Curriculum

Typically, students can take all the courses that are provided by the Dept. of Electrical Engineering, Physics, Chemistry, Materials Science & Engineering, Chemical & Biomolecular Engineering, and Division Mechanical Engineering. The following courses are highly recommended.

Classification	Subject No.	Subject Name	Lecture:Exp.: Credit (Homework)	Term
Elective Course	EE535	Digital Image Processing	3:0:3(6)	Spring
	EE555	Optical Electronics	3:0:3(6)	Spring
	EE566	MEMS in EE Perspective	3:0:3(6)	Fall
	EE568	Introduction to Organic Electronics	3:0:3(6)	Fall
	EE571	Advanced Electronic Circuits	3:0:3(6)	Spring
	EE647	Nano-Photonics	3:0:3(6)	Spring
	EE666	Optoelectronic Semiconductor Devices and Their Applications	3:0:3(6)	Fall
	EE676	Analog Integrated Circuits	3:0:3(6)	Fall
	EE766	Plasma Electronics	3:0:3(6)	Fall
	EE772	Electronic Circuits for Green Energy	3:0:3(6)	Fall
	EE867	Special Topics in Physical Electronics	3:0:3(6)	Spring · Fall
	PH441	Introduction to Plasma Physics	3:0:3(4.5)	Fall
	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
	PH615	Introduction to Phase Transition	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
	PH643	Applied Plasma Physics	3:0:3(4.5)	Spring · Fall
	PH721	Nonlinear Optics	3:0:3(4.5)	Spring · Fall
	PH726	Semiconductor Optics	3:0:3(4.5)	Spring · Fall
	CH542	Organometallic Chemistry	3:0:3(3)	Fall
	CH607	Surface Chemistry	3:0:3(3)	Spring · Fall
	CH671	Organic Chemistry of High Polymers	3:0:3(3)	Spring · Fall
	CH674	Organic Electronic Materials	3:0:3(3)	Spring · Fall
	CH675	Introduction to Lithography	3:0:3(3)	Spring · Fall
	CBE473	Microelectronics Processes	3:0:3(3)	Spring · Fall
	CBE525	Molecular Electronics	3:0:3(3)	Spring · Fall

Classification	Subject No.	Subject Name	Lecture:Exp.: Credit (Homework)	Term
Elective Course	CBE551	Polymer Rheology	3:0:3(3)	Spring · Fall
	CBE552	Materials Engineering of Polymers	3:0:3(3)	Spring · Fall
	CBE554	Physical Principles of Polymers	3:0:3(3)	Fall
	CBE572	Inorganic Materials Processing	3:0:3(4)	Spring · Fall
	CBE631	Microfluidics	3:0:3(4)	Fall
	CBE682	Organic Nano-Structured Materials	3:0:3(3)	Spring
	MS536	Thin Film Processing	3:0:3(2)	Spring
	MS544	Engineering of Soft Materials	3:0:3(3)	Fall
	MS575	Non-Crystalline Materials	3:0:3(3)	Fall
	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
	MS697	Special Topics in Advanced Materials II	3:0:3(3)	Spring · Fall
	MAE505	Sensor and Instrumentation Engineering	3:1:3(6)	Fall
	MAE512	Advanced Heat Transfer	3:0:3(6)	Fall
	MAE537	Optional design of Composite Structures	3:0:3(6)	Spring
	MAE549	Reliability in Microsystems Packaging	3:1:3(6)	Fall
	MAE574	Joining Engineering	3:1:3(6)	Fall
	MAE582	Introduction to Microfabrication Technology	3:0:3(6)	Spring
	MAE583	MEMS Design and Experimental Microfabrication	2:3:3(6)	Fall
	MAE587	Optomechatronics	3:0:3(6)	Fall
	MAE589	Applied Optics	3:1:3(6)	Spring
	MAE592	Laser : Principles and Applications	3:0:3(6)	Fall
	MAE633	Mechanical Behavior of Polymeric and Composite Materials	3:0:3(6)	Fall
	MAE800	Special Topics in Mechanical Engineering	3:0:3(6)	Spring · Fall