GHENT UNIVERSITY

Course Specifications

From the academic year 2024-2025 up to and including the academic year

Capita Selecta Solid-state Physics (C003127)

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

Credits 6.0 **Study time 180 h**

Course offerings in academic year 2024-2025

Lecturers in academic year 2024-2025

Vrielinck, Henk	WE04	lecturer-in-charge
Simoen, Eddy	WE04	co-lecturer

Offered in the following programmes in 2024-2025	**crdts**	**offering**

Teaching languages

English

Keywords

Influence of defects on semiconductor properties, applications of semiconductors, present-day solid state research, guest lectures

Position of the course

Advanced course in solid state physics, that can be taken up after basic courses in Materials physics and Solid state physics. The purpose is to make the students acquainted with current subjects of the solid state research at Ghent University with emphasis on semiconductors and the influence of defects on their properties.

Contents

In the first lectures in the series, properties and applications of semiconductors are further studied, along with research techniques for studying defects in semiconductors.
The remaining lectures cover diverse topics in contemporary solid state research at Ghent University and other universities and research institutions. These topics may vary form year to year and are given by given (on campus or online) by UGent and external guest lecturers.

Initial competences

To have acquired a basic knowledge in general physics, materials physics, solid state physics, semiconductor and atomic and molecular physics.

Final competences

1 Able to follow and understand lectures on solid state research at an advanced level.
2 Knowledge on how to deal with the information provided in scientific talks.
3 Understanding of the possibilities, applicability and importance of the research methods taught.

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

Seminar, Lecture, Independent work

Study material

Type: Slides

Name: Slides for the different modules in this course
Indicative price: Free or paid by faculty
Optional: no
Language : English
Oldest Usable Edition : Use the most recent version on UFORA
Available on Ufora : Yes
Online Available : No
Available in the Library : No
Available through Student Association : No
Additional information: The exam is open course, so the slides can be used as information These are made available electronically on the exam. There is no need to print the slides

References

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Course content-related study coaching

Direct contact with the lecturers in interactive sessions. Appointment with lecturers via email. Interaction via Ufora.

Assessment moments

end-of-term and continuous assessment

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

Written assessment open-book

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

Examination methods in case of permanent assessment

Assignment

Possibilities of retake in case of permanent assessment

not applicable

Extra information on the examination methods

The permanent evaluation is under the form of a report about specified literature.
The exam is written and open book, with open, comprehension- and/or practice-oriented questions about various topics that have been covered in the series of lectures.

Calculation of the examination mark

Permanent evaluation (report on literature) : 5 points
Exam: 15 points
The score on the permanent evaluation is transferred to the second exam period, unless the student wants to retake the assignment for permanent evaluation.