

SUSTAINABLE SUPPLY CHAIN MANAGEMENT

(Prof. Corrado Cerruti)

RESPONSIBLE TEACHING MEMBERS:

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- Massimo Battaglia, Univ. Roma La Sapienza
- Margherita Macellari, Global Compact
- Alessia Sabbatino, Global Compact
- Sergio Vacca, Ermi Research

PRE-REQUISITES FOR THE COURSE:

None

COURSE OVERVIEW

Sustainability is fast emerging as a major strategic consideration for business leaders. Organisations are increasingly under scrutiny from a range of stakeholders, including, customers, investors, legislators, governments and pressure groups regarding the impact their operations are having on the wider environment and society. Issues such as global warming, depletion of natural reserves, waste management, emerging producer responsibility legislation, air transport, corporate social responsibility reporting are just a few examples of the complex nature of the area.

This course is designed to introduce students to the subject of sustainability from a supply chain perspective. Specifically, the objectives of the course are to provide students with:

- Understanding and critical awareness surrounding the concepts of sustainability
- Understanding and critical awareness of the sustainable supply chains and sustainable suppliers

- Comprehensive understanding of the role of green and reverse logistics
- Conceptual understanding of emerging supply chain sustainability models with respect to global and multitier supply chains
- Ability to evaluate and appraise emerging supply chain sustainability models and strategies

LEARNING OBJECTIVES

KNOWLEDGE AND UNDERSTANDING

Develop a basic understanding of supply chain management through the lens of sustainability. Develop a sound knowledge on the key drivers of sustainable purchasing processes and models with respect to global and multitier supply chains, their inter-relationships with the overall strategy, with sustainable suppliers and with the role of green and reverse logistics.

APPLYING KNOWLEDGE AND UNDERSTANDING

Apply analytical and problem solving skills necessary to develop solutions for a variety of sustainable Supply Chain processes and understanding what information should be exchanged for a sustainable supply chain activity, how Information technologies can support sustainable supply chain management , their inter-relationships with sustainable suppliers and with the green and reverse logistics.

MAKING JUDGEMENTS

Identify key issues within sustainable supply chain within different industries and learning to quantify the improvements that various sustainable supply chain strategies can offer.

COMMUNICATION SKILLS

Summarize and present sustainable Supply Chain strategies. Discuss the implication of implementing analytical tools for sustainable Supply Chain Management.

LEARNING SKILLS

Analyse critically Sustainable Supply Chain decisions. Discuss the implication of designing, planning, or operating a sustainable supply chain.

STRUCTURE OF THE COURSE AND REFERENCE TEXTBOOK/READINGS

The course is structured on two major sections:

Section I: Fundamentals of sustainable supply chains

The reference textbook is:

- Sarkis J. and Dou Y., Green Supply Chain, Routledge, 2018

This section is structured on four major areas following the topics of the textbook, namely:

1. Overview on sustainable supply chains, including an eco-design perspective (Chapters 1 and 2)
2. Green procurement and supplier collaboration (Chapters 3 and 4)
3. Green and reverse logistics (Chapters 5 and 6)
4. Global and multitier relationships (Chapter 7 and 8)

Section II: Approaches towards building sustainable supply chains

This section includes four approaches:

- United Nations Global Compact [as from UN Global Compact and BSR, Supply Chain Sustainability: A Practical Guide to Continuous Improvement, 2015]
- ISO 20400 Standard for sustainable procurement
- SA8000 standard for a responsible Supply Chain Management
- Sustainable Supply Chain Operation References Model – S SCOR

The introduction is effectively supported by the following video:

- An overview on Sustainable Supply Chains – Prof. Dr. Carlos Mena - Portland State University
<https://youtu.be/1KXjItNq5J4>

The theoretical contents will be complemented by four case studies (discussed in class):

- McDonald's Corporation: Managing a Sustainable Supply Chain
- Tetra Pak: Creating a Recycling Chain in China
- Dell: Upcycling Ocean Plastics Through Supply Chain Innovation
- Esquel Group: Value Innovation Through Sustainable Supply Chains

OTHER LEARNING SOURCES

- Several videos on the general topic of sustainability are available in the Virtual Academy of Sustainability developed by the University of Bremen and available at:
<http://va-bne.de/>
 - Mena, C. (2014) Sustainable Procurement, in Mena, C., Van Hoek, R. and Christopher, M., Leading Procurement Strategy, pp. 171-196 (this book chapter provided by the lecturer)
 - McKinsey and Co. (2011). Resource revolution: Meeting the worlds energy, materials, foods, and water needs (available from:
<http://www.mckinsey.com/business-functions/sustainability-and-resource-productivity/our-insights/resource-revolution>)
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- Guide Jr, V.D.R. and Van Wassenhove, L.N., 2002. The reverse supply chain. *Harvard business review*, 80(2), pp.25-26.
- Lovins, A.B., Lovins, L.H. and Hawken, P., 2007. A road map for natural capitalism. *Harvard Business Review*, 85(7/8), 172-176.
- Lubin, D., & Esty, D. (2010). The sustainability imperative. *Harvard Business Review*, 8(5), 43– 50.
- Nidumolu, R., Prahalad, C.K. and Rangaswami, M.R., 2009. Why sustainability is now the key driver of innovation. *Harvard Business Review*, 87(9), 56-64.

The course will be built on academic classes based on slides, articles, plus case studies.

TEACHING METHODS

A combination of traditional lectures, in-class discussions and case studies.

EXAM

The exam is based on a written test. The written test will last 1 hour and 45 minutes, and it is made of 4 open questions: two questions from section I, two questions from section II.

At the end of the course, attending students will be able to take part to a working group activity on the use of S-SCOR and gain up to 2 extra points.

During the written test, attending and non attending students will have the possibility to answer to an extra question on the sustainability marketing e-learning lectures offered by the Virtual Academy of Sustainability <https://www.vabne.de/index.php/de/veranstaltungen/26-sustainability-marketing>
Answering to this question will allow to get up to 1 extra point.

THESIS ASSIGNMENT RULES

The thesis will be assigned three times a year:

- in January for the students aiming to graduate in Summer (mid-July)
- in May for the students aiming to graduate in Autumn (beginning of November)
- in October for the students aiming to graduate in Spring (beginning of April)

Three times a year in the course website there will be an announcement for students interested to be assigned a thesis. Following this announcement students will have a two weeks deadline to fill in a Google Form with data on their academic performance and on their proposal for a thesis topic/case.

Theses will be assigned based on the student academic performance (general GPA and mark at this exam) and on the innovativeness of the proposed topic (normally not more than 5 students per graduation session will be accepted), plus any specific assignment rule defined in the MScBA programme.

Two weeks after the announcement deadline, students will be informed whether they have been accepted or not for the thesis. Shortly after, the selected students will be invited to a meeting where they will be presented the suggested approach to develop a master thesis effectively (including the work they will have to make in order to find, select and report references and to develop the analysis of the business case(s) they will have proposed).