

Railway Technology Fundamentals (E053642)

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	<i>(nominal values; actual values may depend on programme)</i>		
Credits 3.0	Study time 90 h	Contact hrs	25.0 h

Course offerings and teaching methods in academic year 2022-2023

A (semester 1)	English	Gent	excursion	10.0 h
			lecture	15.0 h

Lecturers in academic year 2022-2023

Bonne, Hendrik	TW08	lecturer-in-charge
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Offered in the following programmes in 2022-2023

	crdts	offering
Master of Science in Electrical Engineering Technology (main subject Automation)	3	A
Master of Science in Electromechanical Engineering (main subject Control Engineering and Automation)	3	A
Master of Science in Electrical Engineering Technology (main subject Electrical Engineering)	3	A
Master of Science in Electromechanical Engineering (main subject Electrical Power Engineering)	3	A
Master of Science in Electromechanical Engineering (main subject Maritime Engineering)	3	A
Master of Science in Electromechanical Engineering (main subject Mechanical Construction)	3	A
Master of Science in Electromechanical Engineering (main subject Mechanical Energy Engineering)	3	A
Master of Science in Electromechanical Engineering Technology	3	A

Teaching languages

English

Keywords

rolling stock, traction, braking, safety, running stability

Position of the course

This course treats the basics of railway technology. It is an application of mechanics and electrotechnical technology.

Contents

- Railway transport
- Introduction to traction systems
- Rolling stock: basic concepts, traction equipment, braking systems
- Railway guidance mechanism and running stability
- Propulsion of train vehicles

Initial competences

mechanical, electrotechnical and electronics basics

Final competences

- 1 Being able to explain electrical traction.
- 2 Being able to explain running stability.
- 3 Being able to make choices in rolling stock braking systems.
- 4 Situating railways within the transport world.

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

Extra information on the teaching methods

Company visits are aimed at rolling stock and fixed installations.

Learning materials and price

Lecture notes provided by lecturer (5 euros).

References

Course content-related study coaching

Evaluation methods

end-of-term evaluation

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

Oral examination

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

Oral 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: oral closed-book exam

Calculation of the examination mark