

CREDITS REQUIRED IN MAJOR: 66

A student majoring in physics must take 43 credit hours of physics courses including requirements and electives as outlined below. In addition, the major requires 15 credits of mathematics courses, 8 credits of chemistry courses, and a demonstration of competency in computer programming.

To graduate as a physics major, a student must maintain a minimum GPA of 2.0 in all courses which satisfy the major requirement, and a minimum overall GPA of 2.0.

FOUNDATION/REQUIRED MAJOR COURSES: 40 credits

COURSE NUMBER	COURSE NAME	CREDITS	PREREQUISITES	OFFERED	Online
PHY 121	General Physics I	4	Prior completion of MAT 152 (highly recommended) or concurrent registration in MAT 152, or equivalent	Fall, Spring, Summer	
PHY 114	Introductory Physics Laboratory I	1	Co-requisite: PHY 111 or 121	Fall, Spring, Summer	
PHY 123	General Physics II	4	Grade of C or better in PHY 121 and MAT 152	Fall, Spring, Summer	
PHY 116	Introductory Physics Laboratory II	1	Co-requisite: PHY 112 or PHY 123	Fall, Spring, Summer	
PHY 211	Modern Physics I	3	PHY 123 or PHY 112, and MAT 152	Fall	
PHY 213	Modern Physics II	3	PHY 211	Spring	
PHY 240	Intermediate Laboratory I	3	PHY 121, PHY 123, and PHY 211, with PHY 261 strongly recommended.	Fall (odd years)	
PHY 261	Computational Physics	3	Grade of C or higher in PHY 121 and prior or concurrent registration in MAT 153, or permission of instructor	Spring	
PHY 314	Statistical and Thermal Physics	3	PHY 123 and prior or concurrent registration in MAT 252. PHY 261 also recommended.	Fall (odd years)	

PHY 321	Classical Physics I	3	Grade of C or higher in PHY 121 and prior or concurrent registration in MAT 252	Spring (odd years)	
PHY 323	Classical Physics II	3	PHY 321 and MAT 252	Fall (even years)	
PHY 331	Electrodynamics I	3	Grade of C- or higher in PHY 123, and prior or concurrent enrollment in MAT 252.	Spring (even years)	
PHY 333	Electrodynamics II	3	PHY 331	Fall (even years)	
PHY 341	Quantum Mechanics	3	PHY 211, PHY 321, and MAT 252, or permission from instructor.	Fall (even years)	

Select at least one course listed below: 3 CREDITS

COURSE NUMBER	COURSE NAME	CREDITS	PREREQUISITES	OFFERED	Online
PHY 251	Principles of Electronics	3	MAT 152 or equivalent, or permission of instructor	Fall (even years)	
PHY 281	Astrophysics	3	PHY 321	Spring (odd years)	
PHY 375	Optics	3	PHY 331	Spring (even years)	

NON-MAJOR REQUIREMENTS: 25 CREDITS

COURSE NUMBER	COURSE NAME	CREDITS	PREREQUISITES	OFFERED	Online
MAT 152	Calculus A	4	MAT 140 or appropriate score on the College Level Math exam	Fall, Spring, Summer	Yes
MAT 153	Calculus B	4	MAT 152	Fall, Spring, Summer	Yes

MAT 252	Calculus C	4	MAT 153	Fall, Spring, Summer	
MAT 350	Differential Equations	4	MAT 252	Spring	
CHY 113	Principles of Chemistry I	3	Pre- or co-requisite: MAT 108 (or concurrent) or MAT 140 (placement or concurrent) or MAT 152 (placement or concurrent) or permission.	Fall, Spring	
CHY 114	Laboratory Techniques I	1.5	Co-requisite: CHY 113	Fall, Spring	
CHY 115	Principles of Chemistry II	3	Grade of C or better in CHY 113	Spring, Summer	
CHY 116	Laboratory Techniques II	1.5	Grade of C or better in CHY 114; CHY 115 (or concurrent)	Spring, Summer	

CAPSTONE: 3 CREDITS

Capstone Requirement can be satisfied by taking either PHY 242 Intermediate Physics Laboratory II or by completing an approved research project with a department faculty member

MAJOR COURSES OVERLAPPING IN THE CORE:

CORE AREA	COURSE NUMBER	COURSE NAME	REQUIRED BY MAJOR?
SE	PHY 121 PHY 114	General Physics I Introductory Physics Laboratory I	Yes
CAP	PHY 242	Intermediate Physics Laboratory II	Yes (see department)
QR	MAT 152	Calculus A	Yes
SE	CHY 113 CHY 114	Principles of Chemistry I Laboratory Techniques I	Yes
EL	CHY 113	Principles of Chemistry I (instructor dependent)	Yes
EL	PHY 123	General Physics II (instructor dependent)	Yes
EL	PHY 410	Independent Study in Physics	No

CORE CURRICULUM CODES

WRI 1 – Writing, Reading, & Inquiry 1 (ENG 100)

WRI 2 – Writing, Reading, & Inquiry 2 (ENG 102)

WRI 3 – Writing, Reading, & Inquiry 3 (SOC 210)

QR – Quantitative Reasoning

CE – Creative Expression
SCA – Socio-cultural Analysis
CI – Cultural Interpretation
SE – Science Exploration
EISRC – Ethical Inquiry, Social Responsibility, & Citizenship
DIV – Diversity
INT – International
EL – Engaged Learning
CAP – Capstone