GHENT UNIVERSITY

Course Specifications

Valid as from the academic year 2020-2021

Selective Separation of Strategic Elements (I002849)

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.

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

Credits 5.0 **Study time** 150 h **Contact hrs** 60.0 h

Course offerings in academic year 2022-2023

A (year) English Gent

Lecturers in academic year 2022-2023

Haseneder, Roland FREIBE01 lecturer-in-charge

Offered in the following programmes in 2022-2023	crdts	offering
International Master of Science in Sustainable and Innovative Natural Resource Management	5	A

Teaching languages

English

Keywords

Position of the course

Contents

membranes, modules, hybrid processes driving forces, transport resistances structures, materials mass transfer module construction MF, UF, NF, RO standard applications scaling, fouling effects special applications: mine water treatment, leaching solutions, resource recovery internship to membrane processes

Initial competences

Final competences

On completion of the course the student shall be able to explain membrane technology and the different applications like extraction and membrane assisted processes regarding the separation of value products. Focus is put on strategic elements. They can use their physicochemical knowledge on membrane separation, development of hybrid operation systems and the influences for practical applications and are familiar with the methods and problems related to separation devices. Due to the seminar the students will be able to dicuss the current literature on the topic.

Conditions for credit contract

This course unit cannot be taken via a credit contract

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Extra information on the teaching methods

S1 (WS): Lectures (2 SWS)
S1 (WS): Seminar (1 SWS)
S1 (WS): Practical Application (1 SWS)

Learning materials and price

References

Heinrich Strathmann: Introduction to Membrane Science and Technology, Wiley-VCH, 2011
Anil K. Pabby, Syed S.H. Rizvi, Ana Maria Sastre Requena: Handbook of Membrane Separations, CRC-Press 2008

Course content-related study coaching

Evaluation methods

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

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

Examination methods in case of permanent evaluation

Possibilities of retake in case of permanent evaluation

examination during the second examination period is possible

Calculation of the examination mark