

COURSE OUTLINE

(1) GENERAL

SCHOOL	School of Engineering		
ACADEMIC UNIT	Department of Financial and Management Engineering		
LEVEL OF STUDIES	Postgraduate		
COURSE CODE	II-7	SEMESTER	2 nd
COURSE TITLE	Operations and Production Management		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS
		3	8
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Stream Obligatory		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBSITE (URL)	https://odim.aegean.gr/?q=en/content/operations-and-production-management		

(2) LEARNING OUTCOMES

<p>Learning outcomes</p> <p><i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i></p> <p><i>Consult Appendix A</i></p> <ul style="list-style-type: none"> • <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> • <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> • <i>Guidelines for writing Learning Outcomes</i>
<p>This course aims to achieve all the possible learning outcomes, giving the postgraduate students the information and knowledge that are necessary for a manager in the field of production operations. In particular:</p> <ol style="list-style-type: none"> 1. Acquisition of new knowledge: understanding terms of production, product, service, inventory, demand, quality, reliability, speed, flexibility, cost and how all these appear and interact in production and service providing. Also understand the fundamental concepts and principles of operation management. 2. Comprehension and interpretation of problems: understanding of alternative strategies concerning production, process types, product and operations design

procedure steps, layout types, capacity planning and design, inventory types, alternative products, production planning and scheduling, cost types and inventory control strategies.

3. Application of new knowledge in practical problems: application of methods of managing operation processes with main aim the improvement of the results obtained that relate to operation objectives (quality, speed, dependability, flexibility, cost). Support and Definition of operation strategies in organizations of different sizes, cultures, complexities and of different areas.

4. Analysis of problems: recognition of the participants in operation and production management problems, of the strategic roles of people and operations, of organization strategies, of decisions, of problem-solving stages, of production technologies, and of the way it affects overall operation, targets and performance of organization and its components.

5. Synthesis: search, detection, modification and specification of appropriate tools and methods and application to the problems under study

6. Evaluation: determination, selection, and evaluation of different targets, measures and KPIs for the overall organization and of specific departments, parts or activities.

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>
<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>
<i>Decision-making</i>	<i>Respect for the natural environment</i>
<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>
<i>Team work</i>	<i>Criticism and self-criticism</i>
<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>
<i>Working in an interdisciplinary environment</i>	<i>.....</i>
<i>Production of new research ideas</i>	<i>Others...</i>
	<i>.....</i>

- Decision making concerning strategic tactical and operational decisions concerning operations Management.
- Processes design and redesign according to technical specifications and production alternatives.
- Design of products and services.
- Project planning and management
- Measuring the performance of procedures and detecting factors that can improve efficiency.
- Decision making on production operation strategy
- Decision making on enterprise or organization location
- Decision making on the offered product variety and capacity
- Decision making on production control, planning and scheduling.
- Decision making on lot sizes, reorder point and times, and safety stock

(inventory control) with respect to given demand.

- Respect for the natural environment and standardization
- Adapting to European and local laws and Regulations
- Keeping up to date with technological issues and investing in new production and information technologies.

(3) SYLLABUS

Production Operations Management refers to systematic design, programming, control, coordination and improvement of processes that transform resources (money, labor, raw materials, use of equipment, data) to products or services through added value processes. Production Operations Management concerns the activities, decisions and responsibilities of managing the production and delivery of products and services of acceptable levels of quality, in given times and places with as low as possible cost (to gain advantage compared to competition). Some of its main tasks include human resource management, equipment management, management of technology and information and selection of operation and supply strategies.

The role of operations management is to transform different types of organizations inputs that include human resources, facilities and processes into finished goods or services according to the case.

The ways that the key aspects of operation management (operations strategy, process choice, technology management, and managerial decision making) are related to each other, are presented analytically.

(4) TEACHING and LEARNING METHODS - EVALUATION

<p style="text-align: center;">DELIVERY <i>Face-to-face, Distance learning, etc.</i></p>	<p>Distance learning</p>																					
<p style="text-align: center;">USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i></p>	<p>Use of Open-Source Virtual Learning Environment (VLE) Moodle for distance teaching and e-mail and Skype for communication with students.</p>																					
<p style="text-align: center;">TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i></p> <p><i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i></p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><i>Activity</i></th> <th style="text-align: center;"><i>Semester workload</i></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Lectures</td> <td style="text-align: center;">30 h</td> </tr> <tr> <td style="text-align: center;">Lectures Study</td> <td style="text-align: center;">37h</td> </tr> <tr> <td style="text-align: center;">Study of bibliography</td> <td style="text-align: center;">50h</td> </tr> <tr> <td style="text-align: center;">Collection and study of report bibliography</td> <td style="text-align: center;">20 h</td> </tr> <tr> <td style="text-align: center;">Report writing</td> <td style="text-align: center;">50 h</td> </tr> <tr> <td style="text-align: center;">Report presentation</td> <td style="text-align: center;">10h</td> </tr> <tr> <td style="text-align: center;">Exams</td> <td style="text-align: center;">3h</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;">Course total</td> <td style="text-align: center;">200</td> </tr> </tbody> </table>		<i>Activity</i>	<i>Semester workload</i>	Lectures	30 h	Lectures Study	37h	Study of bibliography	50h	Collection and study of report bibliography	20 h	Report writing	50 h	Report presentation	10h	Exams	3h			Course total	200
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<p>STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i></p> <p><i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<p>Language of evaluation: Greek Methods of Evaluation:</p> <ul style="list-style-type: none"> • Multiple choice questions • Short-answer questions • Short case-studies • Numerical Problems solving • Essay/Report • Public Presentation • Active participation in the course– short group projects in the class <p>In the final exams, the possible score for each question or problem is clearly mentioned. The evaluation criteria are presented to the students during the first lecture and are accessible to the students through course e-class.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 20px;"> <thead> <tr> <th style="width: 5%;"></th> <th style="text-align: center;">Description</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">Active participation</td> <td style="text-align: center;">10</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">Report</td> <td style="text-align: center;">15</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">Report presentation</td> <td style="text-align: center;">5</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">Final exams</td> <td style="text-align: center;">70</td> </tr> <tr> <td colspan="2" style="text-align: center;">Total</td> <td style="text-align: center;">100</td> </tr> </tbody> </table>			Description	%	1	Active participation	10	2	Report	15	3	Report presentation	5	4	Final exams	70	Total		100		
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(5) ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

