Course: Research & Development — credits: 5

Course code	WBVB25RD
Name	Research & Development
Study year	2026-2027
ECTS credits	5
Language	Dutch, with parts in English, English
Coordinator	B. Heikema
Modes of delivery	Education
Assessments	Research & Development - Assignment

Learning outcomes

The student:

- can analyse a technical-analytical system and draw up a schematic model in which all relevant physical parameters are quantified.
- Can describe the operation of a technical system using relevant mechanical engineering equations (mechanics, electrical engineering, thermodynamics, etc.) and model this in a spreadsheet or simulation environment.
- Can design and execute an experiment or test to determine and quantify the influence of individual parameters.
- Can execute an experiment in a structured and reproducible manner and collect data that is relevant, reliable and suitable for further analysis.
- Can report the results of both theoretical and experimental research clearly and formulate substantiated conclusions and recommendations in a technical report.

Content

In the R&D module, the analysis, modelling and testing of functional systems will be studied. The learning outcomes describe the competencies that are expected of the student when conducting both theoretical and practical research within R&D.
The student learns to view systems from a systematic and practical perspective, in which both the theoretical foundation and the practical execution of experiments are important. Drawing up models, conducting calculations and simulations, and validating results by means of experiments are essential components of this. The results are used to analyze technical problems and to devise and sunstantiate new solutions to the problem. In doing so, the student is expected to collect and process data in a structured and reproducible manner and to report the findings clearly in a technical report.

Included in programme(s)

Mechanical Engineering VWO a 3-year variant
Mechanical Engineering
Exchange Research, Design & Engineering (spring)

School(s)

Engineering, Life Sciences & ICT

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