COURSE OUTLINE

1. GENERAL

SCHOOL	School of Technology		
DEPARTMENT	Department of Forestry, Wood Sciences and Design (Karditsa)		
LEVEL	*Undergraduate*		
CODE	KM511	**STUDENT SEMESTER**	5th
COURSE TITLE	Forest Ecosystems Management		

ACTIVITIES	**WEEKLY HRS**	**ECTS**
Lectures and Workshops	2	
Exercise	1	
TOTAL	**3**	**5**

TYPE OF COURSE	Generic knowledge and Skills Development
PREREQUISITES:	None
LANGUAGE TEACHING AND EXAMINATION:	Greek or English
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes
WEBPAGES COURSE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course aims to make the student aware of the concepts related to the management of forests and forest areas, but also issues related to the planning and organization of forestry factors and especially the space and time of class.

At the end of the course the students will be able to:

- Describe the principles of the various timber-producing forest management systems.
- Recognize the concept of the even-aged and uneven-aged forest.
- Determine the maturity of the forest clusters and their rotational time.
- Choose appropriate methods for the management of forest ecosystems.
- Implement approved forest ecosystem management plans.

General Skills

The course of Forest Management aims at developing the personal ability of students for independent work through the collection of material related to the scientific issue that concerns them, the methodology of problem solving and the elaboration of relevant studies-works. It also contributes to the development of critical and self-critical ability by identifying errors in processes and results through the identification of contradictions and inconsistencies in the results of relevant exercises. Students adapt to new situations by cultivating a sense of confidence and promoting initiatives to solve theoretical / practical problems of the Forest Practice. In addition, the ability to work in groups is developed and the sense of respect for diversity-multiculturalism is promoted in order to achieve a common goal (e.g. by solving complex exercises). Finally, special emphasis is given to the ability to promote free and inductive thinking through creative thinking, which results from a deeper understanding of the interdependence of the variables that describe forest ecosystems and their interconnection with practice.

3. COURSE CONTENT

Description of the theoretical part:

General management concepts in the context of sustainable development. Purpose of Forestry.

Spatial analysis, land classification and geographic information systems. Spatial organization in the forest. Factors of production in Forestry. Design in Forestry. Classic and modern methods of forest management. Multiple use of forests. Management of timber forests. Management of high, coppice and coppice with standards forests. Management of recreational forests, resin-producing and protected forests. Management in degraded forests and forest areas. The forest management plan.

Description of the exercise part:

Various methods of calculating the annual cut/harvest. How to obtain field data from both high pine, spruce and beech forests, as well as from coppice oak forests. Processing of the above field data (in the laboratory) aiming at calculating/estimating the current and rotational growth of the forest clusters, the real and normal timber stock, the site quality classes, and the threats to the forest due to various factors.

4. TEACHING AND LEARNING METHODS - EVALUATION

DELIVERY METHOD	The J.H. HERBART teaching method is applied for the course and includes the following stages: 1. Preparing students to accept the new knowledge, mainly by retrieving relevant knowledge 2. Presentation and explanation of the teaching unit 3. Linking to the previous ones 4. Generalization and conclusions 5. Application: the new knowledge is tested in practice.
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Use of a course website on the e-class platform for posting (a) notes, (b) internet links, and (c) announcements.
MANAGEMENT OF TEACHING	
STUDENT EVALUATION	The evaluation of students is carried out on the basis of a written final exam, after the implementation of 13 weekly courses, according to the examination program of the Department, and includes questions with which students are asked to develop their knowledge.

Activity	***SemesterWorkload***
Lectures	30
Laboratory exercises	20
Individual and work study for term assignment	100
Course Total	***150***

5. RECOMMENDED-BIBLIOGRAPHY

Books offered to students through the Eudoxus platform:

- Eleftheriadis, N. 2003. Management of Natural Terrestrial Ecosystems. Art of Text Editions, Thessaloniki (Eudoxus code: 6991, *in Greek*)

Books offered besides the Eudoxus platform:

- Kossenakis, G. 1939. Production Tables for Oak, Beech and Chestnut. Ministry of Agriculture, Office of Forest Research, Athens (*in Greek*).
- Panagiotidis, N. 1965. Division of the Forest according to the Contemporary Claims of the Forestry Operation. Ministry of Agriculture (*in Greek*).
- Gatzogiannis, S. 1989. Notes on Forest Management (foundations of Forest Management). Aristotle University of Thessaloniki (*in Greek*).
- Asteris, K. 1991. Forest Management – Volume B'. Aristotle University of Thessaloniki, Publications Service (*in Greek*).
- Ministry of Agriculture. 2002. Provisional Standard Technical Specifications for the Development of Forestry and Other Forest and Forest Land Studies. Athens (*in Greek*).

Relevant scientific journals:

- Forest Ecology and Management
- European Journal of Forest Research
- Forest Science
- Forestry
- Annals of Forest Science
- Mathematical and Computational Forestry & Natural resource Sciences
- Scandinavian Journal of Forest Research
- Silva Fennica