

## COURSE OUTCOME

### ΔΠΥ841 – FOREST ECONOMICS

#### 1. GENERAL

<b>INSTITUTE</b>	UNIVERSITY OF THESSALY		
<b>SCHOOL</b>	SCHOOL OF TECHNOLOGY		
<b>DEPARTMENT</b>	FORESTRY, WOOD SCIENCES AND DESIGN		
<b>LEVEL</b>	Undergraduate		
<b>CODE</b>	ΔΠΥ841	<b>STUDENT SEMESTER</b>	8 <sup>th</sup>
<b>COURSE TITLE</b>	FOREST ECONOMICS		
<b>ACTIVITIES</b>		<b>WEEKLY HRS</b>	<b>ECTS</b>
	Lectures & Exercises	3	5
	<b>TOTAL</b>	3	5
<b>TYPE OF COURSE</b>	Scientific field		
<b>PREREQUISITES:</b>	NO		
<b>LANGUAGE OF TECHING AND EXAMINATION:</b>	Greek		
<b>COURSE OFFERED TO ERASMUS STUDENTS</b>	NO		
<b>COURSE WEBPAGE (URL)</b>			

#### 2. LEARNING OUTCOMES

##### Learning outcomes

The aim of the course is the understanding of the content of Forest Production Economics for products as for services, which in combination with the knowledge regarding forests and forest ecosystems management and the technology of these products, to offer to the student an integrated view on forest production accounting at forest units and manufacturing enterprises level, of forest industries sector, how is the distribution of forest products to markets is implemented, how is the value of forests and parts of forests is estimated and how is an integrated evaluation of investments in forests and natural environment applied, always under the context of the contemporary approaches for multifunctional forestry. Furthermore, the aim of the course is the knowledge of students on contemporary aspects and evolvments in the forests sector and of natural environment in general and the growth of entrepreneurial culture for practical implications of this knowledge.

After the successful completion of the course, students will be able to:

- Integrate basic meanings of economic theory, of the inputs and outputs of the economic operation and their implementation into forestry and forest production.
- Acquire the capability for accounting forest production as long as for the production of enterprises in the forests value chain.
- Acquire the ability of effective utilization of the available resources into forest economic units and enterprises and seeking of additional means outside them.
- Acquire the capability for manipulating the economics of forest organizations and businesses in an effective way in order to design and to schedule their economic operation in the framework of sustainability and to secure their credit status in the market.

- Acquire the capability for estimating the economic value of forests and parts of forests.
- Acquire the capability for information on international evolvments, trends and perspectives regarding implementing policies on sustainability, environmental protection and entrepreneurship.
- Integrate basic meanings of multifunctional forestry in the utilization of forest resources as well as of the whole value chain of forests' production.
- Acquire entrepreneurial culture and the capability for developing enterprises based on forets utilization and other natural resources.
- Develop their knowledge on contemporary issues such as economics of climate change, bioeconomy, eco innovation and green entrepreneurship.
- Acquire the capability for evaluating investments in forests and natural environment but also of projects with environmental orientation and the utilization of funding tools and opportunities.

#### **General skills**

- Searching, analysis and synthesis of data and information with the use of necessary technologies.
- Adjustment in new challenges
- Decision making
- Autonomous work
- Development of social, professional and moral responsibility.
- Implementation of criticism and self-criticism
- Promotion of independent creative and inductive thinking.

### **3. COURSE CONTENT**

In the theoretical part of the course the student is taught and training for:

- Introduction to economic theory and natural resources. Basic meanings of economic principle, natural resources and sustainability, forms of economic units and forest organizations and enterprises.
- Ptoduction factors, production factors in forestry, wood stock as capital, multifunctional forestry.
- Inputs and outputs of economic operation, expenditures, revenues, payments, profits, fixed - non-fixed expenditures, direct – indirect expenditures.
- Production accounting of forest organizations and enterprises – amortization expenditures (amortization methods).
- Forest organizations and enterprises - interest and capital expenditures etc.
- Forest organizations and enterprises accountng – accounting methods, accounting by product and department.
- Forest organizations and enterprises accountng - weighted partial accounting, break even point.
- Mathematics of economics – compounding interest, capitalization, discounting, loan estimation, methods of forest valuation.
- Supply and demand, laws of supply and demand, elasticity, forest products distribution indexes.
- Forecasting and apraisal, forecasting methods, econometric models.
- Financial statements, cash flows, capacity of investments.
- Criteria for viability and evaluation of investments (NPV, IRR, profitability indexes, efficiency, liquidity etc.)
- Cost Benefit Analysis and the investments in forests and natural environment.

