

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

Credits	3.0	Study time	90 h	Contact hrs	22.5 h
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Course offerings and teaching methods in academic year 2018-2019

A (semester 2)	Dutch	lecture	22.5 h
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Lecturers in academic year 2018-2019

De Baets, Patrick	TW08	lecturer-in-charge
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Offered in the following programmes in 2018-2019

	crdts	offering
Bachelor of Science in Civil Engineering	3	A
Preparatory Course Master of Science in Fire Safety Engineering	3	A

Teaching languages

Dutch

Keywords

mechanical production, mechanical construction, reciprocating machinery, turbomachinery, mechanical power transmission

Position of the course

This course aims at providing basic insight in mechanical systems with application in civil engineering. Basic principles of mechanical construction and production are illustrated by means of characteristic applications. Turbo- and reciprocating machinery are treated as examples of mechanical energy conversion.

Contents

- Machine construction: mechanical construction, power transmission, tribology
- Mechanical production technology: casting, powder metallurgy, metal forming, metal removal
- Mechanical power technology: reciprocating machinery, turbomachines

Initial competences

Transport phenomena
Mechanics of materials

Final competences

- 1 Reading of mechanical drawings
- 2 Knowledge of important machine elements: gears, belts, chains, hydraulic components, bearings
- 3 Distinguishing and describing mechanical production processes: forming and machining
- 4 Understand operation of energetic equipment: piston machines, turbomachinery

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

Lecture

Extra information on the teaching methods

Lectures

Lab visit with demonstration

Learning materials and price

'Machines aan het werk: een inleiding tot de werktuigkunde', Patrick De Baets,
Uitgeverij Acco, ISBN: 9789033485183, cost approx 45 Euros
Electronic presentations, images, videos on Minerva

References

Course content-related study coaching

Lecturer is available before and after classes

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

Possibilities of retake in case of permanent evaluation

not applicable

Extra information on the examination methods

During examination period: written closed-book exam

Calculation of the examination mark