

Curriculum

☐ Undergraduate Course

Classification	Subject No.	Subject Name	Lecture:Lab.: Credit(Assignment)	Semester	Remark
Mandatory Major Course	PH221	Classical Mechanics I	3:0:3(6)	spring	
	PH231	Electromagnetism I	3:0:3(6)	spring	
	PH251	Physics Laboratory I	0:4:2(3)	spring	
	PH301	Quantum Mechanics I	3:0:3(6)	spring	
	PH302	Quantum Mechanics II	3:0:3(6)	fall	
	PH311	Thermal Physics	3:0:3(4.5)	spring	
	PH351	Physics Laboratory III	0:3:2(3)	spring/fall	
Elective Major Course	PH211	Mathematical Methods in Physics I	3:0:3(6)	fall	
	PH212	Mathematical Methods in Physics II	3:0:3(6)	spring	
	PH222	Classical Mechanics II	3:0:3(6)	fall	
	PH232	Electromagnetism II	3:0:3(6)	fall	
	PH241	Modern Physics	3:0:3(4.5)	spring	
	PH252	Physics Laboratory II	0:4:2(3)	fall	
	PH312	Statistical Physics	3:0:3(6)	fall	
	PH361	Solid State Physics I	3:0:3(4.5)	fall	
	PH391	Optics	3:0:3(4.5)	spring/fall	
	PH401	Atomic and Molecular Physics	3:0:3(4.5)	spring/fall	**
	PH402	Laser Optics	3:0:3(4.5)	spring/fall	**
	PH413	Computational Physics	2:3:3(4.5)	spring/fall	**
	PH421	Nonlinear Dynamics	3:0:3(4.5)	fall	**
	PH430	Biophysics	3:0:3(4.5)	spring/fall	**
	PH431	Soft Matter Physics	3:0:3(4.5)	spring	**
	PH441	Introduction to Plasma Physics	3:0:3(4.5)	fall	**
	PH450	Nuclear and Elementary Particle Physics	3:0:3(4.5)	fall	
	PH462	Solid State Physics II	3:0:3(4.5)	spring	
	PH471	Theory of Relativity and Cosmology	3:0:3(4.5)	spring	**
	PH481	Astrophysics	3:0:3(4.5)	fall	**
PH487	Lecture on current topics of physics research I	1:0:1(1.5)	summer		
PH488	Lecture on current topics of physics research II	2:0:2(3)	summer		
PH489	Special Topics in Physics	3:0:3(4.5)	spring/fall	**	
Research	PH490	B.S. Thesis Research	0:6:3	spring/fall	
	PH495	Individual Study	0:6:1	spring/fall	
	PH496	Seminar	1:0:1	spring/fall	
	PH497	Special Topics in Experimental Physics	2:2:2(3)	fall	

※ Note: * stands for courses open to both undergraduate and graduate students

□ Graduate Course

Classification	Subject No.	Subject Name	Lecture:Lab.: CreditAssignment)	Semester	Remark
Mandatory General Course	CC510	Introduction to Computer Application	2:3:3(10)	spring/fall	Choose 1
	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(8)	fall	
Mandatory Major Course	PH503	Quantum Mechanics I	3:0:3(4.5)	spring	**
	PH507	Advanced Electrodynamics I	3:0:3(4.5)	fall	**
	PH601	Applied Physics Laboratory I	0:9:3(4.5)	spring	
Elective Course	PH504	Quantum Mechanics II	3:0:3(4.5)	fall	**
	PH505	Advanced Mechanics	3:0:3(4.5)	spring	**
	PH508	Advanced Electrodynamics II	3:0:3(4.5)	spring	**
	PH509	Statistical Mechanics	3:0:3(4.5)	spring	**
	PH602	Applied Physics Laboratory II	0:9:3(4.5)	fall	
	PH611	Advanced Solid State Physics I	3:0:3(4.5)	spring/fall	
	PH612	Advanced Solid State Physics II	3:0:3(4.5)	spring/fall	
	PH613	Semiconductor Physics	3:0:3(4.5)	spring/fall	
	PH614	Light Scattering Spectroscopy	3:0:3(4.5)	spring/fall	
	PH615	Introduction to Phase Transition	3:0:3(4.5)	spring/fall	
	PH616	Semiconductor Photonics	2:3:3(4.5)	spring	
	PH621	Advanced Wave Optics	3:0:3(4.5)	spring/fall	
	PH622	Geometrical Optics	3:0:3(4.5)	spring/fall	
	PH624	Quantum Optics	3:0:3(4.5)	spring/fall	
	PH625	Advanced Spectroscopy	3:0:3(4.5)	spring/fall	
	PH627	Fiber Optics	3:0:3(4.5)	spring/fall	
	PH641	Advanced Plasma Physics	3:0:3(4.5)	spring/fall	
	PH642	Plasma Waves	3:0:3(4.5)	spring/fall	
	PH643	Applied Plasma Physics	3:0:3(4.5)	spring/fall	
	PH650	Advanced Soft Matter Physics	3:0:3(4.5)	fall	
	PH653	Relativistic Quantum Field Theory I	3:0:3(4.5)	spring/fall	
	PH654	Relativistic Quantum Field Theory II	3:0:3(4.5)	spring/fall	
	PH711	Physics of Magnetism	3:0:3(4.5)	spring/fall	
	PH713	Physics of Superconductivity	3:0:3(4.5)	spring/fall	
	PH716	Topics in Solid State Physics I	3:0:3(4.5)	spring/fall	
	PH717	Topics in Solid State Physics II	3:0:3(4.5)	spring/fall	
	PH721	Nonlinear Optics	3:0:3(4.5)	spring/fall	
	PH724	Laser Plasma Interactions	3:0:3(4.5)	spring/fall	
	PH726	Semiconductor Optics	3:0:3(4.5)	spring/fall	
	PH741	Topics in Plasma Physics	3:0:3(4.5)	spring/fall	
	PH742	Plasma Confinement Theory	3:0:3(4.5)	spring/fall	
	PH754	Advanced Particle Physics	3:0:3(4.5)	spring/fall	
PH757	Topics in Particle Physics	3:0:3(4.5)	spring/fall		
PH878	Advanced lecture on current topics of physics research I	1:0:1(1.5)	summer		
PH879	Advanced lecture on current topics of physics research II	2:0:2(3)	summer		
PH880	Topics in Physics	3:0:3(4.5)	spring/fall		
Research	PH960	M.S. Thesis		spring/fall	

Classification	Subject No.	Subject Name	Lecture:Lab.: CreditAssignment)	Semester	Remark
	PH965	Independent Study in M.S.		spring/fall	
	PH966	M.S. Seminar	1:0:1	spring/fall	
	PH968	Introduction to Physics Research	2:0:2	spring	
	PH980	Ph.D. Thesis		spring/fall	
	PH986	Ph.D. Seminar	1:0:1	spring/fall	
	PH990	Physics Colloquium	1:0:0	spring/fall	

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