GHENT UNIVERSITY

Course Specifications

Valid as from the academic year 2017-2018

Pharmaceutical manufacturing techniques (J000449)

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

Credits 3.0	Study time 90 h	Contact hrs	25.0 h

Course offerings and teaching methods in academic year 2018-2019

A (semester 1)	English	self-reliant study activities	10.0 h
		demonstration	5.0 h
		lecture	10.0 h

Lecturers in academic year 2018-2019

De Geest, Bruno	FW01	lecturer-in-charge
De Beer, Thomas	FW02	co-lecturer
Vanhoorne, Valérie	FW01	co-lecturer

Offered in the following programmes in 2018-2019	crdts	offering
Master of Science in Drug Development	3	A

Teaching languages

English

Keywords

Drug dosage forms, process technology

Position of the course

This course discusses innovative dosage forms and their manufacturing techniques.

Contents

This course built on the knowledge gained during the course Pharmaceutical Technology, and covers the following topics:
• formulation of poorly water soluble drugs via hot-melt extrusion, spray-drying and nanoparticles
• processing of biopharmaceuticals via freezedrying
• continuous manufacturing in the pharmaceutical industry (e.g. hot-melt extrusion, injection moulding, continuous wet granulation)
• importance of Quality-by-Design (QbD) and Process Analytical Technologies (PAT) for (continuous) pharmaceutical manufacturing techniques

Initial competences

The student has successfully completed the course Drug Compounding (3rd Bachelor), or has acquired the corresponding competences otherwise. If this course is part of a "GIT" program, the course “Pharmaceutical Technology” must also be selected.

Final competences

1 To have insight in the problems associated with the formulation of poorly water soluble drugs.
2 To have knowledge about innovation within the pharmaceutical industry via continuous manufacturing.
3 To have insight in the importance of QbD and PAT for pharmaceutical manufacturing techniques.

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract

Access to this course unit via an exam contract is unrestricted

Teaching methods

Demonstration, lecture, self-reliant study activities

Extra information on the teaching methods

Interactive sessions in the research lab are organized to demonstrate contemporary pharmaceutical production techniques.
The independent work comprises reading of scientific papers related to the topics covered during the courses.

Learning materials and price

Handouts of the slides and scientific paper can be downloaded via Minerva.

References

n.a.

Course content-related study coaching

The student always has the possibility to contact the lecturer (after the courses, by appointment or by email).

Evaluation methods

end-of-term evaluation

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

Written examination with open questions, written examination with multiple choice questions

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

Written examination with open questions, written examination with multiple choice questions

Examination methods in case of permanent evaluation

Possibilities of retake in case of permanent evaluation

not applicable

Extra information on the examination methods

The examination will cover both general and specific questions in addition to more specific questions regarding the demonstration sessions and the scientific papers that should be read independently.

Calculation of the examination mark

The endscore is based on the written exam.

Facilities for Working Students

n.a.