); Spatial and temporal components of agroforestry; Social and economic aspects; Ecological basics of agroforestry; Land degradation processes and agroforestry systems; Modeling and development of agroforestry systems. Agroforestry regional and national policies. Agroforestry future strategies.

## Practical part:

Processes of soil degradation and agroforestry systems and practices (all types of protective forest belts – field shelterbelts belts, farm shelterbelts, shelterbelts for snow and noise control, biomass plantation, medicinal plants plantation, fish farming, bee-keeping, livestock shelterbelts etc.); the application of certain agroforestry systems and practices in the given conditions through exercises. Modeling and development of agroforestry systems. Application of information technology and GIS in agroforestry.

## **References:**

Young., A. (1991): Agroforestry for soil conservation, CAB International, International Council for Research in Agroforestry

Nair P.K.R. (1993): An Introduction to Agroforestry. Kluwer Academic Publishers, ICRAF

Schnabel, S., Ferreira, A. (2004): *Sustainability of Agrosilvopastoral Systems* – Dehesas, Montados-, A Cooperating Series of the International Union of Soil Science (IUSS)

Riguero-Rodriguez A., McAdam J., Mosquera-Losada M.R. (2009): *Agroforestry in Europe*. Current State and Future Prospects. Advances in Agroforestry. Springer

Number of active teaching lessons:	Theoretical part of teaching:	Practical part of teaching:

## Methods of giving lectures:

Lectures with introduction to the literature from this discipline. Practical knowledge and skills for planning and application of appropriate agroforestry systems and practices in order to achieve ecological and economic benefits. Through the preparation of seminar papers, students should demonstrate a personal initiative in solving the problem of the application of the agroforestry practices.

Knowledge evaluation (max 100 points)				
Before exam obligations:	points	Final exam:	points	
Activity during lectures	10	писмени испит		
Activity during practicals	20	усмени испит	45	
Seminary				
Writing test	25			