

# BACHELOR OF ARTS IN PHYSICS

## Minimum requirements for the B.A. degree in Physics with a minor in mathematics

COURSE	TITLE	S.H.
<b>FIRST YEAR REQUIREMENT -STUDENT SUCCESS</b>		
YSU 1500	Success Seminar	1-2
or SS 1500	Strong Start Success Seminar	
or HONR 1500	Intro to Honors	
<b>General Education Requirements</b>		
ENGL 1550	Writing 1	3-4
or ENGL 1549	Writing 1 with Support	
ENGL 1551	Writing 2	3
CMST 1545	Communication Foundations	3
Mathematics requirement (met with MATH in major)		
Arts and Humanities (6 s.h.)		
Natural Sciences (2 courses, 1 with lab) (6-7 s.h.)		
Requirement met through courses in the major		
Social Science (6 s.h.)		
Social and Personal Awareness (6 s.h.)		
<b>Major Requirements</b>		
Physics Courses:		
PHYS 2610 & 2610L	General Physics 1 and General Physics Laboratory 1	5
PHYS 2611 & 2611L	General Physics 2 and General Physics laboratory 2	5
PHYS 3703	Classical Mechanics and Dynamics	4
PHYS 3704 & 3704L	Modern Physics and Modern Physics Laboratory	5
PHYS 3705 & 3705L	Thermodynamics and Classical Statistical Dynamics and Thermodynamics and Classical Statistical Mechanics Laboratory	4
PHYS 3741	Electromagnetic Field Theory 1	3
PHYS 4805	Undergraduate Physics Research	3
Physics upper division Elective		
Mathematics Courses:		
MATH 1571	Calculus 1	4
MATH 1572	Calculus 2	4
MATH 2673	Calculus 3	4
MATH 3705	Differential Equations	3
Minor Course:		
One additional 3 s.h. upper division elective in mathematics is required for the mathematics minor.		
Other courses:		
FNLG 1550	Elementary Foreign Language (or FNLG 1505)	4
FNLG 2600	Intermediate Foreign Language (or FNLG 1506)	4
CHEM 1515 & 1515L	General Chemistry 1 and General Chemistry 1 Laboratory	4
CHEM 1516 & 1516L	General Chemistry 2 and General Chemistry 2 Laboratory	4
Electives:		
21 additional hours of upper division electives and 5 hours of electives at any level are required		
<b>Total Semester Hours</b>		<b>120-122</b>

<b>Year 1</b>		
<b>Fall</b>		
YSU 1500	Success Seminar	1
PHYS 2610 & 2610L	General Physics 1 and General Physics Laboratory 1 (P, NS)	5
ENGL 1550 or ENGL 1549	Writing 1 or Writing 1 with Support	3-4
CHEM 1515 & 1515L	General Chemistry 1 and General Chemistry 1 Laboratory (NS)	4
MATH 1571	Calculus 1 (P)	4
<b>Semester Hours</b>		<b>17-18</b>
<b>Spring</b>		
PHYS 2611 & 2611L	General Physics 2 and General Physics laboratory 2 (P, NS)	5
CHEM 1516 & 1516L	General Chemistry 2 and General Chemistry 2 Laboratory (P, NS)	4
MATH 1572	Calculus 2 (P)	4
First-Year Experience Course		3
<b>Semester Hours</b>		<b>16</b>
<b>Year 2</b>		
<b>Fall</b>		
PHYS 3704 & 3704L	Modern Physics and Modern Physics Laboratory (P)	5
MATH 2673	Calculus 3 (P)	4
FNLG 1550	Elementary Foreign Language	4
ENGL 1551	Writing 2	3
<b>Semester Hours</b>		<b>16</b>
<b>Spring</b>		
PHYS 3705 & 3705L	Thermodynamics and Classical Statistical Dynamics and Thermodynamics and Classical Statistical Mechanics Laboratory (P)	4
MATH 3705	Differential Equations (P)	3
FNLG 2600	Intermediate Foreign Language	4
Arts & Humanities GER Domain		3
<b>Semester Hours</b>		<b>14</b>
<b>Year 3</b>		
<b>Fall</b>		
PHYS 3703	Classical Mechanics and Dynamics (P)	4
PHYS 3741	Electromagnetic Field Theory 1 (P)	3
Social Sciences GER Domain		3
Upper Division Math (P)		3
CMST 1545	Communication Foundations	3
<b>Semester Hours</b>		<b>16</b>
<b>Spring</b>		
Arts & Humanities GER Domain		3
Elective		4
Physics upper division Elective		3
Social Sciences GER Domain		3
<b>Semester Hours</b>		<b>13</b>
<b>Year 4</b>		
<b>Fall</b>		
PHYS 4805	Undergraduate Physics Research (Capstone, P)	3
Social & Personal Awareness GER Domain		3
Electives (Upper Division)		8
<b>Semester Hours</b>		<b>14</b>

**Spring**

Social & Personal Awareness GER Domain	3
Electives (Upper Division)	12
<b>Semester Hours</b>	<b>15</b>
<b>Total Semester Hours</b>	<b>121-122</b>