# University of Hawaiʻi at Mānoa  
College of Arts & Sciences  
Program Sheet 2015-2016

**Bachelor of Arts (BA) in Astronomy**

**Admissions:** Open  
**Process:** Declaration

Min. Total Credits: 120 (111 in core & major + 9 in electives)

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### UHM General Education Core Requirements

#### Foundations
- **FW**: ENG 100, 100A, 190, or ESL 100
- **FS**: MATH 241
- **FG**: A / B / C
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#### Diversification
- **DA / DH / DL**
- **DA / DH / DL**
- **DB**
- **DP**: CHEM 161 or 171, or PHYS 151
- **DY**: CHEM 161L or 171L, or PHYS 151L
- **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**: ASTR 281
- **W**: ASTR 300L
- **W**
- **W**: ASTR 380
- **W**: ASTR 494

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

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

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

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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 Astronomy majors.*
## Major Requirements for BA in Astronomy

### Admission:
Open

### Application:
NA

### Min. major credits:
48 in Astronomy and Physics courses (64-65 with related requirements)

### Min. C grade (not C-) in all courses

## Requirements

### Astronomy & Physics Related Requirements (16-17 credits)

- CHEM 161*<sup>DP</sup> / CHEM 161L<sup>DY</sup>
- CHEM 162*<sup>DP</sup> / CHEM 162L<sup>DY</sup> or 171/171L or 181A/181L
- MATH 241*<sup>FS</sup>
- MATH 242
- MATH 251A*<sup>FS</sup>, 252A and 253A may be substituted for MATH 241-244.
- MATH 215*<sup>FS</sup>, and 216 may be substituted for 241 and 242 with approval from major advisor.

### Recommended languages:
German, French, or Japanese

### Astronomy & Physics Core Courses (27 credits; see catalog for prerequisites)

- PHYS 151*<sup>DP</sup> / 151L<sup>DY</sup>
- PHYS 152*<sup>DP</sup> / 152L<sup>DY</sup>
- PHYS 485
- ASTR 210<sup>DP</sup>
- ASTR 300 / 300L
- ASTR 301
- ASTR 320
- ASTR 494 (3 credits)

### Additional Courses (21 credits; see catalog for prerequisites)

- 3 courses from Group 1: ASTR 110, 120, 130, 140, 150, 280, 281, 380, 399, 426, 430, 494
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  Must include at least 6 upper division credits, including at least 3 credits at the 400-level.

  110-150 only count if taken before 210; 399 may be taken for a maximum of 3 credits; 494 may be taken a second time as an elective only in addition to the core requirement.

- 4 courses from Group 2: CHEM 272, ECON 321, EE 160, GG 101 (or 170), any GG course at 200-level or higher worth at least 3 credits, ICS 111, 211, MATH 243, 244, PHYS 274, any MATH or PHYS course at 300-level or higher worth at least 3 credits.
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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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