DEPARTMENT OF INDUSTRIAL ENGINEERING
COURSE SYLLABUS

COURSE TITLE	*ENGLISH CODE/NO*	*ARABIC CODE/NO.*	*CREDITS*			
			Th.	*Pr.*	*Tr.*	*Total*
Supply Chain Management	**IE 457**	هـ ص ٤٥٧	3	1	-	3
Pre-requisites:	IE 351					
Course Role in Curriculum	*Required or Elective:*		Elective			

Catalogue Description:
Introduction to Supply Chains (SC). Flow across SC of products, information and revenue. SC operations: issues, opportunities, tools, approaches, inter-corporate relationships, incentives and risk factors. SC design: customer service, quality, logistics, inventory, business processes, system dynamics, control, design, and re-engineering. Integrated SC management: forecasting, global sourcing, and virtual integration. Technology as an SC tool: internet technologies and digital coordination of decisions and resources. Case studies.

***Textbooks*:**
SUPPLY CHAIN MANAGEMENT: STRATEGY, PLANNING, AND OPERATION, 4th Ed, Sunil Chopra and Peter Meind, (2010), Prentice Hall. ISBN-10: 013609451-1 / ISBN-13: 978013609451-7.

***References*:**
DESIGNING AND MANAGING THE SUPPLY CHAIN, Second Edition, David Simchi-Levi, Philip Kaminsky, and Edith Simchi-Levi,McGraw-Hill.

***Supplemental Materials*:**

***Course Learning Outcomes*:**
By the completion of the course the student should be able to:

1. Understating the fundamental concepts of Supply Chain Management.
2. Design the Supply Chain Network..
3. Model the planning demand and supply in supply chain network.
4. Determine the optimal capacity and product availability.
5. Determine the Sourcing, Transportation, and Pricing.
6. Identify the competition and coordination in Supply Chains.
7. Solve real case studies.
8. Work in group to solve homework problems and do projects.

	Topics to be Covered:	***Duration in Weeks***
1	Understanding the Supply Chain	1
2	Supply Chain Performance: Achieving Strategic Fit and Scope	0.5
3	Designing Distribution Networks	1.5
4	Network Design in the Supply Chain	1
5	Designing Global Supply Chain Networks	1
6	Sales and Operations Planning: Planning Supply and Demand in a Supply Chain	1
7	Supply Chain Performance: Achieving Strategic Fit and Scope	0.5
8	Managing Economies of Scale and Uncertainty in a Supply Chain; Cycle, and Safety Inventory	2
9	Managing Uncertainty in a Supply Chain: Safety Inventory	1.5
10	Determining the Optimal Level of Product Availability	0.5
11	Sourcing Decisions, Pricing and Revenue Management in a Supply Chain	2
12	Information Technology in a Supply Chain	0.5

Student Outcomes addressed by the course: (Put a √ sign)

(a)	an ability to apply knowledge of mathematics, science, and engineering	
(b)	an ability to design and conduct experiments, as well as to analyze and interpret data	
(c)	an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability	√
(d)	an ability to function on multidisciplinary teams	
(e)	an ability to identify, formulate, and solve engineering problems	
(f)	an understanding of professional and ethical responsibility	
(g)	an ability to communicate effectively	√
(h)	the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context	
(i)	a recognition of the need for, and an ability to engage in life-long learning	
(j)	a knowledge of contemporary issues	
(k)	an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.	

Key Student Outcomes assessed in the course: (c) and (g)

Instructor or course coordinator: Dr. Mohammad R. A. Kabli
Last updated: September. 2014