

## COURSE OUTCOME

### ΞΞΕ861 Industrial Production of Wood and Furniture Products

#### 1. GENERAL

<b>SCHOOL</b>	TECHNOLOGY		
<b>DEPARTMENT</b>	Department of Forestry, Wood Sciences and Design (FWSD)		
<b>LEVEL</b>	<i>Undergraduate</i>		
<b>CODE</b>	ΞΞΕ861	<b>STUDENT SEMESTER</b>	8th
<b>COURSE TITLE</b>	INDUSTRIAL PRODUCTION OF WOOD AND FURNITURE PRODUCTS		
<b>ACTIVITIES</b>		<b>WEEKLY HOURS</b>	<b>ECTS</b>
Lectures and Workshops		3	5
<b>Type of course</b>	Scientific		
<b>PREREQUISITES:</b>	none		
<b>LANGUAGE TEACHING AND EXAMINATION:</b>	Greek		
<b>THE COURSE OFFERED TO STUDENTS ERASMUS</b>	yes		
<b>WEBPAGES COURSE (URL)</b>			

#### 2. LEARNING OUTCOMES

Learning Outcomes
<p>The subject of the course is to provide knowledge and skills on the effective planning, management and control of the daily operation of a company in the wood sector an the manufacture of wood products.</p> <p>Upon successful completion of the course, students will have acquired basic knowledge in the following subjects:</p> <ul style="list-style-type: none"> <li>• Organization of the production of a unit of the sector of any size and method of production on a daily basis (from the individual to the very large enterprise).</li> <li>• Control and adjustment of the productivity and performance of machines and personnel and in general the performance of the unit.</li> <li>• Selection of the optimal production model and the scheduling of orders especially when there are inline orders.</li> <li>• Management of the supply / supply chain of the company as well as the utilization of appropriate tools and systems such as MRP, ERP.</li> <li>• Number of modern systems that they can implement on a case-by-case basis</li> <li>• Philosophy of planning and quality control and information on the most well-known and applied quality systems.</li> </ul>

- New product Development and design processes
- Maintenance and replacement procedures of mechanical equipment and parts of production facilities
- Processes for the introduction of new technology and its integration.
- Modern production systems such as Lean Six sigma in practice in the context of the application of lean manufacturing in production units and Industry 4.0.

**General Skills**

Upon successful completion of the course, the students will be able to develop and cultivate basic professional and social skills:

- Search, analysis and synthesis of data and information, using the necessary technologies
- Adaptation to new situations
- Decision making in regard of issues related to strategic operational issues
- Autonomous work
- Teamwork
- Dynamic Capabilities
- Work in an interdisciplinary environment
- Individual initiatives
- Production of new ideas
- Sense of responsibility and commitment to creating a better future
- Promoting free, creative and inductive thinking
- Understanding economic and technological developments and their implications,
- Development of business perception and professional mentality.
- Adapting to new situations

**3. COURSE CONTENT**

The course focuses on issues related to:

- Strategic role of Production Management and its relationship with the business strategy of a production company in the field of wood – wood products.
- Decision systems in the organization of production.
- Organizational structures: Work Centers / Production Lines. Types of production and production orders. Set up and productivity of machines and personnel – production costs.
- Production organization: planning and control depending on the production model.
- Supply Chain Management - Planning and control of raw materials – intermediate – semi-finished – stocks.
- Planning and control of the supply chain.
- Business resource planning.
- The lean production and the JIT method.
- Production and Material Planning Systems – MRP.
- Total Quality Management: Quality Planning and Control. Quality Systems
- Product design: levels and design process in relation to the life cycle of the product.
- Organization of maintenance. Procedures for the replacement of mechanical equipment and parts of production facilities – introduction of new technology and its integration.
- Specific production issues through empirical case studies in the industry: Lean Six sigma in practice in the context of the application of Lean Manufacturing in production units. Industry 4.0
- Case study of wood-furniture factories.

