

Sample Undergrad Curriculum Map for the Astrophysics B.S. Major

	FALL	SPRING
<p>Distribution Requirements:</p> <ul style="list-style-type: none"> • 2 courses in humanities / arts (HU) • 2 courses in social sciences (SO) • 2 courses in science (SC)* <p>Skill Requirements:</p> <ul style="list-style-type: none"> • 2 writing (WR) courses • 1 to 3 language (L) courses (depending on placement in freshman year) • 2 quantitative reasoning (QR)* <p>* automatically completed with the major</p> <p>Astronomy Requirements:</p> <p>Pre-requisites:</p> <ul style="list-style-type: none"> • PHYS 180/200/260 • PHYS 181/201/261 • PHYS 165L/205L/ASTR155 • PHYS 166L/206L/ASTR155 • MATH 112, 115, 120 (or ENAS151) <p>Astronomy courses (7 total):</p> <ul style="list-style-type: none"> • 6 courses (200+): ASTR 210 or 220, 255, 310, 320, 490, 491 • 1 elective: ASTR 356, 343, 360, 375, 380 or one PHYS 400+ <p>Physics courses (3 total):</p> <ul style="list-style-type: none"> • 3 courses (400+): e.g., PHYS 401, 402, 439 <p>Math / Scientific Methods (2 total):</p> <ul style="list-style-type: none"> • 2 courses (e.g.: PHYS 301, ASTR 356 Linear Algebra, Differential Equations, Computer programming, Statistics) 	<p>Freshman</p> <ul style="list-style-type: none"> - PHYS 180/200/260 (1st physics) - MATH 112 (single-var Calculus) or MATH 120 (multi-var Calculus if AP Calc in HS) or ENAS 151 (applied multi-var Calculus) - L1 - HU-1 	<ul style="list-style-type: none"> - PHYS 181/201/261 (2nd semester physics) - MATH 115 (if following 112) - L2 - WR-1
	<p>Sophomore</p> <ul style="list-style-type: none"> - PHYS 165L or PHYS 205L (first lab, 0.5 units) - PHYS 301 (Math for physics) or MATH 246 (Diff Eqns) - L3; if language requirement met, could take SO-1 - ASTR 255 (Methods and Techniques in Astronomy I, optional field trip to an Observatory with this course) 	<ul style="list-style-type: none"> - PHYS 166L or PHYS 206L (second lab, 0.5 units) - ASTR 356 (Astrostatistics and Data-Mining Spring 2015 onward – prereq ASTR 255) or use as a Math/Scientific Methods course - ASTR 210 (Fundamentals of Astronomy with focus on Planets and Stars); only if ASTR 220 not taken in previous semester - SO-1, HU / SO / WR or elective
	<p>Junior</p> <ul style="list-style-type: none"> - PHYS 401 (classical mechanics) or PHYS 410 (advanced classical mechanics) - ASTR 310 (Galactic and extra-galactic astronomy, pre-req: ASTR 210 or 220) - SO-2 - WR-2 	<ul style="list-style-type: none"> - PHYS 402 (Advanced physics with E&M) or PHYS 430 (Electromagnetic Fields and Optics) - ASTR 320 (Physical Processes in Astronomy, pre-req: ASTR 210 or ASTR 220) - HU-2
	<p>Senior</p> <ul style="list-style-type: none"> - PHYS 420 (Thermodynamics and Statistical Mechanics) or PHYS 439 (Quantum Mechanics) or PHYS 4xx - ASTR 490 (Senior thesis research I) 	<ul style="list-style-type: none"> - ASTR 491 (Senior thesis research II) - (check for ASTR elective) - (check for 2nd MATH elective)