



Physics (PHYS)

First Year

Fall Semester

Code	Title	Credits	Prerequisites	Corequisites
MATH210	Calculus II	3	MATH160	
MATH225	Linear Algebra with Applications	3	MATH160	
PHYS210	Mechanics	3	PHYS160-MATH160-ENGL051	
CSCI200	Introduction to Computers	3	ENGL051	
ENGL201	Composition and Research Skills	3	ENGL151	
Total		15		

Spring Semester

Code	Title	Credits	Prerequisites	Corequisites
MATH220	Calculus III	3	MATH210	
MATH270	Ordinary Differential Equations	3	MATH210	MATH225
PHYS280	Electricity and Magnetism	3	PHYS160-MATH160	
PHYS280L	Electricity and Magnetism Lab	1		PHYS280
PHYS250	Thermodynamic and Waves	3	ENGL051-MATH160-PHYS160	
ENGL251	Communication Skills	3	ENGL201	
PHYS250L	Thermodynamic and Waves Lab	1		PHYS250
Total		17		

Second Year

Fall Semester

Code	Title	Credits	Prerequisites	Corequisites
CHEM200	General Chemistry	3	ENGL101-CHEM160	
	General Education Electives	3		
PHYS300	Mathematical Physics	3	MATH270-MATH225-MATH220	
PHYS340	Modern Physics	3	PHYS250	
PHYS340L	Atomic Physics Lab	1	PHYS250	PHYS340
PHYS330	Electromagnetic Fields and Waves I	3	PHYS280-PHYS250	PHYS300
Total		16		

Spring Semester

Code	Title	Credits	Prerequisites	Corequisites
CSCI250	Introduction to Programming	3	ENGL101-CSCI200	CSCI250L
PHYS350L	Physical Optics Lab	1	PHYS250	PHYS350
CSCI250L	Introduction to Programming Lab	1	ENGL101-CSCI200	CSCI250
	Major Elective	3		
PHYS350	Physical Optics	3	PHYS250	PHYS350L
PHYS380	Electromagnetic Fields and Waves II	3	PHYS300-PHYS330	
PHYS360	Analytical Mechanics	3	PHYS210-MATH270-MATH220	
Total		17		

Third Year

Fall Semester

Code	Title	Credits	Prerequisites	Corequisites

	Major Elective	3		
PHYS430	Thermal Physics I	3	PHYS340-PHYS330	
MATH375	Numerical Methods for Scientists & Engineers	3	ENGL051-MATH270-MATH225	
ARAB200	Arabic Language and Literature	3		
MATH305	Programming Languages for Scientist	3		
PHYS420	Quantum Mechanics	3	PHYS360-PHYS340	
Total		18		

Spring Semester

Code	Title	Credits	Prerequisites	Corequisites
PHYS490	Physics Seminar	1	PHYS380-PHYS340-ENGL251	
PHYS480	Thermal Physics II	3	PHYS430	
PHYS470	Advanced Quantum Mechanics	3	PHYS420	
PHYS450	Solid State Physics	3	PHYS430-PHYS420	
CULT200	Introduction to Arab - Islamic Civilization	3		
	General Education Electives	3		
Total		16		

Major Elective Courses

Code	Title	Credits	Prerequisites	Corequisites
EDIT250	Educational Technology for Teachers	3	MATH160	
EENG250	Electric Circuits I	3	MATH160	
MATH310	Probability & Statistics for Scientists & Engineers	3	PHYS160-MATH160-ENGL051	
MATH330	Partial Differential Equations	3	ENGL051	
PHYS370	Nuclear Physics	3	ENGL151	
PHYS390	Astronomy	3	MATH210	
PHYS465	Selected Topics in Undergraduate Physics	3	MATH210	MATH225