

Code	ECE 585
Name	Semiconductor Device Fundamentals
Hour per week	3+0 (Theory + Practice)
Credit	3
ECTS	10
Level/Year	Graduate / M.Sc.-Ph.D.
Semester	Fall-Spring
Type	Elective
Prerequisites	General Semiconductor Physics and Electronics Engineering Background
Content	Crystal structure-atoms and electrons, Energy bands and charge carrier in semiconductors, Optical absorption, luminescence, carrier lifetime and diffusion, Junctions, Field effect transistors-Bipolar junction transistors, Photodiodes, Light emitting diodes, Solar cells, Lasers