

Industrial Project (E073720)

Course size (nominal values; actual values may depend on programme)
 Credits 6.0 Study time 180 h Contact hrs 67.5 h

Course offerings and teaching methods in academic year 2018-2019

Offering	Language	Teaching Method	Hours
A (semester 1)	Dutch	excursion	30.0 h
		seminar: practical PC	7.5 h
		room classes	
B (semester 1)	English	project	30.0 h
		seminar: practical PC	7.5 h
		room classes	
		excursion	30.0 h

Lecturers in academic year 2018-2019

De Smedt, Philip	TW11	lecturer-in-charge
Van Geem, Kevin	TW11	co-lecturer

Offered in the following programmes in 2018-2019

Programme	crdts	offering
Bridging Programme Master of Science in Chemical Engineering	6	B
Bridging Programme Master of Science in Chemical Engineering	6	A
Master of Science in Chemical Engineering	6	B
Master of Science in Chemical Engineering	6	A

Teaching languages

Dutch, English

Keywords

Position of the course

The student(s) will be given an assignment formulated by the chemical industry. This is e.g. the conceptual design of a chemical process. Assignments are solved in group and at UGent. AspenPlus is the reference software package for the simulation of chemical processes. Progress reports are made. Written and oral final evaluation is presented to the industrial partner.

Attention is paid to unit operations, safety and environment and economic aspects. Short visits to the chemical partner are made to summarize the process study. Preparation occurs at UGent.

Contents

- Project: Unit operations, Safety and environment, Economic context, Conceptual design, Presentation
- Company visit(s): Unit operations, Safety and environment, Economic context, Production processes, Presentation

Initial competences

Knowledge of AspenPlus

Final competences

To produce a conceptual design for a (new) chemical process

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, project, seminar: practical PC room classes

Extra information on the teaching methods

Projects; Plant visits; Computer-assisted problem solving

Learning materials and price

Design of chemical process systems

References

- Applied Process Design for Chemical and Petrochemical Plants (Ludwig)
- Perry's Chemical Engineers' Handbook
- Systematic methods of chemical process design (Biegler)
- Ullmanns encyclopedia of industrial chemistry
- Chemical Process Design and Integration (Robin Smith)
- Conceptual Design of Chemical Processes (Douglas)
- Process Design Principles (Seider)
- Pyrolysis: Theory and Industrial Practice (Albrecht)
- Petroleum refinery distillation (Watkins)
- Guide to refinery operating costs (Nelson)

Course content-related study coaching

Evaluation methods

end-of-term evaluation and continuous assessment

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

Oral examination, report

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

Oral examination, report

Examination methods in case of permanent evaluation

Report

Possibilities of retake in case of permanent evaluation

examination during the second examination period is possible

Extra information on the examination methods

During examination period: graded project reports; graded oral presentation

During semester: graded project reports; graded oral presentation. Second chance:

Possible in adapted form

Calculation of the examination mark

Evaluation throughout semester. Special conditions: participation to teamwork: 30%
interim presentations: 20% final report: 50%