



LUNDS UNIVERSITET
Lunds Tekniska Högskola

Course syllabus

Förpackningslogistik **Packaging Logistics**

MTTN35, 7,5 credits, A (Second Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED I

Date of Decision: 2023-04-14

General Information

Main field: Food Product and Packaging Development.

Main field: Food Systems.

Compulsory for: MFIPDES2

Elective Compulsory for: MLOG2, MLSA1

Elective for: I5-lf, M4-lp, MD4, MLIV1

Language of instruction: The course will be given in English

Aim

To give students knowledge and deep understandings in how the packaged product influences supply chain performance, i.e. packaging logistics. The aim is also to give students an understanding of packaging system components and the impact of packaging on supply chains. Furthermore, the course provide students with the skill of analysing, designing and choosing packaging system components based on the need and requirements of companies and other organisations in supply chains. The course provides students with a holistic and systems thinking on packaging in supply chains, and contributes to a synthesis of packaging and logistics knowledge. The aim is also to give students insights into the potentials of packaging in the information society.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

- explain the different components and functions of packaging systems
- define and describe the role of packaging systems and its interactions with logistics systems

- analyse the impact of new packaging technology on the logistics system
- describe which packaging system parameters that influence supply chain effectiveness
- identify supply chain needs and requirements on the packaging system
- analyse packaging systems based on the needs and requirements of supply chains
- problematize and explain potential trade-offs among the logistics, marketing and environmental functions of packaging systems

Competences and skills

For a passing grade the student must

- apply the Packaging Scorecard methodology to analyse packaging systems
- use the CAPE software to analyse the optimal use of unit loads
- evaluate and improve an existing packaging system from a packaging logistics perspective
- develop and design packaging systems in order to fulfil logistics requirements along the supply chain
- assess different packaging systems based on the needs and requirements from supply chains

Judgement and approach

For a passing grade the student must

- present results, from the packaging project, both oral and written
- discuss the role of packaging from the viewpoint of different organisations function and supply chain organisations

Contents

Packaging logistics is a concept that integrates packaging and logistics in order to improve the efficiency and effectiveness of the supply chain. Packaging logistics uses logistics knowledge about technology and economy along with the properties of packaging in different industrial applications. The course primarily consists of a project where the purpose is to improve an existing packaging system from a packaging logistics perspective. The project is supported by lectures, cases and feedback seminars, where different analyses and syntheses are introduced. Different methods for analysing packaging will also be included as well as the current state and trends in packaging logistics research and practice.

Relevance for a sustainable development

Packaging and transports are identified as important when a sustainable society is to be developed. The environmental aspects are included in all subjects covered in the course.

Examination details

Grading scale: TH - (U,3,4,5) - (Fail, Three, Four, Five)

Assessment: The grade will be based on both an individual written exam and by the performance of a group project. During the course, the project will be presented in an oral presentation and in a technical report.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Parts

Code: 0119. **Name:** Project.

Credits: 4. **Grading scale:** TH. **Assessment:** The grade will be based on both an individual written exam and by the performance of a group project. During the course, the project will be presented in an oral presentation and in a technical report.

Code: 0219. **Name:** Written Exam.

Credits: 3,5. **Grading scale:** TH. **Assessment:** The grade will be based on both an individual written exam and by the performance of a group project. During the course, the project will be presented in an oral presentation and in a technical report.

Admission

Assumed prior knowledge: MTTF01 Logistics

The number of participants is limited to: No

The course overlaps following course/s: MTT215

Reading list

- Henrik Pålsson: Packaging Logistics, Understanding and managing the economic and environmental impacts of packaging in supply chains. Kogan Page, 2018, ISBN: 978-0-7494-8170-4.
- Series of articles.

Contact and other information

Course coordinator: Henrik Pålsson, henrik.palsson@plog.lth.se

Course homepage: <https://www.plog.lth.se/education/packaging-logistics/>