GHENT UNIVERSITY

Course Specifications

Valid as from the academic year 2018-2019

Subatomic Physics 1 (C002100)

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

Credits	6.0	Study time	180 h
Contact hrs	52.5 h		

Course offerings and teaching methods in academic year 2018-2019

A (semester 2)	English	lecture	30.0 h
		seminar: coached exercises	22.5 h

Lecturers in academic year 2018-2019

Dobur, Didar	WE05	lecturer-in-charge

Offered in the following programmes in 2018-2019	crdts	offering
Bachelor of Science in Physics and Astronomy	6	A
Preparatory Course Master of Science in Physics and Astronomy	6	A

Teaching languages

English

Keywords

Nuclear physics, particle physics

Position of the course

An introduction in subatomic physics is given. On the one hand a comprehensive overview is presented that should give the Bachelor Physics a complete picture of subatomic physics. On the other hand the basis is laid for more detailed courses in Master courses.

Contents

- General concepts
- Nuclear structure
- Unstable nuclei
- Nuclear reactions
- High Energy Physics
- General concepts
- Electron scattering
- The Standard model

Initial competences

Basics of quantum mechanics

Final competences

1 Have the ability to start advanced courses in nuclear or high energy physics.
2 Have a consistent picture of the deepest structure of matter.
3 Have the necessary basis to take advanced courses dealing with applications of nuclear physics methods.

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, seminar: coached exercises

Learning materials and price

B.Povh, K.Rith, “Nuclei and particles: an introduction to the physical concepts” (Springer, 1995) (ca.60Euro)

References

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Course content-related study coaching

Students have individual access to the lecturer after the lectures. The lecturer is always reachable through e-mail.

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, open book examination, oral examination, assignment

Examination methods in case of permanent evaluation

Possibilities of retake in case of permanent evaluation

examination during the second examination period is possible in modified form

Extra information on the examination methods

Theory: written (closed book) + oral
Exercises: written (open book)
Homework assignment

Calculation of the examination mark

Theory: 40%
Exercises: 40%
Homework assignment:20%
Small deviations from the exact division are possible, depending on the difficulty of the questions in each category.