

## Meat and Meat Products (I000653)

Course size (nominal values; actual values may depend on programme)  
Credits 4.0 Study time 120 h Contact hrs 60.0 h

### Course offerings and teaching methods in academic year 2019-2020

Offering	Language	Teaching Method	Hours
A (semester 1)	English	project	6.25 h
		seminar: coached	2.5 h
		exercises	
		practicum	6.25 h
		lecture	35.0 h
		guided self-study	5.0 h
		excursion	5.0 h

### Lecturers in academic year 2019-2020

De Smet, Stefaan	LA22	lecturer-in-charge
Devlieghere, Frank	LA23	co-lecturer
Eeckhout, Mia	LA23	co-lecturer

### Offered in the following programmes in 2019-2020

Programme	crdts	offering
<a href="#">Bachelor of Science in Food Technology</a>	4	A
<a href="#">Master of Science in Bioscience Engineering Technology: Food Industry</a>	4	A
<a href="#">Master of Science in Food Technology</a>	4	A
<a href="#">Exchange Programme in Bioscience Engineering: Agricultural Sciences (master's level)</a>	4	A
<a href="#">Exchange Programme in Bioscience Engineering: Food Science and Nutrition (master's level)</a>	4	A

### Teaching languages

English

### Keywords

Meat technology, meat science, HACCP, meat quality, muscle biochemistry, meat processing

### Position of the course

The aim of this course is to provide basic knowledge in meat characteristics and post-mortem muscle biochemistry and their relation with the quality and processing of meat. Furthermore, the different technologies, ingredients and additives involved in meat processing are discussed. Attention is also given towards the quality assurance and HACCP in the meat industry.

### Contents

#### Theory:

1. Meat science
  - 1.1. Introduction, definitions and composition
  - 1.2. Meat consumption and nutritional value
  - 1.3. Structure and biochemistry of meat
  - 1.4. Muscle to meat conversion
  - 1.5. Sensorial and technological quality
  - 1.6. Slaughtering and cutting of meat
2. Meat technology: technological processes in the meat industry
  - 2.1. Freezing of meat

- 2.2. Cooking of meat
- 2.3. Drying of meat
- 2.4. Brining of meat
- 2.5. Formed and restructured meat products
- 2.6. Ingredients and additives in meat products, legislation and labelling

*Practical work:*

1. Measuring the quality of fresh meat
2. Quality assurance and HACCP in the meat industry
3. Company visits

Initial competences

The student has basic knowledge of biology, microbiology and biochemistry.

Final competences

- 1 Have basic knowledge of meat characteristics, muscle biochemistry and meat technological processes.
- 2 Have insight in the post-mortal muscle to meat conversion and the effects thereof on sensory and technological quality.
- 3 Being able to analyse, to assess and to guarantee the quality of meat, including sensory meat quality.
- 4 Understanding how the treatment and the processing techniques in the production of meat products can influence the properties and the quality of the derived products.
- 5 Having insight in the control measures used to guarantee the safety of meat products.
- 6 Being able to identify the consecutive steps in the production of meat products and to build a quality assurance system to guarantee the safety of the produced meat product

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

Guided self-study, excursion, lecture, practicum, project, seminar: coached exercises

Extra information on the teaching methods

The theory is dealt with in lectures given by three lecturers. The exercises consist of company visits, laboratory exercises and coached exercises.

Learning materials and price

English course notes with literature references are available. All learning material and presentations that are used during the lectures are available via Minerva. Cost: 12 EUR

References

Meat and meat products. 1995. Ed. A.H. Varnam and J.P. Sutherland. Chapman and Hall. ISBN 0-412-49560-0  
 Technology of meat and meat products. 1992. Ed. J.P. Girard. Ellis Horwood Limited. ISBN 0-13-904285-7  
 Lawrie's Meat Science, 6th edition. 1998. Ed. R.A. Lawrie. Woodhead Publishing Limited. ISBN 1-85573-395-1

Course content-related study coaching

For the theory and the theoretical exercises, contact hours are scheduled. During these contact hours the student can ask additional information or explanation to the teacher. The practical exercises are guided by a teaching assistant.

Evaluation methods

end-of-term evaluation and continuous assessment

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

Written examination

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

Written examination

Examination methods in case of permanent evaluation

Assignment, report

Possibilities of retake in case of permanent evaluation

not applicable

## Extra information on the examination methods

### **Period-aligned evaluation:**

The written examination consists of several questions that are mostly short open questions. Some questions aim at evaluating the basic knowledge, whereas other questions aim at evaluating insight. One question is also included on the laboratory exercise work.

### **Non-period aligned evaluation:**

HACCP task: paper + presentation  
company visit: report

### Calculation of the examination mark

Students who eschew period aligned and/or non-period aligned evaluations for this course unit may be failed by the examiner.

67% of the score is based on the theory (written examination)

33% of the score is based on the exercises (task + report)