

ELEC-E3140

Semiconductor physics

Autumn 2021

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Lectures Wed 14:15-16, Zoom, start from Sep 15

Exercises Tue 14:15-16, Zoom, start from Sep 21

Required background

Young, Freedman: University Physics (or similar book including basics of quantum mechanics)

Mid-term exams (2x40%) + lecture quizzes (20%)

OR

Exam (80%) + lecture quizzes (20%)

OR

Exam/Mid-terms only

- The best grade is calculated automatically from the above options
- Mid-term and full exam have 5 questions: 1 about explanation of terms and phenomena, 4 essay questions.
- All exams remotely in MyCourses.



Quizzes

The quizzes are YES or NO type statements about the previous week's lecture.

The quizzes are held on Wednesdays 15:15 Finnish time on MyCourses (so they are after the lecture break). The first one will be on September 22.

The quizzes are graded automatically.

This year exercise sessions are a combination of hints for the next week and solutions of the current week.

Problems are available on the webpage on Friday (previous week).

Table of material parameters will be available on the course webpage.

This year you do not get extra credit for solving the problems.

- **Book** NO specific course book
- **Most closely follows the following books (first half)**
 - Pallab Bhattacharya, Semiconductor Optoelectronic Devices
 - Jasprit Singh, Semiconductor Optoelectronics
- **Online book**
 - C. C. Hu, Modern Semiconductor Devices for Integrated Circuits
 - <http://www.eecs.berkeley.edu/~hu/Book-Chapters-and-Lecture-Slides-download.html>