# Astrophysics Comprehensive, Bachelor of Science

Offered by Department of Physics and Astronomy ([http://catalog.unk.edu/undergraduate/departments-programs/physics-astronomy](http://catalog.unk.edu/undergraduate/departments-programs/physics-astronomy))

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## General Studies

### Foundational Core (Written, Math, Oral, Democracy)

- Foundational Core courses ([http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses](http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses))
  - Including:  
    - MATH 115 Calculus I with Analytic Geometry

### Portal

- Select one course numbered 188 ([http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/portal-course](http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/portal-course))

### Distribution

- ENG 101 Introduction of Academic Writing

- If ENG 101 is not taken as a prerequisite for ENG 102 then additional hours may be required to meet the 27 credit hour minimum in the Distribution Area of General Studies.

- Aesthetics ([http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/aesthetics](http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/aesthetics))
- Humanities ([http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/humanities](http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/humanities))
- Social Sciences ([http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/social-sciences](http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/social-sciences))
- Natural Sciences ([http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/natural-sciences](http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/natural-sciences))

### Analytical and Quantitative Thought

- Including:  
  - PHYS 275 & 275L General Physics I (Calculus) and General Physics I (Calculus) Laboratory
  - MATH 305 Differential Equations

### Wellness

- Select one course numbered 102 ([http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/wellness](http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/wellness))

### Capstone

- Select one course numbered 388 ([http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/capstone-course](http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/capstone-course))

### BS Science-related course requirements

- CHEM 160 General Chemistry
- MATH 260 Calculus III

## Major Option

- Complete all required courses

## Unrestricted electives

- Total Credit Hours: 120

### Major Option

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## Astrophysics Comprehensive Requirements

- PHYS 123 Freshman Physics Seminar
- PHYS 210 Astronomy
- PHYS 276 & 276L General Physics II (Calculus) and General Physics II (Calculus) Laboratory
- PHYS 346 Modern Physics I
- PHYS 350 Astrophysics I
- PHYS 351 Astrophysics II
- PHYS 360 Astronomy Methods I
- PHYS 361 Astronomy Methods II
- PHYS 402 Analytic Mechanics
- PHYS 407 Electricity & Magnetism
- PHYS 410 Mathematical Techniques in Physics I
- PHYS 419 Quantum Mechanics
- PHYS 430 Optics
- PHYS 440 Thermodynamics and Statistical Mechanics
- PHYS 495 Research in Physics
- PHYS 498 Senior Seminar in Physics

## Astrophysics Comprehensive Math Requirements

- MATH 202 Calculus II with Analytic Geometry
- MATH 260 Calculus III
- MATH 305 Differential Equations

### Total Credit Hours

- 62

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1 Students without sufficient preparation will also need to take the following courses, increasing the total credit hours needed:
- MATH 102
- MATH 103