GHENT UNIVERSITY

Course Specifications

Valid in the academic year 2024-2025

Food Packaging: Quality Management (I690021)

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

Credits 3.0 **Study time 90 h**

Course offerings in academic year 2024-2025

A (Year)	English	Kortrijk

Lecturers in academic year 2024-2025

Jacxsens, Liesbeth	LA23	lecturer-in-charge
Buntinx, Mieke	LA23	co-lecturer
Peeters, Roos	LA23	co-lecturer

Offered in the following programmes in 2024-2025	**crdts**	**offering**
Postgraduate Certificate Food Packaging	3	A
Postgraduate Certificate Sustainable Food Packaging Solutions	3	A

Teaching languages

English

Keywords

Quality management – certification – quality control – quality assurance – sampling plans
Physical-mechanical characterisation of different packaging materials and packaging concepts

Position of the course

Quality management in food packaging is an advanced course to be able to understand a quality management system, dealing with multiple perspectives of the definition of quality (e.g. safety, customer requirements, sustainability, physical-mechanical characterisation, etc.) towards a Total Quality Management System. Different standards applied in production and trade of food contact materials are discussed (e.g. BRC, ISO). Building blocks in quality management as traceability, good practices, quality assurance and quality control (including product and process control, sampling plans) are explained. Physical-mechanical packaging material/concepts characterisation are explained as how to measure quality of materials. Packaging requirements regarding packaging waste are also discussed in the context of the new packaging and packaging waste regulation (PPWR).

Contents

PART I: Quality management systems related to packaging

1. Definitions and building blocks in quality and quality management, total quality management
2. Certification standards applied in QMS of packaging materials production and trade (e.g. ISO, BRC)
3. Traceability of food contact materials and packaging materials
4. Good practices, Quality control and assurance activities in a Total Quality Management System for packaging materials
5. Case studies on fulfilling requirements of standards (guided exercises)
6. Theory on sampling plan (product and process control) and exercises (guided exercises)

PART II: Physical-mechanical packaging material/concepts characterisation

7. European standards for packaging requirements related to packaging waste
8. Gas permeability
9. Plastics characterisation
10. Seal performance
11. Paper and cardboard characterisation
12. Conditioning and transport simulation

PART III: Mechanical and climatological influences on packaging during transport and storage

Initial competences

Competences obtained in the course unit 'Food Packaging Materials, Machines and Conditions'

Final competences

1 to understand building blocks of a quality management system (good practices, QC and QA activities)

2 to be able to set up a sampling plan for product and process control
3 to understand principles in most important standards and certification schemes related to production and trade of packaging materials
4 to be able to explain standards in packaging material characterisation
5 to have knowledge of test equipment, test methods and test conditions for the characterisation of packaging materials
6 Can look up recent legislation regarding the new packaging and packaging waste 1 regulation.

Conditions for credit contract

This course unit cannot be taken via a credit contract

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Excursion, Lecture

Extra information on the teaching methods

PART I : Quality management systems related to packaging (18h)
Lectures (can be online): 9 hrs

- Definitions and building blocks in quality and quality management, total quality management
- Certification standards applied in QMS of packaging materials production and trade (e.g. ISO, BRC)
- Good practices (incl. Traceability), Quality control and assurance activities in a Total Quality

Management System for packaging materials (online – lecture) – 3h
Lecture : plenary exercises: 7 hrs:

- Case studies on fulfilling requirements of standards
- Theory and Exercises on sampling plan (product and process control)

Demonstration: 2 hrs: Invited speaker to illustrate QMS in packaging materials in practice
PART II: Physical-mechanical packaging material/concept characterisation (5h)
Lectures (can be online): 5 hrs

- European standards for packaging requirements related to packaging waste

PART III: Mechanical and climatological influences on packaging during transport and storage
Study visit BVI (4h) (optional)

Study material

Type: Slides

Name: Food Packaging: Quality Management
Indicative price: Free or paid by faculty
Optional: no
Language : English

Available on Ufora : Yes

References

- ISO9000:2018
- BRC IOP packaging
- Auto-control guide FEVIA-FAVV regarding food contact materials

Course content-related study coaching

Students can ask additional information during the lectures; the teachers can also be contacted by e-mail.

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

Participation, Assignment

Possibilities of retake in case of permanent assessment

not applicable

Extra information on the examination methods

Assignment: the evaluation of this course is part of an individual integrative assignment in which students have to integrate and apply knowledge and competences from all the different courses making up the specific elective track of the postgraduate certificate Food Packaging. The student (qualitatively) evaluates a food product-packaging concept. The product-packaging concept will be predetermined before the start of the lectures. The student should demonstrate s/he is able to apply the course in an interdisciplinary way, and explain the concept from a course specific perspective. The product of the assignment is a report (including a self-reflection) which will be presented to a jury.

Calculation of the examination mark

The assignment (100%):
- Report (40%)
- Presentation (20%)
- Q&A (40%)