

321. Fertility of forest soils

Instructor: Pantera Anastasia

1. GENERAL

GENERAL			
FACULTY		PLANT SCIENCES	
SECTION		FORESTRY AND NATURAL ENVIRONMENT MANAGEMENT	
LEVEL OF STUDY		Undergraduate	
COURSE CODE		321	SEMESTER OF STUDY 3rd
COURSE TITLE		FERTILITY OF FOREST SOILS	
INDEPENDENT TEACHING ACTIVITIES			TEACHING WEEKS
Lectures			2
Total Course			2
			3
COURSE TYPE		Scientific Area	
PREREQUISITE COURSES:		No	
LANGUAGE OF INSTRUCTION AND EXAMINATIONS:		Greek	
THE COURSE IS OFFERED TO ERASMUS STUDENTS		No	
COURSE WEBSITE (URL)		Relevant online location of the course in e-class	

2. LEARNING OUTCOMES

Learning Outcomes
Upon successful completion of the course, students acquire, on the one hand, general knowledge of fertility of forest soils and, on the other hand, specific knowledge concerning nutrients, their concentration, the problems caused to plant nutrition by their presence in high or low concentrations, fertilizations as well as forestry measures that should be taken for a proper treatment, sustainable management. The main objective is to understand the relationships between them, their interactions and the importance of proper and sustainable management of forest ecosystems and their components for the health of the natural environment and all their living components.
General Competencies
<ul style="list-style-type: none">● Search, analyze and synthesize data and information, using the necessary technologies● Autonomous work● Teamwork● Project planning and management● Respect for the natural environment● Adapting to new situations● Decision-making● Promoting free, creative and inductive thinking

3. COURSE CONTENT

The course offers theoretical knowledge on the subject, fundamental concepts and principles of fertility of forest soils. The topics presented include 1. factors affecting soil fertility and plant growth, 2. Clay minerals and soil fertility, 3. Soil fertility assessment, 4. Plant nutrition and nutrition, 5. Improving soil fertility and fertilizers, and 6. The application of fertilization in forestry and consequences of improper use and application.
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4. TEACHING AND LEARNING METHODS - ASSESSMENT

DELIVERY METHOD	Face-to-face teaching in the Auditorium
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USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Powerpoint presentations. Communication with students via e-mail. Support of the learning process through the e-class platform Access to on-line databases										
TEACHING ORGANIZATION	<table> <tr> <th><i>Activity</i></th><th><i>Semester Workload</i></th></tr> <tr> <td>Lectures</td><td>40</td></tr> <tr> <td>Educational visit</td><td>5</td></tr> <tr> <td>Independent Study</td><td>30</td></tr> <tr> <td>Total Course (25 hours of workload per credit)</td><td>75</td></tr> </table>	<i>Activity</i>	<i>Semester Workload</i>	Lectures	40	Educational visit	5	Independent Study	30	Total Course (25 hours of workload per credit)	75
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Lectures	40										
Educational visit	5										
Independent Study	30										
Total Course (25 hours of workload per credit)	75										
STUDENT EVALUATION	I. The language of assessment is Greek II. The grade in theory is 100% derived from the grade of the final written exam										

5. RECOMMENDED-BIBLIOGRAPHY

- Suggested Bibliography :

- Alifragkis, D. 2008, The soil, Aivazis, ISBN: 9789608609068
- Alifragkis, D. and N. Papamichos. 1994. Fertility of forest soils. Forest fertilization. Thessaloniki.
- Yasoglou N. 1971. Courses in Agricultural Chemistry (soil science) I, Athens.
- Yasoglou N. 1971. Courses in Agricultural Chemistry (soil science) II, Athens.
- Tantos V. and A. Papamichos N. 1990 Forest lands, Thessaloniki.
- Tantos V. and A. Papaioannou. 2006. Forest Soil Science. Ed. Papasotiriou, Athens

-Related scientific journals:

- Current forestry reports, <https://www.springer.com/journal/40725>
- Urban Forestry and Urban Greening, <https://www.journals.elsevier.com/urban-forestry-and-urban-greening>
- Forestry, <https://academic.oup.com/forestry>
- Soil, <https://www.soil-journal.net>