UNIVERSITY of NICOSIA

Course Code	Course Title	ECTS Credits
MENG-412	Industrial Production Engineering	6
Department	**Semester**	**Prerequisites**
Engineering	Fall, Spring	OGEE-290, MENG-310, MENG-312
Type of Course	**Field**	**Language of Instruction**
Elective	Engineering	English
Level of Course	**Year of Study**	**Lecturer(s)**
1st Cycle	4th	Dr Vasileios Drakonakis
Mode of Delivery	**Work Placement**	**Co-requisites**
Face-to-face	N/A	None

Objectives of the Course:

The main objectives of the course are to:

- Study the processes involved (inventory, supply chain, production line, control, management etc.) in product development from conceptual design to the production line.
- Understand the management principles of all these processes in order to optimize the industrial system.
- Study the monitoring of an industrial system and the practices for optimizing it.
- Study fundamentals of industrial management as well as quality control.
- Comprehend decision making practices.

Learning Outcomes:

After completion of the course students are expected to:

- Demonstrate knowledge and understanding of processes involved (inventory, supply chain, production line, control, management etc.) in product development from conceptual design to the production line.
- Be able to manage and optimize a basic industrial system.
- Be able to monitor an industrial system, identify the bottleneck(s), and optimize the system.
- Apply quality management principles.
- Perform quality control in industrial systems.
- Be able to participate in critical decision making.

Course Contents:

- Industrial engineering and production systems.
- Facility location and layout.
- Aggregate and capacity planning.
- Inventory control and material handling.

- Product design and development.
- Manufacturing systems and production line.
- Production planning and control.
- Reliability and maintenance engineering.
- Cost accounting and depreciation, replacement analysis.
- Linear programming, transportation, waiting line theory.
- Principles of management.
- Project and quality management.
- Quality control.
- Six sigma, ISO 9000 and 14000, Lean.
- Supply chain management.
- Decision making.

Learning Activities and Teaching Methods:

Lectures, In-class examples and exercises, In-class Activities, Videos

Assessment Methods:

In-class Activities, Participation, Homework (Applied Exercises), Mid-Term Exam, Final Exam

Required Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Pravin Kumar	Industrial Engineering and Management	Pearson	2015	9789332543560

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
C.Natha Muhi Reddy	Industrial Engineering and Management	New Age Intl	2002	9788122413625