

Subatomic Physics (E025220)

Course size (nominal values; actual values may depend on programme)
 Credits 6.0 Study time 180 h Contact hrs 60.0 h

Course offerings and teaching methods in academic year 2018-2019

Offering	Language	Teaching Methods	Hours
A (semester 2)	Dutch	seminar: coached exercises	30.0 h
		guided self-study	30.0 h
B (semester 2)	English	lecture	30.0 h
		seminar: coached exercises	30.0 h

Lecturers in academic year 2018-2019

Dobur, Didar WE05 lecturer-in-charge

Offered in the following programmes in 2018-2019

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

Teaching languages

Dutch, English

Keywords

Nuclear Physics. Particle Physics.

Position of the course

This course gives an introduction in subatomic physics. The core elements of nuclear and high energy physics are introduced. Part of the course is dedicated to an overview of applications of this physics.

Contents

- Nuclear physics: Introduction, Nuclear structure, Unstable nuclei, Nuclear reactions
- High-energy physics: General concepts, Electron scattering, The standard model

Initial competences

Quantum Mechanics.

Final competences

- 1 Radioactivity; Elementary particles; Quarks; Fundamental interactions.
- 2 Fissiereacties

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

Guided self-study, lecture, seminar: coached exercises

Learning materials and price

Syllabus

References

- B. Povh, K. Rith, "Nuclei and particles: an introduction to the physical concepts" (Springer, 1995)

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

Written examination with open questions, oral examination, assignment

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

Written examination with open questions, oral examination, assignment

Examination methods in case of permanent evaluation

Possibilities of retake in case of permanent evaluation

not applicable

Extra information on the examination methods

Theory: oral closed-book exam, written preparation

Exercises: written with open book

Calculation of the examination mark