

Curriculum

- Students can take all the elective courses that are provided by Dept. of Physics, Dept. of Materials Science & Engineering, Dept. of Chemical & Biomolecular Engineering, and Division of Mechanical Engineering. But the following courses are prior to all other courses.
- It is available to take the research and seminars of the participating departments for research subjects.

Classification		Subject No.	Subject Name	Lecture:Lab: Credit (Homework)	Semester	Remark
General Courses	Required	CC010 CC020	Special Lecture on Leadership Ethics and Safety I	1:0:0(0) 1AU	Fall Spring/Fall	
	Choose 1	CC510	Introduction to Computer Application	2:3:3(10)	Spring/Fall	*IE641
		CC511	Probability and Statistics	2:3:3(6)	Spring/Fall	
		CC512	Introduction to Materials and Engineering	3:0:3(3)	Spring/Fall	
		CC522	Introduction to Instruments	2:3:3	Spring/Fall	
Mandatory Major Course		-	Introduction to Semiconductor Photonics (will be open)	-	-	
Elective Course		PH503	Quantum Mechanics I	3:0:3(4.5)	Spring	**
		PH507	Advanced Electrodynamics I	3:0:3(4.5)	Fall	**
		PH508	Advanced Electrodynamics II	3:0:3(4.5)	Spring	**
		PH611	Advanced Solid State Physics I	3:0:3(4.5)	Spring/Fall	
		PH613	Semiconductor Physics	3:0:3(4.5)	Spring/Fall	
		PH621	Advanced Wave Optics	3:0:3(4.5)	Spring/Fall	
		PH622	Geometrical Optics	3:0:3(4.5)	Spring/Fall	
		PH726	Semiconductor Optics	3:0:3(4.5)	Spring/Fall	
		MS415	Introduction to Semiconductor Devices	3:0:3(2)	Spring	**
		MS613	Solid State Physics	3:0:3(3)	Fall	
		MS620	Optical Materials	3:0:3(3)	Spring	
		MS624	Optical Waves and Periodic Media	3:0:3(3)	Fall	
		MS635	Semiconductor Integrated Process Design	3:0:3(2)	Fall	
		MS670	Sol-Gel Nano Materials and Process	3:0:3(3)	Fall	
		CBE525	Molecular Electronics	3:0:3(3)	Spring/Fall	**
		CBE552	Materials Engineering of Polymers	3:0:3(3)	Spring/Fall	**
		CBE556	Structure and Properties of Macromolecules	3:0:3(3)	Spring	**
		CBE572	Inorganic Materials Processing	3:0:3(4)	Spring/Fall	**
		CBE682	Organic Nano-Structured Materials	3:0:3(3)	Spring	
		MAE510	Advanced Fluid Mechanics	3:0:3(6)	Spring	**
		MAE512	Advanced Heat Transfer	3:0:3(6)	Fall	**
MAE521	Viscous Fluid Flow	3:0:3(6)	Fall	**		
MAE611	Convective Heat Transfer	3:0:3(6)	Spring			
MAE613	Computational Fluid Mechanics and Heat Transfer	3:0:3(6)	Fall			
Research		PH960	M.S. Thesis	1:0:1	Spring/Fall	
		PH966	M.S. Seminar		Spring/Fall	
		PH980	Ph.D. Thesis	Spring/Fall		
		PH986	Ph.D. Seminar	1:0:1	Spring/Fall	

※ Note: 1) * stands for substitutable courses

2) ** stands for courses open to both undergraduate and graduate students