A) Main Course Textbook

Slack, N., Chambers, S. and Johnston, R. (2006) "Operations Management", 5th edition, Prentice Hall.

B) Secondary Sources

1. Jacobs, R. and Chase, R., (2016) "Operations and Supply Chain Management: The Core", 4th ed., McGraw-Hill.
2. Heizer, J., Render, B. and Munson C., (2017) Operations Management: Sustainability and Supply Chain Management, 12th ed., Pearson.
3. Krajewski, L.J., Ritzman, L.P. and Malhotra, M.K., (2013) "Operations Management: Processes and Value Chains", 10th ed., Pearson.
4. Slack, N., Brandon-Jones, A., and Johnston R., (2013) "Operations Management", 7th ed., Pearson.
5. Reid, R. D. and Sanders, N. R. (2012) "Operations Management: An integrated Approach", 5th ed., Wiley.
6. Fitzsimmons, J.A. and Fitzsimmons, M.J. (2010) "Service Management: Operations, Strategy, and Information Technology", 7th ed., McGraw Hill
7. Stevenson, W.J. (2015) "Operations Management", 12th ed., McGraw-Hill
8. Anil Kumar, D. and Suresh, N. (2009), "Operations Management", ed., New Age International.
9. Russell R.S. and Taylor B.W. (2010) "Operations Management: Creating Value along the Supply Chain", 7th ed., Willey.
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12. Bozarth C. C. and Handfield B. R., (2015), "Introduction to Operations and Supply Chain Management", 4th edition, Pearson-Prentice Hall.
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17. Κακούρης, Α. (2013), " Διοίκηση Επιχειρησιακών Λειτουργιών", εκδόσεις Προπομπός.
18. Δημητριάδης, Σ. και Μιχιώτης, Αθανάσιος (2007), " Διοίκηση παραγωγικών συστημάτων", εκδόσεις Κριτική.
19. Ψωινός, Δ. (1997), "Οργάνωση και Διοίκηση Εργοστασίων", εκδόσεις ΖΗΤΗ.
20. Παπαδόπουλος, Χ. (2015), "Διοικητική Επιχειρησιακών Λειτουργιών, Ποσοτική και Υπολογιστική Προσέγγιση", εκδόσεις Σοφία.
21. Ξανθόπουλος, Α. και Κουλουριώτης Δ. (2017), "Δίοικηση Παραγωγής και Επιχειρησιακών Λειτουργιών: Σχεδιασμός, Προγραμματισμός και Έλεγχος σε Συστήματα Παραγωγής και Υπηρεσιών", εκδόσεις Τζιόλα.
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35. Slack N., Lewis M. (2017), "Operations Strategy 5th Edition", Pearson.

- Related academic journals:

1. Annals of Operations Research
2. Business Process Management Journal
3. European Journal of Operational Research
4. Harvard Business Review
5. IEEE Transactions on Engineering Management
6. IEEE Transactions on Semiconductor Manufacturing
7. International Journal of Logistics Management
8. International Journal of Logistics Research and Applications
9. International Journal of Logistics Systems and Management
10. International Journal of Operations and Production Management
11. International Journal of Operations and Quantitative Management
12. International Journal of Physical Distribution and Material Flow
13. International Journal of Production Economics
14. International Journal of Production Research
15. International Journal of Productivity and Performance Management
16. International Journal of Quality and Reliability Management
17. International Journal of Retail and Distribution Management
18. International Journal of Service Industry Management
19. International Journal of Services and Operations Management
20. International Journal of Supply and Operations Management (IJSOM)
21. International Journal of Trends in Production and Operations management (IJTIPOM)
22. Journal of Business Logistics
23. Journal of Consumer Research
24. Journal of Industrial and Management Optimization (JIMO)
25. Journal of Operations Management
26. Manufacturing & Service Operations Management (M&SOM)
27. Mathematics of Operations Research
28. Operations Management Research
29. Operations Research
30. Production and Inventory Management Journal
31. Production and Operations Management
32. POM Journal
33. Strategic Management Journal
34. Computers and Operations Research
35. International Journal of Production Economics
36. International Journal of Operations & Production Management
37. Applied Sciences
38. Journal of Open Innovation: Technology, Market, and Complexity
39. Sustainability
40. International Journal of Advanced Operations Management
41. Computers and Industrial Engineering

