

35E03000 Sustainable supply chains

6 ECTS

SYLLABUS

Instructor's contact information	Course information
Katri Kauppi katri.kauppi@aalto.fi T208, Ekonominaukio 1 Available for on campus, and Teams / zoom meetings https://people.aalto.fi/katri.kauppi	Information and Service Management master's programme elective 2021-2022, Fall period 1 On campus module with options for online participation Language of Instruction: English Course Website: https://mycourses.aalto.fi/course/view.php?id=36981#section-0 Teaching Assistant: Misa Bakajic, misa.bakajic@aalto.fi

1. OVERVIEW

The course topics include the triple bottom line in supply chain context, benefits of sustainability in supply chains, environmental issues in purchasing and supply, sustainability in logistics, social sustainability in supply chains, sustainability certifications and implementation issues. Both organization and industry perspectives are discussed on the course.

2. PREREQUISITES

Recommended Tuotantotalouden perusteet 35A00310 or similar principles of operations management course

3. LEARNING OUTCOMES

The course is intended to provide an overall understanding of the triple bottom line i.e. economic, environmental and social sustainability in the context of supply chains. Students will understand the various ways in which environmental and social sustainability strategies and practices can be incorporated into different stages of a supply chain, and how these will impact supply chain (economic) performance. The course will also provide insights on the challenges related to the implementation issues in supply chain sustainability for organizations as well as for some key industries.

4. ASSESSMENT, GRADING, EXAM FEEDBACK

I.	Case A&W Canada (groupwork)	15%
II.	Case Hewlett Packard (groupwork)	15%
III.	Multiple choice quizzes based on lecture videos	15%
IV.	Essay on certifications	15%
V.	Analysis of a company sustainability report (groupwork)	20%
VI.	Exam (open book exam)	20%

Extra points (above 100%) available for:

- Class participation: if you participate in at least 4 lectures on campus you get 2 points extra (lectures included in this point scheme: 4,5,6,7,8,9 and 11)
- Course feedback survey: 1 extra point for filling the survey

- Sustainable SCM decision making experiment 1-2 points (based on performance in the experiment, at minimum 1 point)

Group work is done in groups of 4 students.

For details on the assignments, see separate instructions on mycourses for each assignment.

NOTE: all 4 quiz sets carry equal weight, i.e. 1/4th of the 15% assigned to quizzes.

NOTE: You should be able to follow the development of your grade in the gradebook on mycourses. However, the description above on how the final grade is formed from the different assignments is the one that will be adhered to should there be any conflicts between this document and the gradebook in how the overall grade is shown to be formulated.

5. READINGS

LECTURE 1 – Why sustainable supply chain management?

- Govindan, K., Rajeev, A., Padhi, S. S., & Pati, R. K. (2020). Supply chain sustainability and performance of firms: A meta-analysis of the literature. *Transportation Research Part E: Logistics and Transportation Review*, 137, 101923.

LECTURE 2 - The triple bottom line – management and measures of economic, social and environmental sustainability in SCM

- Rogers, D. S. (2011). Sustainability is free: the case for doing the right thing. *Supply Chain Management Review*, 15(6).
- Foerstl, K., Meinlschmidt, J., & Busse, C. (2018). It's a match! Choosing information processing mechanisms to address sustainability-related uncertainty in sustainable supply management. *Journal of Purchasing and Supply Management*.
- Neri, A., Cagno, E., Lepri, M., & Trianni, A. (2021). A triple bottom line balanced set of key performance indicators to measure the sustainability performance of industrial supply chains. *Sustainable Production and Consumption*, 26, p. 648-691.

LECTURE 3 - Sustainable transportation and warehousing

- Mangiaracina, R., Marchet, G., Perotti, S., & Tumino, A. (2015). A review of the environmental implications of B2C e-commerce: a logistics perspective. *International Journal of Physical Distribution & Logistics Management*, Vol. 45 No. 6, pp. 565-591
- Bartolini, M., Bottani, E., & Grosse, E. H. (2019). Green warehousing: Systematic literature review and bibliometric analysis. *Journal of Cleaner Production*, 226, 242-258.

LECTURE 4 - Green procurement

- Kristensen, H. S., Mosgaard, M. A., & Remmen, A. (2021). Circular public procurement practices in Danish municipalities. *Journal of Cleaner Production*, 281, 124962.

LECTURE 5 - Sustainable manufacturing and service production

- Hallam, C., & Contreras, C. (2016). Integrating lean and green management. *Management Decision*, 54(9), 2157-2187.

LECTURE 6 – Circular Economy

- Pagell, M., Wu, Z. and Murthy, N. 2007. The supply chain implications of recycling. *Business Horizons* 50(2): 133-143.
- Bocken, N. M., De Pauw, I., Bakker, C., & Van Der Grinten, B. (2016). Product design and business model strategies for a circular economy. *Journal of Industrial and Production Engineering*, 33(5), 308-320

LECTURE 7 – Guest lecture: No readings assigned

LECTURE 8 – Guest lecture: No readings assigned

LECTURE 9 – Purchasing ethics

- Saini, A., 2010. Purchasing ethics and inter-organizational buyer–supplier relational determinants: A conceptual framework. *Journal of Business Ethics*, 95(3), pp.439-455.

LECTURE 10 – Socially sustainable SCM

- Huq, F., Stevenson, M. and Zorzini, M., 2014. Social sustainability in developing country suppliers: An exploratory study in the ready made garments industry of Bangladesh. *International Journal of Operations & Production Management*, 34(5), pp.610-638.
- Rodríguez, J.A., Giménez Thomsen, C., Arenas, D. and Pagell, M. (2016). NGOs' Initiatives to Enhance Social Sustainability in the Supply Chain: Poverty Alleviation through Supplier Development Programs. *Journal of Supply Chain Management*, 5, pp.: 83-108.
- Yawar, S., and Seuring, S. (2017), "Management of social issues in supply chains: a literature review exploring social issues, actions and performance outcomes." *Journal of Business Ethics* 141, no. 3 (2017): 621-643.

