



This four year guide is a recommended semester-by semester plan of study for this major. All four year guides are meant as examples of how a degree can be completed in four years. Individual plans will be developed for each student in consultation with the academic advisor. Prior credit, course availability, and student needs must be considered in developing the individual plan.

Shaded areas of guide require special attention.

Course Subject and Title	Credit Hours	Min. Grade Required	Included in Major GPA	Important Notes POS = Program of Study
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Semester One: [14-15 Credit Hours]

RC 1000	3			May take in fall or spring semester of first year
Liberal Studies Experience Course 1	3			HS or LS or FA or SS Designation
PHY 1103 or 1150	4-5	C-	X	Also counts in Gen Ed Science Inquiry requirement (<i>For PHY 1103, CO: MAT 1020 or MAT 1025 or the equivalent. For PHY 1150, CO: MAT 1110</i>)
MAT 1110	4	C-	X	Also meets Gen Ed Quantitative Literacy requirement (<i>PRE: MAT 1025 or equivalent test score</i>). If PHY 1103 is chosen above and MAT 1020 or 1025 is chosen here, you will need to consult with your advisor regarding adjustment of your Math requirements for your degree plan.

Semester Two: [14-15 Credit Hours]

UCO 1200	3			May take in fall or spring semester of first year
PHY 1104 or 1151	4-5	C-	X	Also counts in Gen Ed Science Inquiry requirement
MAT 1120	4	C-	X	
Integrative Learning Experience Course 1	3			

Semester Three : [15 Credit Hours]

RC 2001	3			May take in fall or spring of sophomore year
Gen Ed Wellness Literacy	1			
PHY 2010	4	C-	X	
MAT 2130	4		X	
PHY 2110	3	C	X	Min. grade C required for some upper level PHY courses

Semester Four: [16 Credit Hours]

PHY 2020	4	C	X	Min. grade C required for some upper level PHY courses
PHY Emphasis Area Course 1	3		X	See Emphasis Area section on POS for information on contracted courses; Courses must be approved by the advisor (Total of 8 courses - 24 hours); A list of recommended courses is in the Additional Notes at the end of this guide.
PHY Emphasis Area Course 2	3		X	
Liberal Studies Experience Course 2	3			HS or LS or FA or SS Designation
Free Elective	3			



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Semester Five: [16-17 Credit Hours]				
PHY Emphasis Area Course 3	3		X	
PHY Electives Course 1	3-4		X	Physics area on POS; A total of 10 hours required for students who took PHY 1150/1151 sequence; (A total of 12 hours required for students who took PHY 1103/1104 sequence); See notes at the end of this guide for recommendations.
Integrative Learning Experience Course 2	3			HS or LS or FA or SS Designation
Gen Ed Wellness Literacy	1			
Free Elective	3			
Free Elective	3			
Semester Six: [15 Credit Hours]				
PHY 3310	3		X	[WID] (Spring Only)
PHY Emphasis Area Course 4	3		X	
PHY Electives Course 2	3		X	Physics area on POS; A total of 10 hours required for students who took PHY 1150/1151 sequence; (A total of 12 hours required for students who took PHY 1103/1104 sequence.) See notes at the end of this guide for recommendations.
Liberal Studies Experience Course 3	3			
Free Elective	3			
Semester Seven: [15-16 Credit Hours]				
PHY Electives Course 3	3-4		X	Physics area on POS; A total of 10 hours required for students who took PHY 1150/1151 sequence; (A total of 12 hours required for students who took PHY 1103/1104 sequence.) See notes at the end of this guide for recommendations.
PHY Emphasis Area Course 5	3		X	
PHY Emphasis Area Course 6	3		X	
Integrative Learning Experience Course 3	3			
Liberal Studies Experience Course 4	3			HS or LS or FA or SS Designation
Semester Eight: [11-15 Credit Hours]				
PHY 4210	4		X	CAPSTONE
PHY Emphasis Area Course 7	3		X	
PHY Emphasis Area Course 8	3		X	
Free Elective	1-5*			Take enough hours to meet the minimum 120 required to graduate



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General Requirements Summary				
Minimum Total Hours	Gen Ed. Hours	Writing	Minimum	
			Major GPA	Overall GPA
120	44	RC 1000 and RC 2001	2.0	2.0

All PHY & AST courses and all courses in Major Requirements area on Program of Study count in the major GPA.

General Education Program Model - 44 Semester Hours Total		
Program Categories	Hours	Important Notes – <i>Be sure to check for Gen Ed courses required in your major</i>
First Year Seminar	3	Can be taken first or second semester of freshman year
Wellness Literacy	2	
Quantitative Literacy	4	
First Year Writing	3	Can be taken first or second semester of freshman year
Sophomore Writing	3	
Integrative Learning Experience	9	Must choose a minimum of two disciplines
Liberal Studies Experience	12	Must choose a minimum of three disciplines
Science Inquiry	8	
You must also meet the Fine Arts, Literary Studies, Historical Studies, and the Social Science Designations. Those may be met within the Integrative Learning Experience and the Liberal Studies Experience.		

Additional Notes:

- This curriculum is designed for students planning on continuing to graduate school in physics and can include a minor in Math.
- Recommended Courses to take in the concentration, as physics electives, and as free electives:
 - CS 1440 Computer Science I (4) OR CS 1445 Intro Programming w/Interdisciplinary Applications (4)
 - MAT 2240 Linear Algebra (3) (Pre: MAT 1120)
 - MAT 3130 Differential Equations (3) (Pre: MAT 1120; recommended pre: MAT 2240)
 - PHY 3001 Analytical Methods in Physics (3) (Pre: MAT 2130 w/grade of C; Co: PHY 2020) Spring semester only
 - PHY 3010 Classical Physics (3) (Pre: MAT 3130) Fall semester only



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- PHY 3020 Electromagnetic Fields & Waves (3) (Pre: PHY 2020 & 3001 w/grade of C; MAT 3130) Spring semester only
- PHY 3211 Modern Physics II (3) (Pre: PHY 1151; Co: PHY 2010) Spring semester only
- PHY 3230 Thermal Physics (3) (Pre: PHY 1104 or 1151; MAT 2130) Spring semester only
- PHY 4020 Computational Meth in Phy & Eng (3) (Pre: PHY 2020 w/grade of C; MAT 2130; Sr standing) Fall semester only
- PHY 4620 Optics (4) (Pre: MAT 3130; Co: PHY 3020; Sr standing) Spring semester only
- PHY 4640 Quantum Mechanics (3) (Pre: PHY 3010 & PHY 3210 w/grade of C; MAT 3130; Sr standing) Spring semester only
- A contract with a list of the approved courses MUST be filed with the College of Arts & Sciences Dean’s Office no later than the end of the first semester of junior year.
- Please consult with your advisor to ensure you will complete the appropriate number of free electives as needed to reach the 120 total hours required for your degree.
- Residency Requirements:
 - 30 hours must be from ASU
 - 18 hours in the major must be from ASU
 - 9 hours in the minor must be from ASU