

**DEPARTMENT OF PHYSICS
PHYSICS MAJOR**

Bachelor of Science Degree

		Semester Hours		
		1 st Sem	2 nd Sem	Total Hours
FRESHMAN YEAR				
PHYS 112,113	General Physics I and II	4	4	8
ENGL 110/111	Composition I/II	3	3	6
GEHE	Wellness Elective	2		2
MATH 200, 201	Calculus I and II	3	3	6
FRST	Freshman Studies	2		2
GE	History Elective		3	3
ECON 100	Basic Economics		3	3
GE	Global Studies	3		3
		17	16	33
SOPHOMORE YEAR				
PHYS 214, 311	General Physics III/Optical Physics	4	3	7
PHYS 217	Intermediate Lab		2	2
PHIL 180	Critical Thinking	3		3
MATH 300,301	Calculus III/Multivariate Calculus	3	3	6
TECH	Technical Elective	3		3
GE	Literature Elective		3	3
	Unrestrictive Elective		2	2
	Restrictive Elective	3	3	6
		16	16	32
JUNIOR YEAR				
PHYS 218	Intermediate Lab	2		2
PHYS 312	Thermal Physics		3	3
PHYS 313	Physical Mechanics	3		3
PHYS 319	Advanced Lab I		3	3
PHYS 350	Continuum Mechanics		3	3
MATH 350	Differential Equations		3	3
CHEM 101,102	General Chemistry	3	3	6
CHEM 103,104	Laboratory	1	1	3
GE	Humanities Elective	3		3
		12	16	28
SENIOR YEAR				
PHYS 320	Advanced Lab II	3		3
PHYS 414,415	Electromagnetism I & II	3	3	6
PHYS 418	Mathematical Methods of Physics	3		3
PHYS 481	Introduction to Condensed Matter Physics	3		3
PHYS 424	Senior Thesis		2	2
PHYS 416/417	Quantum Mechanics I & II	3	3	3
PHYS 416	Biophysics		3	3
MCET102	Machines Laboratory		1	1
		15	12	27
				120

Senior-level restrictive electives can be selected from upper level math/stat./computer science/engineering courses such as MATH350 or from CHEM401, CHEM402, and CHEM 404. Sophomore-level restrictive electives can be selected from 100-level or above math/stat./computer science/engineering courses

**DEPARTMENT OF PHYSICS
BIOLOGICAL PHYSICS CONCENTRATION**

Bachelor of Science Degree

		Semester Hours		
		1st Sem	2nd Sem	Total Hours
FRESHMAN YEAR				
PHYS 112,113	General Physics I and II	4	4	8
MATH 200, 201	Calculus I and II	3	3	6
ENGL 110/111	Composition I/II	3	3	6
GEHE	Wellness Elective	2		2
FRST	Freshman Studies	2		2
GE	History Elective		3	3
GE	Humanities Elective	3		3
GE	Humanities Elective		3	3
		17	16	33
SOPHOMORE YEAR				
PHYS 214, 311	General Physics III/Optical Physics	4	3	7
PHYS 217	Intermediate Lab		2	2
MATH 300,301	Calculus III/Multivariate Calculus	3	3	6
TECH	Technical Elective	3		3
GEPI 140	Introduction to Philosophy	3		3
GE	Literature Elective		3	3
BIOL 120,121	Principles of Biology I, II	4	4	8
		17	15	32
JUNIOR YEAR				
PHYS 218	Intermediate Lab	2		2
PHYS 312	Thermal Physics		3	3
PHYS 313	Physical Mechanics	3		3
MATH 350	Differential Equations		3	3
CHEM 101,102	General Chemistry	3	3	6
CHEM 103,104	Laboratory	1	1	2
BIOL 201	Cell and Molecular Biology	4		4
BIOL 220	Principles of Genetics		4	4
	Restrictive Elective	2		2
		15	14	29
SENIOR YEAR				
PHYS 414,415	Electromagnetism I & II	3	3	6
PHYS 424	Senior Thesis		2	2
PHYS 418	Methods of Mathematical Physics	3		3
PHYS 419	Introduction to Condensed Matter Physics	3		3
PHYS 416, 417	Quantum Mechanics I & II	3	3	6
PHYS 481	Biophysics		3	3
GE	Global Studies		3	3
		12	14	26
				120

Restricted electives can be selected from upper level engineering/physics/math/statistics/biology/computer science courses.

**DEPARTMENT OF PHYSICS
ENGINEERING PHYSICS CONCENTRATION**

Bachelor of Science Degree

		Semester Hours		
		1st Sem	2nd Sem	Total Hours
FRESHMAN YEAR				
PHYS 112,113	General Physics I and II	4	4	8
ENGL 110,111	Composition I/II	3	3	6
GEHE	Wellness Elective	2		2
MATH 200,201	Calculus I and II	3	3	6
FRST	Freshman Studies	2		2
GE	History Elective		3	3
GE	Humanities Elective	3		3
ENGT 100	Introduction to Engineering Technology		2	2
		17	15	32
SOPHOMORE YEAR				
PHYS 214,311	General Physics III/Optical Physics	4	3	7
PHYS 217	Intermediate Lab		2	2
GEPI 140	Introduction to Philosophy	3		3
MATH 300,301	Calculus III/Multivariate Calculus	3	3	6
TECH	Technical Elective	3		3
ENGT 105	Engineering Problem Solving		1	1
ELET 101,102	Circuit Analysis I, II	4	4	8
	Unrestrictive Elective		2	2
		17	15	32
JUNIOR YEAR				
PHYS 218	Intermediate Lab	2		2
PHYS 312	Thermal Physics		3	3
ENGT 301	Computer Programming	3		3
MATH 350	Differential Equations		3	3
CHEM 101,102	General Chemistry	3	3	6
CHEM 103,104	Laboratory	1	1	2
GE	Humanities Elective		3	3
PHYS 313	Physical Mechanics	3		3
GE	Literature Elective	3		3
		15	13	28
SENIOR YEAR				
PHYS 414,415	Electromagnetism I & II	3	3	6
PHYS 424	Senior Thesis		2	2
ELET 203	Introduction to Electronics	4		4
CPEG 403	Engineering Computations	3		3
GE	Global Studies	3		3
PHYS 416,417	Quantum Mechanics I & II	3	3	6
MCET 102	Machines Laboratory		1	1
	Restrictive Elective		3	3
		16	12	28
				120

Restricted electives can be selected from upper level engineering/physics/math/statistics/computer science courses.