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

<b>DELIVERY METHOD</b>	Face to face
	The course is organized in two parallel streams:

	<p>1. Lectures, which analyze the concepts and methodologies that form the core of the course material</p> <p>2. Workshops (studios), where students: get acquainted with methods and tools of creative thinking and analysis, synthesis of ideas and presentation skills</p>																
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b>	<ul style="list-style-type: none"> <li>• PC, ppt, projector</li> <li>• Use of a course website on the e-class platform for posting (a) notes, (b) internet links, (c) announcements, search tools and social networks</li> <li>• MSTEAMS platform</li> </ul>																
<b>MANAGEMENT OF TEACHING</b>	<table border="1"> <thead> <tr> <th><i>Activity</i></th> <th><i>Semester Workload</i></th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td>26</td> </tr> <tr> <td>Workshops</td> <td>13</td> </tr> <tr> <td>term assignment</td> <td>20</td> </tr> <tr> <td>Short essays and case studies</td> <td>20</td> </tr> <tr> <td>Individual and work study</td> <td>51</td> </tr> <tr> <td><b>Σύνολο Μαθήματος (25 ώρες φόρτου εργασίας ανά πιστωτική μονάδα)</b></td> <td><b>125</b></td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>	<i>Activity</i>	<i>Semester Workload</i>	Lectures	26	Workshops	13	term assignment	20	Short essays and case studies	20	Individual and work study	51	<b>Σύνολο Μαθήματος (25 ώρες φόρτου εργασίας ανά πιστωτική μονάδα)</b>	<b>125</b>		
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<b>STUDENT EVALUATION</b>	<p>I. Written final exam (80%) including:</p> <ul style="list-style-type: none"> <li>- Short-answered questions</li> <li>- exercises related to the subject of the course</li> </ul> <p>II. Presentation of the term assignment (20%)</p>																

## 5. RECOMMENDED-BIBLIOGRAPHY

- Ξανθόπουλος Α., Κουλουριώτης Δ., Διοίκηση παραγωγής και επιχειρησιακών λειτουργιών, Εκδόσεις Τζιόλα, 2017
- Reid, R.D., Sanders N.R., Διοίκηση επιχειρησιακών λειτουργιών, Επιμέλεια Πρόδρομος Χατζόγλου, Εκδόσεις Πολιτεία, 2016
- Κακούρης Α. Διοίκηση Επιχειρησιακών Λειτουργιών, Εκδόσεις Προπομπός, 2016
- Slack, N., Chambers, S. και Johnston R., Διοίκηση Παραγωγής Προϊόντων και Υπηρεσιών (5η Αγγλική Έκδοση), Εκδόσεις Κλειδάριθμος, Αθήνα, 2010.
- Αυλωνίτης Σ. «Οργάνωση και Διοίκηση Παραγωγής», εκδόσεις ΙΩΝ 2002.
- Krajewski L. ,L. Pitzman “Operations management” 5th edition, Addison Wisley, 1998.
- Λιαρμακόπουλος Λ. «Διοίκηση συστημάτων παραγωγής» Πάτρα 2001.
- Αδαμίδης, Ε.Δ., Στρατηγική Διοίκηση της Παραγωγής, Εκδόσεις Κλειδάριθμος, Αθήνα, 2009.
- Δημητριάδης, Σ.Γ. και Μιχιώτης, Α.Ν., Διοίκηση Παραγωγικών Συστημάτων: Βασικές Θεωρητικές Αρχές και Εφαρμογές στη Λήψη Επιχειρηματικών Αποφάσεων, Εκδόσεις Κριτική, Αθήνα, 2007.

-Scientific Journals:

- *Journal of Operations Management*
- *Journal of Operations and Production Management*
- *International Journal of Operations and Production Management*
- *MIT Sloan Management Review*
- *Journal of Manufacturing Technology Management*
- *International journal of production research*
- *International Journal of Production Research*
- *Strategic Management Journal*
- *Production Planning & Control*
- *Journal of Operations Management*
- *Journal of Cleaner Production*
- *Journal of Management Studies*
- *Production Planning & Control*
- *Business Process Management Journal*