

## Syllabus

Instructor: Prof. Carmen S. Menoni

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Class times: TR 9.30-10.50 AM

Office hours: TR 8.30 – 9.30 AM or by appointment

Textbook: “Semiconductor Physics and Devices”, Donald A. Neamen, Fourth Edition

Course Description: This course introduces basic concepts of semiconductor physics which are needed for the understanding of the operation and limitations of semiconductor devices

Course credits: 1

Course pre-requisites: PH142; MATH340 or MATH345

Grading and exams:

2 quizzes; at the end of chapter 2 and chapter 4 Final Exam on Thursday Friday 20, 2020	85%
In class problems discussion	15%

**Homework** will be assigned once a week. It will not be graded. There will be discussion on the homework in class and this will be graded.

**Quizzes:** There will be 2 quizzes at the end of chapter 2 and 4. These will be opened notes and book but not homework.

**Final exam:** Comprehensive; in class, open notes and book. Not opened homework.

## Course Outline

Material for the class will be stored in CANVAS

Course Outline:

No. lectures	Topic
1	<b>Chapter 1</b> The crystal structure of solids
1	<b>Chapter 2</b> Introduction to Quantum Mechanics
2	<b>Chapter 3</b> Introduction to the Quantum Theory of Solids
2	<b>Chapter 4</b> The semiconductor in equilibrium
2	<b>Chapter 5</b> Carrier Transport Phenomena

**The pace of this class requires students to read each chapter ahead before they are discussed in class.**

**Class Etiquette** Phones and other electronic devices must be turned off at the beginning of the class and remain off during the duration of the class.