**Bachelor of Science (BS) in Astrophysics**

**Admissions:** Open  
**Process:** Declaration  
**Min. Total Credits:** 124 (112 in core & major + 12 in electives)

### UHM General Education Core Requirements

**Foundations**
- FW  ENG 100, 100A, 190, or ESL 100
- FS  MATH 241
- FG (A / B / C)
- FG (A / B / C)

**Diversification**
- DA / DH / DL
- DA / DH / DL
- DB
- DP  CHEM 161 or 171, or PHYS 170
- DY  CHEM 161L or 171L, or PHYS 170L
- DS
- DS

* See degree, college and major requirements for courses that can also fulfill these.

### UHM Graduation Requirements

**Focus**
- H
- E (300+)  PHYS 485
- O (300+)  ASTR 301

- W  PHYS 274L
- W  MATH 311
- W  ASTR 300L
- W (300+)  ASTR 494
- W (300+)

**Hawaiian / Second Language**
- 101
- 102
- 201
- 202

**Credit Minimums**
- 120 total applicable
- 30 in residence at UHM
- 45 upper division (300+ level) courses

**Grade Point Average**
- 2.0 cumulative or higher *(Note: Other GPAs may be required.)*
- Good academic standing

### Degree Requirements

**Bachelor of Science Requirements**
- Calculus I
- Calculus II
- Chemistry I with lab
- Chemistry II with lab
- Physics I with lab
- Physics II with lab

*Refer to major requirements for the specific courses that satisfy these requirements.*

### College Requirements

**Credit Maximums**
- 8 KRS activity
- 9 Directed Reading / Research
- 12 Practicum / Internship

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*This program sheet was prepared to provide information and does not constitute a contract. See back for major requirements.*  
*Meet regularly with your major advisor. Advising is mandatory every semester for Astrophysics majors.*
Major Requirements for BS in Astrophysics

Admission: Open
Application: NA
Min. major credits: 63 in Physics and Astronomy courses (88 with related requirements)
Min. C grade (not C-) in all courses

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<th>Requirements</th>
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| Astrophysics Related Requirements (25-26 credits) | CHEM 161*DP / 161L*DY  
|                               | CHEM 162*DP / 162L*DY or 171/171L or 181A/181L  
|                               | MATH 241*FS  
|                               | MATH 242  
|                               | MATH 243  
|                               | MATH 244  
|                               | MATH 311 or 307  
|                               | MATH 251A*FS, 252A and 253A may be substituted for MATH 241-244.  
|                               | MATH 215*FS and 216 may be substituted for 241 and 242 with approval from physics advisor.  

| Astrophysics Core Courses (53 credits; see catalog for prerequisites) | PHYS 170*DP / 170L*DY  
|                                                                       | PHYS 272*DP / 272L*DY  
|                                                                       | PHYS 274*DP / 274L*DY  
|                                                                       | PHYS 310  
|                                                                       | PHYS 311  
|                                                                       | PHYS 350  
|                                                                       | PHYS 450  
|                                                                       | PHYS 480  
|                                                                       | PHYS 485  
|                                                                       | ASTR 241*DP  
|                                                                       | ASTR 242*DP  
|                                                                       | ASTR 300 / 300L  
|                                                                       | ASTR 301  
|                                                                       | ASTR 423  
|                                                                       | ASTR 494 (6 credits, distributed across two semesters)  

| Additional Courses (9 credits; see catalog for prerequisites) | 1 course from Group 1: ASTR 320, 427, 430  
|                                                               | 2 courses from Group 2: PHYS 400, 460, 481, 490  
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| Notes                                                                 | College of Natural Sciences Advising: Bilger 102; (808) 956-6451  
|                                                                   | Department of Physics and Astronomy: Watanabe 416; (808) 956-7087; undergrad@ifa.hawaii.edu  

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