



**UNIVERSITÉ  
DE NAMUR**

FACULTÉ  
DES SCIENCES ÉCONOMIQUES,  
SOCIALES ET DE GESTION

## **Supply Chain Management (ELOIM420)**

**Instructor:** Aadhaar Chaturvedi

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**Credits:** 5 ECTS

### **Learning Goals**

#### Effective Oral Communication

Each student shall be able to communicate verbally in an organized, clear, and persuasive manner, and be a responsive listener. Assessment: class participation

#### Critical and Integrative Thinking

Each student shall be able to identify key issues in a business setting, develop a perspective that is supported with relevant information and integrative thinking, to draw and assess conclusions. Assessment: class participation, case reports, final exam

### **Course Description**

Supply chains have increasingly become a source of competitive advantage not only from a tactical efficiency perspective but also from a strategic value addition perspective. Thus managing supply chains is becoming necessary to guarantee profitability today and viable future tomorrow. In doing so, firms face complex challenges: they need to understand when and how to externally source an input into their business, they need to manage the uncertainties in their chain, they need to manage planning and control all along the chain and they need to manage coordination amongst the different entities in the chain, each of whom might have conflicting objectives.

In this course we broadly look at the issues faced in running a global supply chain operations and how they can be best managed. In particular we state of the art sourcing practices including terminology, metric and decision approaches. We then investigate supply chain planning issues in production and distribution. Finally, we investigate the contracts that can be used to coordinate the supply chains. We will pay significant attention to the interactions between supply chain functions with other business activities, including operations, finance and strategy.



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## **Reference Textbooks**

Operations & Supply Management, 12th edition Jacobs, Chase and Aquilano, McGraw Hill.  
Other texts are made available during the course.

Production and Operations Analysis, Steven Nahmias, McGraw Hill.

Designing and Managing the Supply Chain, 2nd edition, Simchi-levi,  
Kaminsky and Simchi-Leiv, McGraw Hill

## **Session-Wise topics**

1. Introduction to Supply Chain Management: What are supply chains, objectives of supply chain management, challenges and skills required, make versus buy, objectives of sourcing, Kraljic's matrix.
2. Outsourcing: Objectives of outsourcing, numbers behind outsourcing, cost driver analysis, strategic implications of outsourcing, core competencies and double helix.
3. Auctions: Cost discovery, supplier competition, long-term implications
4. Negotiations (simulation): objectives (deal vs optimization), identification of win-win opportunities, supply chain coordination
5. Monitoring Suppliers: Incentives, rewards and penalties.
6. Inventory planning I: Deterministic and stochastic models in inventory planning.
7. Inventory planning II: Advanced stochastic models in inventory planning.
8. Resilient supply chains: Identifying risks, mitigation strategies, resilient supply chains
9. Production process planning: Aggregate planning, material requirement planning, scheduling
10. Product design: Modularity in product design and application of postponement and delayed differentiation
11. Capacity planning: Reactive production capacity, matching supply with demand
12. Channel coordination: Bullwhip effect , just-in-time distribution.
13. Coordinating contracts: Buyback and revenue sharing contracts.
14. Wrap-up and recent trends: Putting it all together, e-commerce.

## **Handouts for the class**



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The slides from each session will be handed out to the students.

### **Homework**

Six group assignments will be handed out at the end of sessions 2,4,6,7,10,11. The questions for each homework will be posted online on the course website on Webcampus.

### **Evaluation components**

The course grade will be based on 6 group homework, out of which the best 4 will be considered for grading (30%), individual class participation (20%) and an in-class individual final exam (50%).