

# University of Memphis Physics – Astronomy Concentration

## First Year

Fall		Spring	
Physics for Scientists and Engineers I (PHYS 2110)	3 cr.	Physics for Scientists and Engineers II (PHYS 2120)	3 cr.
Physics for Scientists and Engineers I Laboratory (PHYS 2111)	1 cr.	Physics for Scientists and Engineers II Laboratory (PHYS 2121)	1 cr.
Calculus I (MATH 1910)	4 cr.	Calculus II (MATH 1920)	4 cr.
General Chemistry I (CHEM 1110)	3 cr.	General Chemistry II (CHEM 1120)	3 cr.
General Chemistry I Laboratory (CHEM 1111)	1 cr.	General Chemistry II Laboratory (CHEM 1121)	1 cr.
GE English Composition (ENGL 1010)	3 cr.	GE English Composition/Analysis (ENGL 1020)	3 cr.
<i>Semester Total</i>	<i>15 cr.</i>	<i>Semester Total</i>	<i>15 cr.</i>

## Second Year

Fall		Spring	
Intermediate Physics (PHYS 2130)	4 cr.	Theoretical Physics (PHYS 3011)	3 cr.
Research in Physics I (PHYS 2990)	1 cr.	Introductory Astronomy and Astrophysics (PHYS 3050)	3 cr.
Modern Physics (PHYS 3010)	3 cr.	Introductory Astronomy and Astrophysics Laboratory (PHYS 3051)	1 cr.
Calculus III (MATH 2110)	4 cr.	Differential Equations (MATH 2120)	3 cr.
GE Oral Communication (COMM 2381)	3 cr.	GE Social/Behavioral Sciences Elective	3 cr.
<i>Semester Total</i>	<i>15 cr.</i>	<i>Semester Total</i>	<i>16 cr.</i>

## Third Year

Fall		Spring	
Life in the Universe (PHYS 3052)	3 cr.	Advanced Physics Methodology (PHYS 3060)	3 cr.
Observational Astronomy (PHYS 3053)	3 cr.	Research in Physics II (PHYS 3990)	2 cr.
GE Literary Heritage (ENGL 2201 or 2202)	3 cr.	GE History	3 cr.
GE History	3 cr.	GE Humanities/Fine Arts	3 cr.
UD Elective	3 cr.	GE Social/Behavioral Sciences	3 cr.
<i>Semester Total</i>	<i>15 cr.</i>	<i>Semester Total</i>	<i>14 cr.</i>

## Fourth Year

Fall		Spring	
Stellar and Galactic Astronomy (PHYS 4055)	3 cr.	Advanced Topics in Astronomy (PHYS 4300)	3 cr.
Extragalactic Astronomy (PHYS 4056)	3 cr.	GE Humanities/Fine Arts	3 cr.
UD Physics Elective	3 cr.	UD Elective	3 cr.
UD Elective	3 cr.	UD Elective	3 cr.
Elective	3 cr.	Elective	3 cr.
<i>Semester Total</i>	<i>15 cr.</i>	<i>Semester Total</i>	<i>15 cr.</i>