#### **Student Planner**

# Major Requirements for a Bachelor of Science in Physics-Astrophysics Emphasis

Requirements listed are those in the 2018-2019 catalog. The required courses for the major should be taken for a letter grade. All courses are required unless otherwise indicated.

# **Preparatory Subject Matter**

Course	No	Units	Qtr	Grade	GP
PHY	9A	5	F,S		
	9B	5	F,W		
	9C	5	W,S		
	9D	4	F,S		
	or				
PHY	9HA	5	F		
	9HB	5	W		
	9HC	5	S		
	9HD	5	F		
	9HE	5	W		
	and				
MAT	21A	4	F,W,S		
	21B	4	F,W,S		
	21C	4	F,W,S		
	21D	4	F,W,S		
	22A	3	F,W,S		
	22B	3	F,W,S		
PHY	40	4	S		
	80	4	W,S		
	185*	1	S		
	190*	1	F		

## **Depth Subject Matter**

Course	No	Units	Qtr	Grade	GP
PHY	104A	4	F		
	105A	4	F		
	108	3	S		
	108L	1	S		
	110A	4	W		
	110B	4	S		
	112	4	F		
	115A	4	S		
	115B	4	F		

Course	No	Units	Qtr	Grade	GP
PHY	102	1	F		
	or				
	104B	4	W		

PHY 80 will be a pre-requisite for PHY 122A/B starting W2020 # Course offered in alternate years

### **Depth Subject Matter**

Course	No	Units	Qtr	Grade	GP
PHY	122A/B	4	W		
	or				
	157	4	S#		

### **Concentration Courses**

Course	No	Units	Qtr	Grade	GP
PHY	151	4	F#		
	152	4	F#		
	153	4	W#		
	156	4	W#		

## **Electives-Choose 2**

Course	No	Units	Qtr	Grade	GP
PHY	105B	4	W		
	110C	4	F		
	116A	4	F		
	129A	4	S		
	130A	4	W		
	130B	4	S		
	150&	4	F,W,S		
	154	4	S#		
	155	4	W		
GEL	163	3	W		
PHY	194H^				
	195^				
	199^				

^ May inclue only one course from Physics 194H, 195 and 199.

& Only with an astrophysics topic and prior departmental approval.

### **Recommended Courses**

Course	No	Units	Qtr	Grade	GP
AST	25*	4	F		

Major GPA

Overall Upper Div

<sup>\*</sup>Recommended Courses

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## Major Requirements for a Bachelor of Science in Physics-Astrophysics Emphasis

Sample plan for Junior and Senior Year beginning in alternate years

Underlined courses are required. Italics means possible elective course, only one of the lab courses in parenthesis is required.

Junior	Fall 104A 105A 152 102	Winter  110A  156  Physics 105B	Spring 110B 115A Physics 155
Senior	115B 112 151	(122A or 122B) 153 Physics 130A	108, 108L (157) Physics 154
Junior	Fall 104A 105A 151 102	Winter 110A 153	Spring 110B 115A (157) Physics 154
Senior	115B 112 152	(122A or 122B) 156 Physics 130A	108, 108L Physics 130B or 129A or GEL 163 or Physics 155
# Course offered in al	·	centration and Electives Total	59 Total Units

Course Substitution/ Waiver requests should be submitted well in advance, preferably prior to enrollment in the course.

- 1. Student must first speak with a faculty advisor.
- 2. Faculty advisor submits course substitution/waiver request to the Undergraduate Curriculum Committee for approval.

Advisor please Initial & date substitution/waiver requests and submit to the Chair of the Undergraduate Curriculum Committee.

Approval:			(Required for delcaration of major &
	Physics Advisor	Date	any subsequent substitutions)
Approval:			(Required only if there are
	Departmental Approval	Date	substitutions.)