

**REQUIREMENTS FOR THE BACHELOR OF SCIENCE**  
**COLLEGE OF ARTS AND SCIENCES**  
 THE UNIVERSITY OF OKLAHOMA

For Students Entering the Oklahoma State System for Higher Education:  
**Summer 2009 through Spring 2010**

| Minimum Credit Hours and Grade Point Averages Required            |     |                             |    |
|---|-----|-----------------------------|----|
| Total Hours —   | 120 | Upper-Division Within Total | 48 |
| Major Hours —   | 35  |                             |    |
| <b>Grade Point Averages:</b>                                      |     |                             |    |
| <b>Overall &amp; Major: Combined OU/Transfer - 2.00 OU - 2.00</b> |     |                             |    |
| <b>48 Upper-Division Hours REQUIRED</b>                           |     |                             |    |

Astronomy

**B080**

Bachelor of Science

**OU encourages students to complete at least 30 hours of applicable coursework each year to have the opportunity to graduate in four years.**

| GENERAL EDUCATION AND COLLEGE REQUIREMENTS<br>Courses graded P/NP will not apply.  | Some courses required for the major may also fulfill University General Education and/or College of Arts & Sciences Requirements   |  |   |
|--|--|--|---|
|  | MAJOR REQUIREMENTS   | MAJOR SUPPORT REQUIREMENTS   |   |
|  | <b>A grade of C or better must be earned in each required astronomy and physics course and in the required mathematics courses.</b>  |  |   |
| <p><b>University-Wide General Education (minimum 40 hours) and College of Arts and Sciences Requirements</b></p> <p><b>Core Area I: Symbolic and Oral Communication</b> (9-22 hours, 3-6 courses)</p> <p>a. <b>English Composition</b> (6 hours, 2 courses)</p> <p>1. English 1113, Principles of English Composition</p> <p>2. English 1213, Principles of English Composition. <b>or</b> EXPO 1213, Expository Writing</p> <p>b. <b>Foreign Language</b> (0-13 hours in the same language)<br/>                     The College of Arts and Sciences requirement <b>cannot be met by high school coursework.</b></p> <p>1. Beginning Course (0-5 hours) _____</p> <p>2. Beginning Course, continued (0-5 hours) _____</p> <p>◆ 3. Intermediate Course (2000 level, 0-3 hours). _____<br/>                     One course at the intermediate level or demonstrated competency at that level.</p> <p>c. <b>Mathematics</b> (3 hours, 1 course). _____</p> <p><b>Core Area II: Natural Science</b> (7 hours, 2 courses) including one laboratory component.</p> <p>◆ 1. <b>Biological Science</b> _____<br/>                     Chosen from the following approved General Education designators: BIOL, BOT, HES, MBIO, or ZOO.</p> <p>◆ 2. <b>Physical Science</b> _____<br/>                     Chosen from the following approved General Education designators: ACSC, ASTR, CHEM, GEOG, GEOL, GPHY, METR, or PHYS.</p> <p><b>Core Area III: Social Science</b> (6 hours, 2 courses)</p> <p>1. Political Science 1113, American Federal Government</p> <p>2. _____</p> <p><b>Core Area IV: Humanities</b> (18 hours, 6 courses)</p> <p>a: <b>Understanding Artistic Forms</b> (3 hours, 1 course) _____</p> <p>b. <b>Western Civilization and Culture</b> (6 hours, 2 courses)</p> <p>1. History 1483, U.S., 1492-1865, <b>or</b> History 1493, U.S., 1865-Present,</p> <p>2. _____ (excluding HIST 1483 and 1493)</p> <p>c. <b>Non-Western Culture</b> (3 hours, 1 course): _____</p> <p>d. <b>Additional Core IV Humanities courses</b> (6 upper-division hours, 2 courses at the 3000- 4000-level). Must be outside the major and selected from Understanding Artistic Forms, Western Civilization and Culture, or Non-Western Culture.</p> <p>◆ 1. _____</p> <p>◆ 2. _____</p> <p><b>Core Area V: Senior Capstone Experience</b> (3 hours, 1 course): _____</p> <p>◆ College of Arts and Sciences Requirements: College requirements are not automatically fulfilled by a previous degree.</p> <p><b>Computer Literacy Requirement</b> — Students must demonstrate computer proficiency which includes the competent use of a variety of software and networking applications. This requirement may be satisfied by:</p> <p>1. A high school computer science course that meets curricular requirement; <b>or</b></p> <p>2. Completion of a college-level course that requires competent use of computing; <b>or</b></p> <p>3. Completion of a university computer proficiency assessment test.</p> | <p><b>ASTRONOMY</b></p> <p>2513 Observatory Methods 3</p> <p>3103 Stars 3</p> <p>3113 Galaxies and Cosmology 3</p> <p><b>PHYSICS</b></p> <p>1205 Introductory Physics I for Physics Majors 5</p> <p>1215 Introductory Physics II for Physics Majors 5</p> <p>2203 Intro. Physics III: Modern Physics 3</p> <p>3043 Physical Mechanics I 3</p> <p>3053 Physical Mechanics II 3</p> <p>4300 Senior Research Project (Senior Capstone Course) 2</p> <p>4300 Senior Research Project (2 enrollments required) 2</p> <p>One of the following:</p> <p>HSCI 3013, History of Science to the Age of Newton</p> <p>HSCI 3023, History of Science since the Seventeenth Century</p> <p>PHYSICS course at the 3000-level or higher</p> <p>_____ 3</p> | <p>CHEM 1315 General Chemistry 5</p> <p>MATH 2443 Calculus &amp; Analytic Geometry IV 3</p> <p>MATH 3413 Physical Math I 3</p> | <p style="text-align: center;"><b>Free Electives</b></p> <p>Electives to bring total applicable hours to 120 including 48 upper-division hours.</p> |

