



JAGIELLONIAN
UNIVERSITY
IN KRAKÓW

Supply Chain Management

Educational subject description sheet

Basic information

Field of study Joint Bachelor in Sustainability		Education cycle 2025/26	
Speciality Economics, Management & Engineering		Subject code UJ.WPAJBSEMES.8100.16496.25	
Organizational unit Faculty of Law and Administration		Lecture languages english	
Study level first cycle (joint degree programme)		Subject related to scientific research Yes	
Study form full-time degree programme		Disciplines Management science and quality	
Education profile General academic		ISCED classification 0311 Economics	
Mandatory obligatory		USOS code	
Subject coordinator	Piotr Szwedo		
Lecturer	Maximiliano Udenio		
Period Semester 5	Examination exam	Number of ECTS points 6.0	
	Activities and hours Lecture: 44		

Goals

C1	The aim of this course is to provide a comprehensive overview of the principal theories and models in supply chain management, with particular attention to different aspects of sustainability. During the course students will learn the theoretical models and insights, and also their application in the industry.
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Subject's learning outcomes

Code	Outcomes in terms of	Effects	Examination methods
Knowledge - Student knows and understands:			
W1	the Strategic, Tactical and Operational components of supply chain management	JBS_K1_W01, JBS_K1_W07	written exam
W2	the strategic fit framework and can give real-life examples of firms with different characteristics	JBS_K1_W06, JBS_K1_W07	written exam
W3	the (growing) importance of sustainability as a strategic objective, can describe real-life applications of sustainable supply chains, and can explain the impact of sustainability in sourcing decisions and supply chain network design (SCND)	JBS_K1_W03, JBS_K1_W04, JBS_K1_W06, JBS_K1_W07	written exam
Skills - Student can:			
U1	develop sales forecasts and aggregate planning models	JBS_K1_U01, JBS_K1_U03	written exam
U2	distinguish between deterministic and stochastic inventory management, understand the different models associated, and be able to correctly apply specific models given real life situations. In particular, students will be able to understand and apply the newsvendor model, multi-echelon inventory theory, and coordination contracts	JBS_K1_U03	written exam
Social competences - Student is ready for:			
K1	to critically approach their knowledge and its sources, noticing the importance of an objective evaluation of all reported results and data.	JBS_K1_K01, JBS_K1_K03, JBS_K1_K05	written exam
K2	to distinguish between stylized models of reality - useful to develop general insights - and detailed simulation models - useful for the implementation in a company context. They can evaluate the usefulness of each according to the context and are able to critically assess the needs for one or the other according to circumstances.	JBS_K1_K01, JBS_K1_K05	written exam

Calculation of ECTS points

Activity form	Activity hours*
Lecture	44
tasks solving	55
preparation for the exam	53
preparation for classes	27
Student workload	Hours 179
	ECTS 6.0

* hour means 45 minutes

Study content

No.	Course content	Subject's learning outcomes
1.	Intro + understanding the SC	W1, W2, W3
2.	Strategic framework	W2
3.	Sustainable sourcing	W3, K1, K2
4.	Supply Chain Network Design	W3, K1, K2
5.	Sustainable Supply Chain Network Design	W3, K1, K2
6.	Closed-loop Supply Chains and the Circular Economy	W3, K1, K2
7.	Sustainable Food Supply Chains	W3, K1, K2
8.	Joint replenishment	U2, K2
9.	Forecasting	U1, K2
10.	Aggregate planning	U1, K2
11.	Coordination	U2, K2
12.	Q&A and exam revision	W1, W2, W3, U1, U2, K1, K2

Course advanced

Teaching methods :

text analysis, conversation lecture, lecture with multimedia presentation, solving tasks, peer review

Activities	Examination methods	Credit conditions
Lecture	written exam	Class participation, written exam. Participation in group feedback meetings.

Entry requirements

None

Literature

Obligatory

1. Supply Chain Management: strategy, planning, and operation by S. Chopra.

Effects

Code	Content
JBS_K1_K01	The graduate can encourage sustainability-driven practices in the workplace and appraise sustainability of own values, perceptions, roles, and actions, with a special focus on environmental wellbeing.
JBS_K1_K03	The graduate can consider different visions of the future and develop own evidence-based opinions in reference to the balance of values linked to economic development, social welfare, and environmental protection.
JBS_K1_K05	The graduate can defend the importance of scientific data and methods as a basis for decision-making.
JBS_K1_U01	The graduate can critically analyse academic literature, formulate research questions and conduct research under supervision.
JBS_K1_U03	The graduate can apply adequate methods and tools, including selected IT tools, to solve problems related to data collection, analysis, and management in the context of sustainability.
JBS_K1_W01	The graduate can describe the concept of sustainability and recognize the differences in relevant definitions, models and approaches.
JBS_K1_W03	The graduate can give examples of sustainability-related dilemmas and hypothesize on the optimal course of action.
JBS_K1_W04	The graduate can identify sustainability-related problems specific to selected cultural, geographical, and political contexts.
JBS_K1_W06	The graduate can describe interconnections between various aspects of sustainability and identify their significance in the context of natural and social sciences, with a special focus on disciplines included in the selected specialisation track (law and politics; chemistry and physics; chemistry and biology; economics and geography; economics, management and engineering; humanities).
JBS_K1_W07	The graduate can apply the theory and methodology of disciplines included in the selected specialisation track to sustainability-related problems, taking into consideration practical limitations such as protection of intellectual property.