LECTURE 11 - Sustainability certifications

- Readings provided in the essay assignment

LECTURE 12 - Implementation issues – how to get started

- Fawcett, S.E. et al. 2015. Sustainability as strategy: caught in the luxury trap. *Supply Chain Management Review*.
- Saenz, H. and Hinkel, J. 2022. Supply chain traceability is key to sustainability—and improved performance. *Supply Chain Management Review*, July/August, p.42-47

6. SCHEDULE

The course is primarily held in classroom, V001 at the Business School Building, Ekonominaukio 1. For some classes, there is the opportunity to join live via zoom, for others a lecture recording is provided afterwards in Mycourses (the recording will only cover the lecture parts, not the interactive/group work parts done in class). **PLEASE GO THROUGH SCHEDULE BELOW IN DETAIL!!**

Week	Session	Date & Time	Live lectures ON CAMPUS PLUS either zoom participation and/or recording of lecture available afterwards (check per each lecture)	Pre-recorded lectures (Watch in your own time during the week and fill in quiz)	Assignment Due Dates
Week 1 5.-11.9.	Lecture 1	Monday 5.9.2022 at 12.15-13.45	<i>Course introduction</i> <i>Why sustainable supply chain management?</i> Live lecture in class AND via zoom, recording provided afterwards		Video quizzes due Sunday 11.9 at 23.59
		Wednesday 7.9.2022 12.15-13.00	<i>45 min voluntary Q&A session with Prof Kauppi in class & zoom, come and discuss about sustainable supply chain issues and/or ask if there is anything unclear about the assignments</i> Live lecture in class AND via zoom, NO recording provided afterwards		
	Lecture 2	Pre-recorded video lecture	<i>No live class for this lecture, pre-recorded videos plus quiz</i>	<i>The triple bottom line – measures of economic, social and environmental sustainability in SCM</i> Three short pre-recorded videos <ul style="list-style-type: none"> • What is sustainable SCM • Measuring sustainability in a supply chain • CO2 measurement and reduction in supply chains 	
Week 2 12.-18.9	Lecture 3	Pre-recorded video lecture	<i>No live class for this lecture, pre-recorded videos plus quiz</i>	<i>Sustainable transportation and warehousing</i> Two pre-recorded videos <ul style="list-style-type: none"> • Sustainable transportation • Sustainable warehousing • Sustainable logistics in e-commerce • Biodiversity in SCM and transportation 	Case A&W Canada due 13.9 at 23.59
	Lecture 4 & case discussion	Wed 14.9 at 12.15-13.45	<i>Case discussion A&W Canada</i> <i>Lecture on Green procurement</i> Live lecture in class plus recording available afterwards (of lecture, not of case discussion)		Video quizzes due 18.9 at 23.59

Week 3 19.9- 25.9	Lecture 5	Monday 19.9 at 12.15- 13.45 PLUS Pre- recorded video lecture	Sustainability in service production <i>Live lecture in class plus recording available afterwards</i>	<i>Green products and production, 4 pre-recorded videos:</i> <ul style="list-style-type: none"> • 2 green manufacturing videos from Youtube • Green packaging • Lean and green 	Case HP Canada due 20.9 at 23.59 Video quizzes due 25.9 at 23.59
	Lecture 6	Wednesday 21.9 at 12.15- 13.45	Case discussion HP Canada Lecture on Circular Economy <i>Live lecture in class plus recording available afterwards (only for lecture, not case discussion)</i>		
Week 4 26.9 – 2.10	Lecture 7	Monday 26.9 at 12.15- 13.15	Guest lecture by Tero Ylönen, Rekki, online marketplace for used clothing and accessories <i>Live lecture in class</i>		No assignments due this week
	Lecture 8	Wednesday 28.9 at 12.15- 13.45	Guest lecture by Päivi Wood, Senior Adviser, Chamber of Commerce Finland, “External requirements on supply chain sustainability” <i>Live lecture in class</i>		
Week 5 3.10 – 9.10	Lecture 9	Monday 3.10 at 12.15-13.45	<i>Purchasing ethics</i> <i>Live lecture in class, no recording provided afterwards</i>		Certifications essay due Thursday 6.10 at 23.59 Video quizzes due 9.10 at 23.59
		Wednesday 5.10 at 12.15- 13.00	<i>Sustainable SCM decision making experiment</i> <i>45 min Q&A session, ask about the assignments or the course topics overall</i> <i>Live lecture in class AND via zoom, no recording provided afterwards</i>		
	Lecture 10	Pre-recorded video lecture		<i>Socially sustainable SCM, Three pre-recorded videos</i> <ul style="list-style-type: none"> • What is social sustainability • Codes of conduct • Challenges in implementing social sustainability 	

Week 6 10.10 – 16.10	Lecture 11	Monday 10.10 at 12.15- 13.45	<i>Sustainability certifications</i> Class discussion and debate <i>Live lecture in class, no recording provided afterwards</i>		Sustainability report analysis due Thursday 13.10 at 23.59
	Lecture 12	Wednesday 12.10 at 12.15- 13.45	<i>Implementation issues – how to get started</i> Course wrap-up <i>Live lecture in class and via ZOOM, recording provided afterwards</i>		
Exam week	EXAM	Tuesday 18.10 9.00-12.00	Course exam		

7. ETHICAL RULES

Aalto University Code of Academic Integrity and Handling Thereof>

<https://into.aalto.fi/pages/viewpage.action?pageId=3772443>

8. OTHER ISSUES