POLITEHNICA University of Bucharest (**UPB**)
Faculty of Engineering and Management of Technological Systems (**IMST**)
Study Programme: Industrial Engineering (**IE**)
Form of study: Licence (Bachelor)

COURSE SPECIFICATION

Course title:	Industrial Management	***Semester:***	6
Course code:	UPB.06.S.06.A.007	***Credits (ECTS):***	4

Course structure	Lecture	Seminar	Laboratory	Project	Total hours
Number of hours per week	2			2	4
Number of hours per semester	28			28	56

Lecturer	Lecture	Seminar / Laboratory / Project
Name, academic degree	GheorgheMilitaru, professor	GheorgheMilitaru, professor
Contact (email, location)	gheorghe.militaru@upb.ro	gheorghe.militaru@upb.ro

Course description:

This course provides an understanding of the issues involved in designing and managing manufacturing and service systems. Topics include introduction to industrial management, operations strategy in a global environment, product development and design, manufacturing processes, flexible manufacturing systems, innovation and technology transfer, facility layout, supply-chain management, just-in-timeand lean production systems, material requirements planning (MRP) and enterprise resource planning (ERP), human resources and job design, managing quality and performance, maintenance and reliability, design for six sigma, and simulation. This course examines the management challenges posed by the growth in worldwide manufacturing capabilities, markets, and competition and by rapid advances in technology and the concomitant decline in product life cycles. Emphasis on optimization, simulation and interpreting results for managerial applications pf linear programming models, and decision analysis. The course combines advanced engineering subjects with management modules specially designed for engineers.

Seminar / Laboratory / Project description:

Industrial management overseas the planning, scheduling and coordination of work flow and processing activities to deliver quality products and services.Project will cover more topics such as productivity (definition, measurement, productivity index, types of production system), inventory control, forecasting (types of forecasts, regression analysis), transportation models, lean production systems, the simplex method, capacity planning, facilities planning, short-term scheduling, cost estimating,break even analysis, formulation of operations strategy, and sensitivity analysis.

Intended learning outcomes:

The main goal of this course is to develop a foundation of industrial management concepts. This will enable to the student to understand the integration of an enterprise’s processes, as well as how to utilize modern tools, techniques and technologies to make their organization more competitive

and profitable. This area of study is concerned with the creation and management of systems that incorporate people, equipment, materials, technologies, and energy in productive ways.This course aims to develop a practical base for students who learn about basic production processes, operational logistics, capacity planning, inventory control, regression analysis, the simplex method, the sensitivity analysis and personnel management strategies. This will enable to the student to understand how planning, organizing and controlling the organization operations. Therefore, skills on analytical problem solving, system thinking and creativity are essential.

Assessment method:	% of the final grade	Minimal requirements for award of credits
Written exam	20	
Report / Project	50	The project will cover the main topics of the course. Each student must do a project and the end of the laboratory he or she must present it. The presence and class participation of each student is essential for progress individually and collectively.
Homework	30	Each student will have to present the homework to be evaluated in laboratory classes. Homework – max 30 points
Laboratory		
Other		

References:

- Heizer, J. and Render, B., Operations Management, Prentice Hall, New Jersey, 2006
- Daft, R. , New Era of Management. Ninth edition, South-Western Cengage Learning, 2010
- Ivancevich, J., Donnelly, H. and Gibson, L. Management: Principles and Functions. Fourth Edition. Homewood Il. IRWIN, 1989
- SalvendyGavriel , Handbook of Industrial Engineering, Third Edition, Wiley, 2007
- Myerson Paul, Lean Supply Chain and Logistics Management, McGraw-Hill, 2012
- Wheelen, T. and Hunger, D. Strategic Management and Business Policy, Tenth Edition, Prentice Hall, New Jersey, 2006

Prerequisites:	***Co-requisites*** ***(courses to be taken in parallel as a condition for enrolment):***

Additional relevant information:

Date: 15.07.2016

Professional degree, Surname, Name: Professor **Gheorghe MILITARU**