Course Specifications
Valid as from the academic year 2019-2020

Biochemical Analysis Techniques (I630038)

Due to Covid 19, the education and evaluation methods may vary from the information displayed in the schedules and course details. Any changes will be communicated on Ufora.

Lecturers in academic year 2020-2021
Dumoulin, Ann
LA24

Offered in the following programmes in 2020-2021
Bachelor of Science in Bioindustrial Sciences

Course offerings and teaching methods in academic year 2020-2021
A (semester 2) Dutch Kortrijk seminar 10.0 h

guided self-study 10.0 h

lecture 10.0 h

Teaching languages
Dutch

Keywords
Food, rheology, viscosimetry, thermal properties, texture analysis

Position of the course
The goal of this course is to provide the students with an overview of physical analysis of food, cosmetics and pharmaceuticals and their influence on product and process properties. The first part deals with rheological properties followed by viscosity measurements. There are lab measurements on this part with the implementation of performance characteristics of the measurements and the work-out of an SOP. The third part deals with texture analysis and the last part is about the thermal analysis of food.

Contents
The course consists of a theoretical course and lab exercises:
1. Rheological properties of food, cosmetics and pharmaceuticals
2. Viscosity measurements
   • capillary viscosity
   • Zahn viscosity measurement
   • falling ball visometer
   • rotational viscometer
   • oscillatory rheometers
3. Food texture
4. Thermal food analysis

Initial competences
1 knowledge of and insight in the possibilities and limitations of the physical methods and apply them in team for complex food, cosmetics and pharmaceutical related problems
2 critical, creative and scientific thinking and reasoning
3 searching and interpreting relevant scientific and technical information (scientific literature, application notes, standards), preparing a research proposal, processing of the measurement data
4 implementation of environment, health and safety rules
5 preparing an SOP

Final competences

Conditions for credit contract

(Approved)
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, lecture, seminar.

Extra information on the teaching methods
10 h lectures with powerpoint presentation
10 h coached exercises and guided self-studie (paper)
10h lab

Learning materials and price
Digital learning environment
Dutch syllabus for the theoretical course, €12
Notes for exercise

References
in course notes

Course content-related study coaching
The teaching staff can allways be contacted to solve problems. Minerva will be used to post exercises and solutions of the exercises.

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, oral examination.

Examination methods in case of periodic evaluation during the second examination period
Written examination with open questions, oral examination.

Examination methods in case of permanent evaluation
Assignment, report

Possibilities of retake in case of permanent evaluation
examination during the second examination period is possible.

Extra information on the examination methods
permanent evaluation: paper, presentation, reports and SOP
periodic evaluation: written examination with open questions, oral examination

Calculation of the examination mark
First and second examination period:
periodic evaluation: 50%
permanent evaluation: 50%
In order to pass, one has to attain a score of at least 8/20 for both periodic and permanent evaluation. If this condition is not fulfilled, and when the calculated score is 10/20 or more, the student may be failed by the examinator and gets a score of 9/20.