Syllabus

Course title
Purchasing and Supply Management

Course code
47516

Scientific sector
ING-IND/17

Degree
Master Industrial Mechanical Engineering

Semester
2

Year
I – mandatory for Production and Logistics / I – OPT for Mechanics and Automation

Academic year
2019/20

Credits
5

Modular
No

Total lecturing hours
32 hrs

Total lab hours

Total exercise hours
12 hrs

Attendance
Extremely recommended

Prerequisites
None

Course page
https://next.unibz.it/en/faculties/scientific_technology/master-industrial-mechanical-engineering/course-offering/

Specific educational objectives
The Course aims at providing an exhaustive overview of procurement, purchasing, outsourcing, supply, and, sustainable supply chain management. The evolution and the most recent methodologies will be illustrated, along with the tools and the techniques that are needed to manage procurement in an effective way.

Lecturer
For lectures: Simone Zanoni

For exercises: Simone Zanoni

Scientific sector of the lecturer
ING-IND/17

Teaching language
English

Office hours
See on timetable

Teaching assistant (if any)
None

List of topics covered
1. Introduction to purchasing and supply management: The enablers of purchasing and supply chain management; The evolution of purchasing and supply chain management
2. The purchasing process: Purchasing objectives and responsibilities; E-Procurement and the procure to pay
3. Policy and procedures
5. Purchasing and Supply Chain Organisation: Organizational Structure; Placement of purchasing authority; Organizing for Supply Chain Management
6. Supply Management and commodity strategy development: Supply Management and enterprise objectives; Strategic sourcing
7. Supplier evaluation and selection: Evaluation and Selection Process; Key Supplier evaluation criteria; Developing a supplier evaluation and selection survey; Data Envelopment Analysis for supplier selection
8. Supplier Quality Management: Factors affecting Supply Management role in managing supplier quality; Total quality management perspective; Pursuing Six Sigma supplier quality; Using ISO Standards to assess supplier quality systems
9. Supplier management and development: creating a world-class supply base: Supplier performance measurement; Overcoming the barriers to supplier development
10. Worldwide sourcing: From domestic buying to international purchasing; Global Sourcing
11. Strategic cost management: Price analysis; Cost analysis techniques: Total Cost of Ownership; Collaborative approaches to cost management
12. Purchasing and supply chain analysis: tools and techniques: Learning-Curve Analysis; Value Analysis/Value Engineering;
13. Contract management: Elements of a contract; Types of contracts; Alliances and partnerships
14. Production inventory models: EOQ model, Inventory models with probabilistic demand, Joint Replenishment Problem, Newsvendor model, Joint Economic Lot Size, VMI with Consignment Stock, Contracting in Supply Chain Management

Teaching format

Frontal and interactive teaching: lessons will be supported by slides provided by the teacher and will be integrated with interactive activities using office software applications (spreadsheet and open source industrial data analytics applications)

Learning outcomes

Knowledge and understanding of the most important aspects and the terminology of procurement and supply management
Applying knowledge and understanding to real contexts,
by means of good practice examples and interactive examples

Making judgements and taking decisions using correct procedures and tools

Communication skills will be improved by means of interactive discussions during which the students will be required to discuss noteworthy themes

Learning skills will be improved by the interactive use of office software applications and open source industrial data analytics applications

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Written and/or oral exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment language</td>
<td>English</td>
</tr>
<tr>
<td>Evaluation criteria and criteria for awarding marks</td>
<td>The exam consists of open questions on different part of the course and numerical exercises. An optional assignment will be provided during the course, consisting of a scientific paper discussion and model reproduction.</td>
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<tr>
<td>Required readings</td>
<td>Lecture notes and documents for exercise will be available on the reserve collections</td>
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<tr>
<td>Supplementary readings</td>
<td>Books and articles will be suggested by the teacher during the course</td>
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