## BS, Physics, Automation & Instrumentation

BS\_270F

College of Arts and Sciences
Department of Physics & Astronomy
2021-2022



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.

	Credit	Min.	Included	Important Notes
Course Subject and Title		Grade	in Major	F
-	Hours	Required	GPA	POS = Program of Study

		Semeste	er One: [1	4-15 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-	Х	Also counts in <b>Gen Ed Science Inquiry</b> requirement (For PHY 1103, CO: MAT 1020 or MAT 1025 or the equivalent. For PHY 1150, CO: MAT 1110)
MAT 1110	4	C-	Х	Also meets <b>Gen Ed Quantitative Literacy</b> 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.
		Semeste	er Two: [1	.4-15 Credit Hours]
UCO 1200	3			May take in fall or spring semester of first year
PHY 1104 or 1151	4-5	C-	Х	Also counts in <b>Gen Ed Science Inquiry</b> requirement
MAT 1120	4	C-	Х	
Integrative Learning Experience Course 1	3			HS or LS or FA or SS Designation
		Semest	er 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-	Х	
PHY 2110	3	С	Х	Min. grade C required for some upper level PHY courses
MAT 2130	4		Х	
		Semes	ter Four:	[16 Credit Hours]
PHY 2020	4	С	Х	Min. grade C required for some upper level PHY courses
PHY 2700	3		Х	
PHY Electives Course 1	3-4		х	<b>Physics</b> 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.)
Liberal Studies Experience Course 2	3			HS or LS or FA or SS Designation
Free Elective	3			
		Semeste	er Five: [1	5-16 Credit Hours]
PHY Electives Course 2	3-4		Х	<b>Physics</b> 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)
CS 2435	4		Х	
Gen Ed Wellness Literacy	1			

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Course Subject and Title	Hours	Grade Required	in Major GPA	POS = Program of Study

Integrative Learning Experience Course 2	3			HS or LS or FA or SS Designation
Liberal Studies Experience Course 3	3			
		Semeste	er Six: [15	-16 Credit Hours]
PHY 3310	3		Х	[WID] (Spring Only)
Emphasis Area Course 1	3		Х	See <b>Emphasis Area</b> section on POS for more information; Courses options are MAT 2240, PHY 3030, PHY 4020, PHY 4845 or PHY 4860 (Total of 9 hours required).
Liberal Studies Experience Course 4	3			
Free Elective	3			
Free Elective	3			
		Semester	Seven: [1	L6-17 Credit Hours]
PHY 4330	4		Х	
PHY 4730	4		Х	(Fall Only)
PHY Electives Course 3	3-4		х	<b>Physics</b> 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.)
Emphasis Area Course 2	3		х	See <b>Emphasis Area</b> section on POS for more information; Courses options are MAT 2240, PHY 3030, PHY 4020, PHY 4845 or PHY 4860 (Total of 9 hours required).
Integrative Learning Experience Course 3	3			
		Semester	Eight: [1	0-15 Credit Hours]
PHY 4210	4		Х	CAPSTONE
Emphasis Area Course 3	3		Х	See <b>Emphasis Area</b> section on POS for more information; Courses options are MAT 2240, PHY 3030, PHY 4020, PHY 4845 or PHY 4860 (Total of 9 hours required).
Free Elective	3-8*			Take enough hours to meet the minimum 120 required to graduate

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

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	Credit	Min.	Included	Important Notes
Course Subject and Title	Hours	Grade	in Major	POS = Program of Study
	Hours	Required	GPA	FOS - Flogram of Study

# 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 – Be sure to check for Gen Ed courses required in your major	
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:**

- 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:
  - o 30 hours must be from ASU
  - 18 hours in the major must be from ASU
  - 9 hours in the minor must be from ASU