Syllabus
Course description

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/sciencetechnology/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

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process; Improving the purchasing process;
3. Policy and procedures
4. Supply management integration for competitive advantage: Cross-functional sourcing teams; Integrating Supply Management
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

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<tr><td>**Teaching format**</td><td>*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)*</td></tr>
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<tr><td>**Learning outcomes**</td><td>

<u>Knowledge and understanding</u> of the most important aspects and the terminology of procurement and supply management

<u>Applying knowledge and understanding</u> to real contexts,

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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

Assessment	Written and/or oral exam
Assessment language	English
Evaluation criteria and criteria for awarding marks	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.

Required readings	Lecture notes and documents for exercise will be available on the reserve collections
Supplementary readings	Books and articles will be suggested by the teacher during the course