

Quality Management Systems in Agro-food Chain (O000149)

Course size (nominal values; actual values may depend on programme)
 Credits 3.0 Study time 90 h Contact hrs 45.0 h

Course offerings and teaching methods in academic year 2019-2020

Offering	Language	Teaching Method	Hours
A (semester 2)	English	seminar: coached	8.0 h
		exercises	
		lecture	20.0 h
		lecture: plenary	4.0 h
		exercises	
		guided self-study	5.0 h
		excursion	4.0 h
		microteaching	4.0 h

Lecturers in academic year 2019-2020

Jacxsens, Liesbeth LA23 lecturer-in-charge

Offered in the following programmes in 2019-2020

[Bachelor of Science in Food Technology](#) crdts 3 offering A

Teaching languages

English

Keywords

Quality, quality management systems, quality control, quality assurance

Position of the course

In this course the concepts and principles of quality management systems and more narrow food safety management systems applied along the different steps of an agro-food chain will be explored. Agricultural companies, food processing, food distribution, feed industry need to comply with international agreements on food safety and quality management. Apart from regulatory issues, many organisations along the agro-food chain are adopting quality management based on ISO9000 principles or other commercial certification systems to be able to have market access. For a bio science engineer it is important that next to the processes and operational level in an organisation, also the systems around that operational level are well understood i.e. process and product control, internal auditing, managerial aspects as setting procedures and registrations, important of people involvement.

Contents

Theory:

1. Introduction to quality and quality management
2. Legal and international framework to food safety management systems (FSMS)
3. Quality management systems (QMS) in agro-food chain
4. PreRequisite Programs
5. Hazard Analysis Critical Control Points (HACCP)
6. Performance measurement of QMS/FSMS (including auditing, diagnostic tool, sampling plan, etc.)

Exercises:

1. Document management
 2. Exercises on QMS and standards
 3. Exercises on HACCP
 4. Company visit to audit FSMS/QMS in practice
- Own exercises on HACCP plan (case study in groups)

Initial competences

Education on food technology, process control, mathematic, food microbiology and food chemistry.

Final competences

- 1 *Students will be able to understand concepts and principles of food safety management and quality management.*
- 2 *Students will be able to set up a QMS/FSMS in an agro-food chain and have insight in international standard setting*
- 3 *Students will know about food safety, food quality, food fraud and other pressures in the agrofood chain and how respond on it by a QMS*

Conditions for credit contract

Access to this course unit via a credit contract is unrestricted: the student takes into consideration the conditions mentioned in 'Starting Competences'

Conditions for exam contract

Access to this course unit via an exam contract is unrestricted

Teaching methods

Guided self-study, excursion, lecture, microteaching, lecture: plenary exercises, seminar: coached exercises

Extra information on the teaching methods

In the theory part mainly plenary lectures are used, while in the exercises a study visit, plenary exercises and guided self-study is foreseen. The group work (HACCP case study) will be presented for the other students (microteaching).

Learning materials and price

All learning materials will be provided and no additional costs are foreseen.

References

Jacxsens, L., Kirezieva, K., Luning, P., Ingelrham, J., Diricks, H., Uyttendaele, M. Measuring microbial food safety output and comparing self-checking systems of food business operators in Belgium. *Food Control*, 49, 59-69
Kirezieva, K., Luning, P., **Jacxsens, L.**, Allende, A., Johannessen, G., Tondo, E., Rajkovic, A., Uyttendaele, M., van Boekel, M. (2015). Factors affecting the status of food safety management systems in the global fresh produce chain. *Food Control*, 52, 85-97
Jacxsens, L., Devlieghere, F., Uyttendaele, M. (2009). *Quality management systems in the food industry*. ISBN 978-90-5989-275-0.

Course content-related study coaching

The students will be guided during the lectures and also in their own exercise on HACCP case study

Evaluation methods

end-of-term evaluation and continuous assessment

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

Written examination with open questions, open book examination

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

Written examination with open questions, open book examination

Examination methods in case of permanent evaluation

Oral examination, peer assessment, report

Possibilities of retake in case of permanent evaluation

examination during the second examination period is possible in modified form

Extra information on the examination methods

*The HACCP case study will be a group work prepared as non-period evaluation. A report and presentation of the work is expected. Peer assessment from other students on the work will be organised and during the presentation, questions and oral examination will be organised.
The theory and other exercise parts are as written exam with open questions and open book exam.*

Calculation of the examination mark

Theory : 50%

Exercises : 10%

Exercises – HACCP case study : 40%

Students who eschew period aligned and/or non-period aligned evaluations for this

(Approved)

course unit may be failed by the examiner.