

The schedule below shows a sequence for completing required courses for the students who major in a **Physics B.A. (120 credits)**.
Variations and substitutions are possible.

Freshman Year			
Fall		Spring	
MTH 132	3	MTH 133	4
PHY 183 or PHY 193H <i>Fall</i>	4	PHY 184 or PHY 294H <i>Spring</i>	4
CEM 141	4	Arts & Hums Crse	3
WRA 101	4	CEM 161 lab	1
		CMSE 201 (Python)	4
Total	~15	Total	~16

Sophomore Year			
Fall		Spring	
MTH 234	4	MTH 235	3
PHY 215	3	PHY 321	3
PHY 191 lab <i>Fall</i>	1	PHY 192 lab <i>Spring</i>	1
IAH 201-210	4	ISS 2xx level	4
Elective	3	Elective	3
Total	~15	Total	~14

Junior Year			
Fall		Spring	
*PHY 415 <i>Fall</i>	4	PHY 431 lab (or PHY 440 <i>Fall</i>)	3
PHY 471 <i>Fall</i>	3	PHY 410 <i>Spring</i>	3
ISS 3xx	4	*MTH 314	3
PHY 440 lab (or PHY 431 <i>Spring</i>)	4	Biological Science	3
Elective	1	Elective	2
Total	~16	Total	~14

Senior Year			
Fall		Spring	
Capstone course	3	Capstone course	3
Arts & Hums Crse	3	PHY 472 (<i>Elective</i>) <i>Spring</i>	3
Electives	3	Electives	3
IAH 211+	4	Electives	3
Elective	1	Electives	3
Total	~15	Total	~15

Capstone Courses: Complete 2 of 4 capstone courses listed below

PHY 491 - Intro to Condensed Matter Physics - Fall Only

PHY 492 - Intro to Nuclear Physics - Spring Only

PHY 493 - Intro to Elementary Particle Physics - Spring Only

PHY 494 - Survey of Physics Education Research - Fall ODD Years Only

University Required Courses, 23 - 24 credits:

WRA 101 (1 course) ISS (2 courses) IAH (2 courses) &

Biological Science (1 course)

Recommended: IBIO 150, PLB 105, ENT 205

Other Options: MMG 141, MMG 201 Spring, PSL 250, BS 161

Upper Division MTH Requirement, 3 credits:

*= MTH 3xx or MTH 4xx

Electives to Reach 120 credits, ~23 credits:

[College of Natural Science Sample Elective List](#)

Courses	Cr.	Course Title	Prerequisites
CEM 141	4	General Chemistry	((MTH 103B or concurrently) or (MTH 103 or concurrently) or (MTH 116 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 152H or concurrently) or LB 118) or designated score on Mathematics Placement test
CEM 151	4	General and Descriptive Chemistry	((MTH 116 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 152H or concurrently) or (LB 118 or concurrently)) or designated score on Mathematics Placement test
CEM 142	3	General and Inorganic Chemistry	CEM 141 or CEM 151 or CEM 181H or LB 171
CEM 152	3	Principles of Chemistry	CEM 151 or CEM 181H or LB 171
CEM 161	1	Chemistry Laboratory I	(CEM 141 or concurrently) or (CEM 151 or concurrently) or (CEM 181H or concurrently) or (LB 171 or concurrently)
CMSE 201	4	Computational Modeling and Data Analysis I	MTH 124 or MTH 132 or MTH 152H or LB 118
MTH 132	3	Calculus I	(MTH 116) or (MTH 103 and MTH 114) or (MTH 103B and MTH 114) or LB 117 or Designated score on Mathematics Placement test
MTH 133	4	Calculus II	MTH 132 or MTH 152H or LB 118
MTH 234	4	Multivariable Calculus	MTH 133 or MTH 153H or LB 119
MTH 235	3	Differential Equations	MTH 234 or MTH 254H or LB 220
MTH 3xx or 4xx	3	Advanced math courses	depends on course selected
MTH 3xx or 4xx	3	Advanced math courses	depends on course selected
Introductory Physics			
PHY 183	4	Physics for Scientists and Engineers I	(MTH 132 or concurrently) or (MTH 152H or concurrently) or (LB 118 or concurrently)
PHY 184	4	Physics for Scientists and Engineers II	{(PHY 183 or PHY 183B or PHY 193H or LB 273) or (PHY 231 and PHY 233B) or (PHY 231C and PHY 233B)} and ((MTH 133 or concurrently) or (MTH 153H or concurrently) or (LB 119 or concurrently))
PHY 193H	4	Honors Physics I-Mechanics	(MTH 132 or concurrently) or (MTH 152H or concurrently) or (LB 118 or concurrently)
PHY 294H	4	Honors Physics II-Electromagnetism	(PHY 193H or PHY 183 or PHY 183B) and ((MTH 133 or concurrently) or (MTH 153H or concurrently) or (LB 119 or concurrently))
Introductory Laboratory Courses			
PHY 191	1	Physics Laboratory for Scientists, I	((PHY 183 or concurrently) or (PHY 193H or concurrently) or PHY 183B) or (PHY 231 and (PHY 233B or concurrently)) or (PHY 231C and (PHY 233B or concurrently))
PHY 192	1	Physics Laboratory for Scientists, II	{PHY 191 and ((PHY 184 or concurrently) or PHY 184B)} or (PHY 232 and (PHY 234B or concurrently)) or (PHY 232C and (PHY 234B or concurrently))
Intermediate Physics			

