Libera Università Internazionale
degli Studi Sociali Guido Carli

LUISS

Syllabus

Academic Year	2021/2022
Program	Data Science and Management
course	International Operations and Global Supply Chain
Term	I Semester
Year	2
SSD	SECS-P/08
Credits	6

INSTRUCTIONAL GOALS	The course of International Operations and Supply Chain seeks to supply knowledge and skills to apply operations and supply chain principles to international environments. The students will develop an understanding of the operations and the supply chain strategies. They will learn to design, plan, operate and control manufacturing, production, logistics and operations systems within the supply chain framework. The course requires the use of analytical techniques to develop critical thinking and to sharpen decision making skills. The students will have the opportunity to apply what they are learning in class to practical problems through the analysis of several case studies and projects to be discussed in class.
INTENDED LEARNING OUTCOMES They describe what a learner is expected to know, understand and be able to demonstrate after completion of a learning path.	**Knowledge and understanding**: Upon completion of the course, the students will be able to: 1. Understand operations and supply chain management and establish their fundamental knowledge, e.g. strategy, models, layouts, scheduling, logistics plan and quality management. 2. Examine the role of operations in any international organization and examine productivity and a system approach to analyzing operations problems. 3. Understand multiple analytical techniques and applications to develop production and logistics systems. 4. Identify the key components of product and service design, and the ways to improve reliability in design decisions. 5. Understand how recent trends like sustainability and digital transformation are affecting the entire area of operations and supply chain management. 6. Identify the key variables that decision makers utilize in addressing the production (aggregate) planning within supply chains. 7. Draw and describe an operational process and explain the kinds of information this process provides. 8. Develop an understanding of how operations and supply chain management can provide a competitive advantage in the marketplace. **Applying knowledge and understanding**: The course of International Operations and Supply Chain Management is fully based on cases, real problems, and business challenges. Students will be asked to acquire some knowledge on the business problems, understand the best techniques and approaches to solve these problems, and derive managerial practices out of the solutions obtained. The course will be based on cases with exceptions and real challenges, which require students to understand the managerial issues behind a problem before diving into an ad hoc solution.

	Making judgements: Students will learn how to apply several quantitative techniques and models to solve real problems based on the area of Operations and Supply Chain. Students will receive stimuli to derive managerial intuitions and recommendations upon using methods and techniques. For each topic, students will be asked to play the role of an operations manager and take optimal decisions for production and logistics facilities, as well as for global supply chain networks. **Communications Skills**: The course of International Operations and Supply Chain Management will represent a real opportunity for students to improve their communication skills by presenting orally their solutions and opinions weekly, by writing reports linked to cases and business challenges, as well as by presenting a solution a business problem by the end of the course. **Learning skills**: This course will give to the students the chance to learn several quantitative techniques to solve operations-based problems. Statistical and operations research tools will be used during the course with a special emphasis on both applications and cases. This will empower the students' problem-solving skills.
Pre-requisites	Basic knowledge on statistics, operations research and mathematics.
Course content	The course will cover the following topics: - Introduction to operations and Supply Chain Management - Strategic layouts - Production planning, scheduling, and capacity requirement planning - Deterministic and stochastic inventory management - Facility locations - Quality management and statistical process control - Supply Chain coordination and networks - Digital transformation in Operations and Supply Chain Management - Sustainable operations and circula economy
Reference Books	Slack, N., Alistair B.J., Johnston, R. and Betts, A. (2013), Operations and Process Management. Principles and Practice for Strategic Impact, Pearson, Third Edition. Stevenson (2015). Operations Management: Theory and Practice Chase et al. (2011). Operations Management for Competitive Advantage Several cases from the Harvard Business Publishing will be used and discussed. Students will be involved in solving some simulations covering several topics of the course.
Teaching Methods	The course material will be presented by a variety of teaching approaches including lectures, in-class exercises, multimedia cases, short videos, homework, case analysis, and presentation, and class discussion of assigned readings. A cooperative student-centered learning approach will be undertaken to enable a high level of students' involvement.
Assessment	The assessment will be composed of a written exam weighting 30% of the final grade, in which students will need to answer to a variety of questions. Besides, students will be divided into groups, which will be assigned to some assignments linked to the cases discussed in class. Furthermore, groups will be asked to solve a real business challenge presented by a company in the beginning of the course. Finally, students will be involved a research report, which will be based on a research project initiated within the chair and aligned to the enquiry-based learning approach sponsored at Luiss. During this project, students will play the role of business consultants and analysts and write a research report. These deliverables (assignments, solution to the challenge, and research report) will cover 70% of the final grade. The class participation will weight an extra 10% of the final grade.