GHENT UNIVERSITY

Course Specifications

Valid in the academic year 2022-2023

Comparative Sustainability Analysis of Food Packaging – Case Studies (I690014)

Course size *(nominal values; actual values may depend on programme)*

Credits 5.0	**Study time 150 h**	**Contact hrs**	50.0h

Course offerings and teaching methods in academic year 2022-2023

A (semester 2)	English	Kortrijk	lecture	7.5h
			integration seminar	1.5h
			guided self-study	10.0h
			group work	16.0h
			self-reliant study activities	10.0h

Lecturers in academic year 2022-2023

Nachtergaele, Pieter	LA24	lecturer-in-charge
Boone, Lieselot	LA24	co-lecturer
Ragaert, Peter	LA23	co-lecturer

Offered in the following programmes in 2022-2023	**crdts**	**offering**
Master of Science in Sustainable Food Packaging	5	A

Teaching languages

English

Keywords

Food packaging systems, Sustainability analysis, Food packaging design, Packaging strategy, Interdisciplinarity

Position of the course

This is an integrating course unit combining the knowledge and skills learned throughout previous course units from the Master in Sustainable Food Packaging. In this course, a group task is made on a case study provided by companies or other stakeholders within the food packaging chain regarding sustainable food packaging. A group of students will design and/or optimise a food packaging system, taking into account functionality and the embedding in the food and packaging chain, with a conscious and critical choice of resources, production methods and the end-of-life of the packaging system (circularity). The proposed packaging strategy should take into account the corporate or organisational culture of the company, its mission and vision, and the broad socio-economic context. The students should integrate requirements from sales, purchase, production, quality, marketing, sustainability and the supply chain within the food packaging system. Throughout the course, the students are coached by a team of lecturers from the master's programme and external experts. During the development of the task, attention will also be given to soft skills such as professional and interdisciplinary communication.

Contents

The students will work in a team (three to five students) to design and/or optimise a food packaging system

for a specific case. Groups ideally consist of people with mixed professional/academic backgrounds. The cases
will be provided by industrial partners or other stakeholders. The students will interact with the company/
organisation to learn about the case and the context, and at the end to present the results of the case study.
Throughout the course, the teams are coached by a team of lecturers from the master's programme and external
experts regarding the different relevant aspects of sustainable food packaging. Students will need to incorporate different aspects from the master's programme's courses in the case study:

- Food packaging systems: materials, machines, conditions
- Food packaging economics & management
- Shelf life of packed foods
- Sustainability in food systems
- Food safety of packaging materials
- Management of end-of-life packaging
- Quality management in food packaging
- Food packaging design

The students are encouraged to find creative solutions and to work in an interdisciplinary way. The teams
will ideally be a mix of different backgrounds and interests, to foster cross-pollination and to simulate different profiles and stakeholders in a professional environment (process, engineering, sales, marketing,
HSE, ...). The responsibility for writing the report, presenting results and the discussion, is shared.
The focus of the course lies on independent practical work. The focus of the course lies on independent practical work combined with interactive coaching sessions, in which students receive constructive feedback and guidance in developing a sustainable food packaging system.

Initial competences

Competences obtained in the previous course units: Food packaging systems: materials, machines and packaging conditions; Food packaging economics & management; Shelf life of packed foods; Sustainability in food systems; Food safety of packaging materials; End-of-life management of packaging; Quality management in food packaging.

Final competences

1 To work in an interdisciplinary team to design and/or optimise a food packaging system.
2 To make evidence-based decisions regarding the individual aspects of sustainable food packaging for the development of a new or optimised food packaging system.
3 To design and characterise a packaging system, taking into account aspects such as production, resources, functionality, consumer, applicability, supply chain, socio-economic impact...
4 To integrate possible requirements from sales, purchase, production, quality, marketing, sustainability and supply chain within the food packaging system.
5 To contextualise and evaluate the impact of technical and socio-economic aspects on the development of a new or optimised food packaging system
6 To develop a packaging strategy within a company or organisation, considering the corporate or organisational culture, its mission and vision, and the broad socio-economic context.
7 To have the professional skills to act as a key figure in professional communication inside and outside an organisation, when designing and/or optimising a packaging system.
8 To apply new technological skills in response to developments in the field of packaging systems or to a new context.

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Group work, Guided self-study, Excursion, Lecture, Self-reliant study activities, Integration seminar

Extra information on the teaching methods

Lecture: this refers to the plenary sessions when students receive instructions for the project or

on specific topics (7.5 hrs).
Guided self-study: This refers to the interactive moments with coaches and experts (10 hrs).
Group work: This refers to when the students work on the project in a group (16 hrs).
Independent work: This refers to when the students work on the project individually (10 hrs).
Study visit: This refers to when students visit the company/organisation to learn about the case study/present results (5h)
Integration seminar: This refers to a moment where one group discusses the work of another group and formulates suggestions (1.5 hrs).

Learning materials and price

Script giving details regarding the course trajectory. The course notes from all previous courses in the master of sustainable food packaging.

References

Course content-related study coaching

During coaching sessions, the students will be able to receive feedback and acquire information from the different lecturers and experts. The responsible teacher and assistant also monitor their process.

Assessment moments

continuous assessment

Examination methods in case of periodic assessment during the first examination period

Examination methods in case of periodic assessment during the second examination period

Examination methods in case of permanent assessment

Report, Participation, Oral examination, Peer assessment, Assignment

Possibilities of retake in case of permanent assessment

examination during the second examination period is possible in modified form

Extra information on the examination methods

NPE Oral examination: presentation of assignment with Q&A session
NPE Peer assessment: The team members evaluate each other's soft skills
NPE Participation: Active participation in sessions, demonstrating organisational skills, independency, and project management skills.
NPE Assignment: The assignment is graded by the lecturers and experts/coaches involved. This results in a score for the group.
NPE Report Evaluation of periodical reports on progress and project management, self-reflection report

Calculation of the examination mark

NPE oral examination: 30%
NPE peer assessment: 10%
NPE reports: 10%
NPE participation: 10%
NPE assignment (= final report): 40%

Students who eschew a part of the teaching methods or the non-period aligned evaluation forms for this course unit may be failed by the examiner.