Course title	Organization and Management of Productive Systems				
Course code	OMP103				
Course type	Compulsory				
Level	Postgraduate				
Year / Semester	1st/1st				
Teacher's name	Dr Andreas Efstathiades, Kyprianos Nicolaides				
ECTS	7.5	**Lectures / week**	1-2	**Laboratories / week**	0
Course purpose and objectives	This course focuses on major themes and strategies of manufacturing and operations management relationships. Students shall be exposed to the functions of systems producing goods or delivering services and will review and learn how to apply the various techniques for planning, scheduling and controlling at different levels of manufacturing and operation management decisions. Students will also be exposed to the basic concepts of Quality Management and the techniques, models and tools of quality for the improvement of productivity and competitiveness of an enterprise. The new trends and developments such as, Synchronous Manufacturing, the transformative potential of Artificial Intelligence and cycle time reduction will be examined. The emphasis will be put on interrelations of the different manufacturing and operational decisions on the final product and competitive position of the organization.				
Learning outcomes	Upon successful completion of the course the student will be able to: ▪ Analyze the various production process characteristics and identify how they support operations strategy through cases and Project work ▪ Apply workforce management techniques with emphasis on Learning curves in business cases ▪ Analyze capacity management concepts and apply capacity techniques in business examples. ▪ Apply location principles and techniques to optimize production costs ▪ Identify and apply layout techniques for different types of production process strategies in business examples ▪ Through cases apply inventory Management techniques including Just - In Time (JIT) systems in optimizing inventory levels ▪ Apply network models and techniques in Project Management problems ▪ Apply in real business Environment Lean system continues improvement techniques, Total Quality Management concepts and quality Management tools and techniques				

Prerequisites	None	**Required**	None
Course content	▪ Operations as a competitive weapon. Productivity, Productivity Measurements ▪ Operations strategy – Positioning Strategies ▪ Process management – Major Process decisions. Business process reengineering, process improvement tools ▪ Lean Systems across the Organization. Continuous Improvement Using a Lean Systems ▪ Development and evolution of Quality, Models and philosophies of Quality Gurus, Cost of Quality ▪ Principles and measurement of Customer Satisfaction ▪ Quality Tools for solving problems in a business environment for continuous improvement ▪ Quality Management Standards ISO 9001. EFQM Excellence Model, the role of Artificial Intelligence in Quality Management ▪ Capacity planning – Tools for capacity planning ▪ Location – Location management tools ▪ Layout- Layout planning – Layout types ▪ Process layout planning – Product layout planning ▪ Learning Curves ▪ Networks- Network planning		
Teaching methodology	Face to Face		
Bibliography	▪ Processes and Supply Chains, eBook, Global Edition. Lee J. Krajewski, Manoj K. Malhotra, Larry P. Ritzman, Pearson Education Limited 2013 ▪ James R. Evans, Quality Management, Organisation and Strategy, (ISBN 0538469374) Cengage Learning, 2010 International Edition ▪ Zeithami, Parasuraman & Berry, Delivering Quality Service, (ISBN 02935701-2), Free Press, 1990 ▪ Richard Whiteley, The customer driven company, (ISBN 20160813-8), Addison-Wesley, 1991 ▪ Project Management: The Managerial Process – Clifford Gray, Erik Larson Mc Graw Hill. ▪ Project Management, BC Open Textbooks, Adrienne Watt Journal Papers:		

Last update: 28/2/2024

	▪ Vasilis Theoharakis, Chris Voss, George C. Hadjinicola Andreas C. Soteriou, Insights into factors affecting Production and Operations Management (POM) journal evaluation. Journal of Operations Management, Volume 25, Issue 4, June 2007, Pages 932-955 ▪ Robert Joppen, Sebastian von Enzberg, Dr. -Ing. Arno Kühn, Prof. Dr. -Ing. Roman Dumitresc. A practical Framework for the Optimization of Production Management Processes ▪ Procedia Manufacturing, Volume 33, 2019, Pages 406-413 ▪ R. S. Selladurai, Mass customization in operations management: oxymoron or reality? Omega, Volume 32, Issue 4, August 2004, Pages 295-300 ▪ MIDOR, Katarzyna, KUČERA, Marian, Improving the Service with the Servqual Method, Management Systems in Production Engineering. 2018, Vol. 26 Issue 1, p60-65. 6p ▪ Models of Quality Costs Calculation and their classification, SADKOWSKI, Wojciech,, Organization & Management Quarterly. 2019, Vol. 46 Issue 2, p117-129. 13p ▪ Quality: where have we come from and what can we expect? www.emeraldinsight.com ▪ Genevieve Diesing, Trends In Total Quality Management, April 8, 2022, Quality Magazine ▪ The Future of Quality Management: Trends to Watch in 2024
Assessment	Final Exam: 50% Assignments: 40% Attendance and Participation: 10%
Language	English