

BACHELOR OF SCIENCE WITH A COMBINED MAJOR IN PHYSICS AND ASTRONOMY AND A MINOR IN MATHEMATICS

Minimum requirements for the BS with a combined major in physics and astronomy and a minor in mathematics

COURSE	TITLE	S.H.
General Education Requirements		
Core Competencies		9
ENGL 1550	Writing 1	
ENGL 1551	Writing 2	
CMST 1545	Communication Foundations	
Mathematics Requirement - included in minor		
Arts and Humanities		6
Natural Sciences - included in major		
Social Science		6
Social and Personal Awareness		6
General Education Elective / First-Year Experience		3
Major Requirements		
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
Select 6 s.h. of upper division physics courses.		6
Astronomy Courses:		
ASTR 1504	Descriptive Astronomy	3
ASTR 2609	Moon and Planets	3
ASTR 3711	Astrophysics 1	3
ASTR 3712	Astrophysics 2	3
ASTR 4815	Undergraduate Astronomy Research	3
ASTR 4811	Observational Astronomy 1	3
ASTR 4812	Observational Astronomy 2	3
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.		3
Other Courses		

CHEM 1515	General Chemistry 1	4
CHEM 1515L	General Chemistry 1 Laboratory	0
CHEM 1516	General Chemistry 2	4
CHEM 1516L	General Chemistry 2 Laboratory	0
CSIS 2610	Programming and Problem-Solving	4
Elective courses needed: 5 hours of upper division and 2 hours of any level elective.		7

Total Semester Hours 120

Course	Title	S.H.
Year 1		
Fall		
PHYS 2610 & 2610L	General Physics 1 and General Physics laboratory 1 (P, NS)	5
ASTR 1504	Descriptive Astronomy (NS)	3
MATH 1571	Calculus 1 (P)	4
ENGL 1550	Writing 1	3
Semester Hours		15
Spring		
ASTR 2609	Moon and Planets	3
PHYS 2611 & 2611L	General Physics 2 and General Physics laboratory 2 (P)	5
MATH 1572	Calculus 2 (P)	4
First-Year Experience Course		3
Semester Hours		15
Year 2		
Fall		
PHYS 3704 & 3704L	Modern Physics and Modern Physics Laboratory (P)	5
CHEM 1515 & 1515L	General Chemistry 1 and General Chemistry 1 Laboratory (NS)	4
MATH 2673	Calculus 3 (P)	4
ENGL 1551	Writing 2	3
Semester Hours		16
Spring		
CHEM 1516 & 1516L	General Chemistry 2 and General Chemistry 2 Laboratory (P, NS)	4
MATH 3705	Differential Equations (P)	3
CMST 1545	Communication Foundations	3
CSIS 2610	Programming and Problem-Solving	4
Semester Hours		14
Year 3		
Fall		
PHYS 3703	Classical Mechanics and Dynamics (P)	4
PHYS 3741	Electromagnetic Field Theory 1 (P)	3
ASTR 3711	Astrophysics 1 (P)	3
Physics Elective (Upper Division)		3
Social Sciences GER Domain		3
Semester Hours		16
Spring		
PHYS 3705 & 3705L	Thermodynamics and Classical Statistical Dynamics and Thermodynamics and Classical Statistical Mechanics Laboratory (P)	4
Physics Elective (Upper Division)		3
ASTR 3712	Astrophysics 2 (P)	3
Arts & Humanities GER Domain		3

Social & Personal Awareness GER Domain	3
Semester Hours	16
Year 4	
Fall	
ASTR 4811 Observational Astronomy 1	3
ASTR 4815 Undergraduate Astronomy Research (Capstone)	3
Upper Division elective	3
Arts & Humanities Elective GER Domain	3
Social Sciences Elective GER Domain	3
Semester Hours	15
Spring	
ASTR 4812 Observational Astronomy 2 (P)	3
Math Elective (Upper Division)	3
Electives (Upper Division)	2
Electives	2
Social & Personal Awareness GER Domain	3
Semester Hours	13
Total Semester Hours	120