- Basic meanings of entrepreneurship. The characteristics of the entrepreneur, economic and organizational approach of the enterprise, enterprises as a system, forest enterprises.
- Value chains in forestry and in natural environment.
- Funding and funding means, tools and projects. Banking loans, alternative ways for funding of forest and environmental projects and investments.
- The role of forestry in the international business, economic environment and the contemporary business and economic models for the development of greek forestry.

The exercise of the course are developed for one (1) hour per week. The attendance of them by the students is mandatory at 50% at least. From the 1<sup>st</sup> course it is highlighted by the teaching staff the significance of the attendance, but also for the theoretical part, while motivations are offered to achieve the continuous participation of students.

Basically, the exercise constitutes a continuation of the theoretical part, where practical exercises are solved, while several case studies are presented of successful forest enterprises and organizations. The aim of the exercises is to maximize for the students the knowledge that they acquired from the theoretical part, using practical implications and development of constructive dialogue, solving of questions and considerations, as well as the acquisition of tangible knowledge and implementation of the basic principles of the forest economics field into practice.

From the 1<sup>st</sup> week of classes, it is provided by the teaching staff, either a list of possible subjects for assignments related to the content of the course and its is asked from the students to choose one, or a list of forest enterprises/organizations is given from which the students are asked to choose one as a case study.

The relative directions are given, while rich content and instructions are uploaded to e-class platform.

The final assignment of the course includes, besides the writing and public oral presentation for the chosen subject and a public oral presentation in a given date (usually during the 12th week of courses). The oral presentation lasts 10' and 5' of questions follow, by the present students. The teaching staff interferes - if needed - for comments, remarks, corrections. The evaluation of the assignment is countable at a 20% to the final scoring of the course. The rest percentage has to do with the final written exams of the theoretical part of the course.

#### 4. TEACHING AND LEARNING METHODS - EVALUATION

<b>DELIVERY METHOD</b>	In classroom	
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b>	<ul style="list-style-type: none"> <li>• Use of PC, slides ppt, projector</li> <li>• Support of teaching process through the e-class platform</li> <li>• Interactive whiteboard</li> <li>• Eight (8) PC's in the Laboratory for practical use of students in questionnaire analysis software.</li> </ul>	
<b>MANAGEMENT OF TEACHING</b>	<b>Activity</b>	<b>Semester Workload</b>
	Lectures	26
	Exercises focusing to the implementation of methodologies and case studies analysis in smaller groups of students	13
	Personal assignments in economic valuation of environmental goods	10
	Short personal assignments for practice	30

	Autotelic study	71
	<b>Course total (25 hours of workload per credit unit )</b>	<b>150</b>
<b>STUDENT EVALUATION</b>	<p>I. Written exams (80%) including:</p> <ul style="list-style-type: none"> <li>- Questions of short answers from the whole material of the book</li> <li>- Solving of exercises related to the field of the course</li> </ul> <p>II. Presentation of assignments (20%)</p>	

## 5. RECOMMENDED-BIBLIOGRAPHY

### *-Recommended bibliography:*

- Stamou N. 1985. Economics of forest organizations. [https://e-class.teilar.gr/modules/document/file.php/DAS159/STAMOU FOREST ECONOMICS I FINAL.pdf](https://e-class.teilar.gr/modules/document/file.php/DAS159/STAMOU_FOREST_ECONOMICS_I_FINAL.pdf)
- Daowei Zhang and Peter H. Pearse 2011. Forest Economics UBC press, Vancouver
- Peter H. Pearse - 1990. Introduction to Forestry Economics
- Wagner, J. E. (2011). Forestry economics: a managerial approach. Routledge.
- IUFRO 2008. The Multifunctional Role of Forests □ Policies, Methods and Case Studies
- Kant, S., & Alavalapati, J. (Eds.). (2014). Handbook of forest resource economics. Routledge.
- Tsaklaganos A. (1995). An introduction to business economics. Kyriakidi bros, Thessaloniki, ISBN: 9789603431480
- Tsaklaganos A. (2008) Funding and evaluation of investments. Kyriakidi bros, Thessaloniki, ISBN: 9789603438885
- Papadopoulos, I. (2010). Marketing of furniture and wooden products. A. Stamoulis, Athens, pages 600, ISBN 978-960-351-848-8

### *-Relative scientific journals:*

- Forest Policy and Economics
- Journal of Forest Economics
- Journal of Marketing
- Journal of Sustainable Forestry
- Forest Products Journal
- International Forestry Review