PHY 215	3	Thermodynamics and Modern Physics	{(PHY 184 or PHY 294H or LB 274 or PHY 184B) or (PHY 232 and PHY 234B) or (PHY 232C and PHY 234B)} and ((MTH 234 or concurrently) or (MTH 254H or concurrently) or (LB 220 or concurrently)) ((MTH 235 or concurrently) or (MTH 340 or concurrently) or (MTH 347H or concurrently)) and CMSE 201 and ((PHY 215 or concurrently) or (PHY 215B or concurrently))
PHY 321	3	Classical Mechanics I	

Advanced Lecture Courses

PHY 410	3	Thermal and Statistical Physics	PHY 471
PHY 471	3	Quantum Physics I	(PHY 215 or PHY 215B) and (PHY 321 or concurrently) and (MTH 235 or MTH 340 or MTH 347H)
PHY 481	3	Electricity and Magnetism I	MTH 234 or MTH 254H or LB 220/Open to juniors or seniors or graduate students.
PHY 491	3	Intro to Condensed Matter Physics	(PHY 471 and PHY 410) and completion of Tier I writing requirement
PHY 492	3	Intro to Nuclear Physics	(PHY 471) and completion of Tier I writing requirement
PHY 493	3	Intro to Elementary Particle Physics	(PHY 471) and completion of Tier I writing requirement
PHY 494	3	Survey of Physics Education Research	(PHY 471 or concurrently) and completion of Tier I writing requirement

Advanced Laboratory Courses

PHY 431	3	Optics I	{{(PHY 184 or PHY 184B or PHY 294H) and PHY 192} or LB 274} and (((MTH 235 or concurrently) or (MTH 340 or concurrently) or (MTH 347H or concurrently)) and completion of Tier I writing requirement)
PHY 440	4	Electronics	{{(PHY 184 or PHY 184B) or (PHY 232 and PHY 234B) or (PHY 232C and PHY 234B)} and PHY 192} or LB 274 and (((MTH 235 or concurrently) or (MTH 340 or concurrently) or (MTH 347H or concurrently)) and completion of Tier I writing requirement)
PHY 451	3	Advanced Laboratory	(PHY 431 or PHY 440) and completion of Tier I writing requirement

Optional Physics Courses

PHY 415	4	Methods of Theoretical Physics	(MTH 234 or LB 220 or MTH 254H) and (LB 273 or PHY 183 or PHY 193H) and (LB 274 or PHY 184 or PHY 294H)
PHY 422	3	Classical Mechanics II	PHY 321
PHY 472	3	Quantum Theory II	PHY 471
PHY 482	3	Electricity and Magnetism II	PHY 481
PHY 480	3	Computational Physics	