

# Honors Astrophysics Requirements (78)

## Foundation Courses

- MATH 144 - Calculus for the Mathematical and Physical Sciences I
- MATH 146 - Calculus for the Mathematical and Physical Sciences II
- PHYS 144 - Newtonian Mechanics
- PHYS 181 - Relativity, Electricity and Magnetism

### 3 units from:

MATH 125 - Linear Algebra I  
 MATH 127 - Honors Linear Algebra I \_\_\_\_\_

## Senior Courses

- ASTRO 320 - Stellar Astrophysics I
- ASTRO 322 - Galactic and Extragalactic Astrophysics
- MA PH 251 - Differential Equations for Physics (see Note 1)
- MA PH 351 - Mathematical Methods for Physics I (see Note 2)
- MATH 214 - Calculus III
- PHYS 234 - Introductory Computational Physics
- PHYS 244 - Classical Mechanics I
- PHYS 271 - Introduction to Modern Physics
- PHYS 295 - Experimental Physics I
- PHYS 310 - Thermodynamics and Kinetic Theory
- PHYS 311 - Statistical Physics
- PHYS 372 - Quantum Mechanics A
- PHYS 381 - Electromagnetic Theory I
- PHYS 499 - Undergraduate Research Project

### 3 units from:

MATH 225 - Linear Algebra II  
 MATH 227 - Honors Linear Algebra II \_\_\_\_\_

### 3 units from:

MA PH 343 - Classical Mechanics II  
 PHYS 362 - Optical Physics \_\_\_\_\_

### 6 units from:

ASTRO at the 400-level \_\_\_\_\_

### 9 units from:

ASTRO at the 400-level \_\_\_\_\_  
 PHYS 420 - Computational Physics \_\_\_\_\_  
 PHYS 458 - Special and General Relativity \_\_\_\_\_  
 PHYS 467 - Fundamentals of Continuum Mechanics \_\_\_\_\_  
 PHYS 472 - Quantum Mechanics B \_\_\_\_\_  
 PHYS 481 - Electromagnetic Theory II \_\_\_\_\_  
 PHYS 485 - Introductory Particle Physics \_\_\_\_\_

**Notes:**

1. This requirement may also be fulfilled by completing one of MATH 334 or MATH 336 and MATH 337.
2. This requirement may also be fulfilled by completing both MATH 315 and MATH 311.
3. ASTRO 120 and ASTRO 122 are recommended as Science options.
4. Not all 200-, 300-, and 400-level Physics courses are offered every year so students should plan accordingly.
5. Students without a background in computer programming are strongly encouraged to take CMPUT 174 as one of their Science options in their first year.

- COMM
- COMM
- IND
- BO\_\_
- BO\_\_
- BSBS
- BSFS
- BSSS
- LAB