

Technology of Biochemical Industries (I700164)

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

Credits	3.0	Study time	90 h	Contact hrs	24.0 h
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Course offerings and teaching methods in academic year 2018-2019

A (semester 1)	English	lecture	22.0 h
		excursion	2.0 h

Lecturers in academic year 2018-2019

De Gelder, Leen	LA25	lecturer-in-charge
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Offered in the following programmes in 2018-2019

Master of Science in Biochemical Engineering Technology	crdts	offering
	3	A

Teaching languages

English

Keywords

Biochemical technology, Bioreactor, Down-stream processing

Position of the course

Providing knowledge and insight concerning industrial biochemical production technologies

Contents

Fermentation dynamics and control, types of bioreactors, down stream processing
Animal cell cultivation
Thermal disinfection and cleaning in place

Initial competences

Microbiology
Engineering techniques I and II

Final competences

- 1 Insight into biochemical production systems and the required equipment and process control
- 2 Based on a desired product and some fixed parameters being able to suggest a production and processing scheme
- 3 Having insight into the monitoring and steering of biochemical production processes
- 4 Having knowledge concerning cleaning and disinfection methods used in biochemical industry

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

Excursion, lecture

Learning materials and price

References

- Peter F. Stanbury, Stephen J. Hall & Allan Whitaker, 2003, Principles of Fermentation Technology
Regine Eibl, Dieter Eibl, Ralf Pörtner, Gerardo Catapano & Peter Czermak (2009) Cell and Tissue Reaction Engineering. Springer-Verlag Berlin Heidelberg
John Villadsen Jens Nielsen & Gunnar Lidén (2011) Bioreaction Engineering Principles. Springer Science+Business Media, LLC

Course content-related study coaching

Evaluation methods

end-of-term evaluation

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

Participation

Possibilities of retake in case of permanent evaluation

examination during the second examination period is not possible

Calculation of the examination mark

Written exam: 100%