COURSE DETAIL

PHYSICS OF SEMICONDUCTORS & DEVICES
Country Singapore
Host Institution Nanyang Technological University
Program(s) Nanyang Technological University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Physics
UCEAP Course Number 150
UCEAP Course Suffix
UCEAP Official Title PHYSICS OF SEMICONDUCTORS & DEVICES
UCEAP Transcript Title SEMICONDUCTORS/DVCS
UCEAP Quarter Units 4.50
UCEAP Semester Units 3.00

Course Description

This course provides a comprehensive introduction to the physics of semiconductors and devices. It covers essential topics including principles and design and the foundational knowledge of the functionality and applications of the devices. Students design experiments that use these devices, and link theory and practice so that concepts learned in the course can be implemented. Topics include widely used semiconductor devices, such as diode and transistor, or memory, such as, SRAM, DRAM, and NAND Flash. This course familiarizes students with the common semiconductor devices in the advanced manufacturing industry to gain the relevant background in the semiconductor industry. The course requires students to take prerequisites.

Language(s) of Instruction
English

Host Institution Course Number
PH4601

Host Institution Course Title
PHYSICS OF SEMICONDUCTORS & DEVICES

Host Institution Course Details
https://wis.ntu.edu.sg/webexe/owa/aus_subj_cont.main

Host Institution Campus

Host Institution Faculty
School of Physical and Mathematical Sciences

Host Institution Degree

Host Institution Department
Physics

Course Last Reviewed
2025-2026

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