COURSE OUTLINE

(1) GENERAL

SCHOOL	
ACADEMIC UNIT	
LEVEL OF STUDIES	
COURSE CODE		**SEMESTER**	
COURSE TITLE	**Value Chain Management**

INDEPENDENT TEACHING ACTIVITIES *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits*	WEEKLY TEACHING HOURS	CREDITS
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).		

COURSE TYPE *general background, special background, specialised general knowledge, skills development*	Specialised general knowledge, skills development
PREREQUISITE COURSES:	
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	EN
IS THE COURSE OFFERED TO ERASMUS STUDENTS	
COURSE WEBSITE (URL)	

(2) LEARNING OUTCOMES

Learning outcomes
The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.
Consult Appendix A
- *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area*
- *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
- *Guidelines for writing Learning Outcomes*

Upon course completion students will have the competences to understand and analyse the existing value chains and be able to suggest improvement actions based on the principles of sustainability and circular economy model. They will also be familiar with modern tools and their roles in the redesigned value chains.

General Competences
Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology *Adapting to new situations* *Decision-making* *Working independently* *Team work* *Working in an international environment* *Working in an interdisciplinary environment* *Production of new research ideas*	*Project planning and management* *Respect for difference and multiculturalism* *Respect for the natural environment* *Showing social, professional and ethical responsibility and sensitivity to gender issues* *Criticism and self-criticism* *Production of free, creative and inductive thinking* *……* *Others…* *…….*
• Analysis of existing bibliography • Team and independent work • Decision making in value chain management • Develop of new ideas • Familisarise with the necessary field applied technology	

(3) SYLLABUS

The aim of this course is to provide the key concepts that will allow understanding, managing and improving of contemporary value chains. Strong emphasis will be given on providing analytical skills, critical thinking and tools around value chain management and how modern technologies (i.e. digitization of information) and models like circular economy, are forming a new regime for transition from linear to circular value chains. Design principles of sustainable value chains that include the aspect of reversibility and closed loop operation, emphasizing in the manufacturing field are within the scope of the course.

The core areas of the Value Chain Management course are based upon:

- Value chain management analysis; process, materials and information flows;
- Value chain management strategies regarding the sustainability aspect
- The role of corporate responsibility and circularity for companies and its relevance to sustainable supply chain management
- Reverse and closed loop supply chains
- Digitalization trends and modern tools that enable the "Rs" in value chains
- Case studies from the field of manufacturing.

In more detail:

Analysis of values chains will take place in respect to the processes and operations regarding both materials information flows;

The role of sustainability is explored and how is embraced at corporate level by modern value chain managers aiming at limiting the misallocation of resources and improving the value chains entire environmental performance.

The sustainable supply chain management perspective into achieving sustainability in all aspects – from economic to social whilst also coupling with the CE model is in detail studied. Redesign paradigms of values chains based on the reversibility and the closed loop operation as mandated by the circular economy model and the sustainable dimension.

The role of technology and more precisely of the digitization to reverse value chains is explored and finally the students will work with real value chains from the field of manufacturing and will learn to analyse them based on the performance results of the valued chain in respect to the market expectations.

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY *Face-to-face, Distance learning, etc.*	• Face-to-face, Distance learning
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY *Use of ICT in teaching, laboratory education, communication with students*	• Commercial/free/open source software • Audio-visual material and multimedia applications • Moodle

TEACHING METHODS *The manner and methods of teaching are described in detail.* *Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.* *The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS*	*Activity*	*Semester workload*
	Lectures	
	Tutorials	
	Individual work	
	Project essays	
	Course total	

| **STUDENT PERFORMANCE EVALUATION**
Description of the evaluation procedure

Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other

Specifically-defined evaluation criteria are given, and if and where they are accessible to students. | • Individual assignments
• Group based projects
• Final exam closed-book, with a combination of multiple choice, short answer and problem/essay questions

Evaluation
• Individual assignments (2): 20% Group projects (2): 20% Class Participation: 10% Final exam: 50% |

(5) ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

- *Ivanov, D., Tsipoulanidis, A. and Schönberger, J. (2019), Global Supply Chain and Operations Management: A Decision-Oriented Introduction to the Creation of Value, available at: http://www.springer.com/series/10099.*

- *Robert B. Handfield, Ernest L. Nichols, J., Handfield, R.B. and Nichols, E.L. (2002), Supply Chain Redesign: Transforming Supply Chains Into Integrated Value Systems, Financial Times, Prentice Hall, Vol. 97, Financial Times Prentice Hall, available at:https://doi.org/10.1016/s0026-0576(00)83977-x.*

- Related academic journals:

- *Eisenreich, A., Füller, J., Stuchtey, M. and Gimenez-Jimenez, D. (2022), "Toward a circular value chain: Impact of the circular economy on a company's value chain processes", Journal of Cleaner Production, Elsevier Ltd, Vol. 378 No. October 2021, p. 134375.*

- *Van Hoek, R.I. (1999), "From reversed logistics to green supply chains", Supply Chain Management, Vol. 4 No. 3, pp. 129–134.*

- *Kumar, D. and Rajeev, P. V. (2016), "Value Chain: a Conceptual Framework", International Journal of Information Engineering and Management Sciences, Vol. 7 No. 1, pp. 74–77.*

- *Saidani, M., Cluzel, F., Yannou, B. and Kim, H. (2021), "Circular economy as a key for industrial value chain resilience in a post-COVID world: What do future engineers think?", Procedia CIRP, Elsevier B.V., Vol. 103, pp. 26–31.*

- *Sasikumar, P. and Kannan, G. (2008a), "Issues in reverse supply chains, part I: End-of-life product recovery and inventory management - an overview", International Journal of Sustainable Engineering, Vol. 1 No. 3, pp. 154–172.*

- *Sasikumar, P. and Kannan, G. (2008b), "Issues in reverse supply chains, part II: Reverse distribution issues - an overview", International Journal of Sustainable Engineering, Vol. 1 No. 4, pp. 234–249.*

- *Sasikumar, P. and Kannan, G. (2009), "Issues in reverse supply chain, part III: Classification and simple analysis", International Journal of Sustainable Engineering, Vol. 2 No. 1, pp. 2–27*