## INFORMATION CONCERNING GENERAL RULES, REGULATIONS AND MINIMUM REQUIREMENTS

**TOTAL HOURS:** A minimum of 120 semester hours acceptable toward graduation must be completed.

**UPPER-DIVISION HOURS:** A minimum of 48 upper-division semester hours acceptable toward graduation must be completed. OU courses numbered 3000 or above are upper-division. Transfer work is counted as lower-division or upper-division credit depending on the level at which it was offered at the institution where it was earned. Two-year college work is accepted only as lower-division credit.

**ARTS AND SCIENCES HOURS:** At least 80 semester hours of liberal arts and sciences courses are required for a BA degree. At least 55 semester hours of liberal arts and sciences courses are required for a BS degree.

**MAJOR WORK:** A minimum of 30 semester hours must be earned in the major, including a minimum of 15 credit hours at the upper-division level.

**PASS/NO PASS ENROLLMENT:** A maximum of 16 semester hours of free elective credit may be attempted under this option.

**INDIVIDUAL STUDIES (e.g., courses titled "Independent Study"):** A maximum of 12 total semester hours may be counted toward graduation, excluding Honors Reading and Honors Research.

**P.E. COURSES:** No physical education activity courses will be counted toward the 120 semester hours of acceptable credit for graduation.

**SENIOR INSTITUTION HOURS:** A minimum of 60 semester hours applied toward graduation must be earned at senior (4-year) institutions.

**RESIDENCY:**

- At least 15 of the final 30 hours applied toward the degree or at least 50 percent of the hours required by the institution in the major field must be satisfactorily completed at the awarding institution.
- At least 15 semester hours of upper-division major work must be completed in residence at OU.
- OU correspondence courses are **not** considered resident credit.
- Credits earned via examination are neither resident nor nonresident credit.

**GRADE POINT AVERAGES:** Students must earn a minimum overall 2.00 for each of the following: Combined Retention GPA (all college grades), OU Retention GPA, GPA for all major courses, and GPA for all major courses taken at OU. Some schools and departments of the College have higher minimum grade point averages required for their students.

**SPECIAL DEGREES:** Students may qualify for an Honors degree (cum Laude, Magna cum Laude, or Summa cum Laude) by completing specific requirements of the Honors College. A degree will be earned with Distinction if the student completes at least 60 semester hours at OU with at least a 3.60 combined retention GPA and OU retention GPA. A degree will be earned with Special Distinction if the student completes at least 60 semester hours at OU with at least a 3.90 combined retention GPA and OU retention GPA.

**APPLICATION FOR GRADUATION:** Students must apply for graduation during the term in which they complete their degree requirements in order to graduate in that term. Application forms are available from the College of Arts and Sciences Academic Services office, Ellison Hall, Room 124. The deadline for completion of all coursework to graduate in a particular term is the last day of classes in that term.

**Refer to the OU General Catalog for more complete information.**

### Suggested Semester Plan of Study — Astronomy - B080

This plan shows one possible grouping of courses that would allow students to graduate in four years. Please refer to the front of the degree checksheet for official requirements. Students must consult with College of Arts and Sciences and/or Department of Physics and Astronomy academic advisers to verify that courses selected each semester fulfill the recommended plan and satisfy university, College of Arts and Sciences, and Astronomy major requirements.

| Year             | FIRST SEMESTER   | Hours   | SECOND SEMESTER  | Hours     |
|------------------|--|---|--|-----------|
| <b>FRESHMAN</b>  | ENGL 1113, Principles of English Composition (Core I)            | 3   | CHEM 1315, General Chemistry                                     | 5         |
|                  | MATH 1823, Calculus & Analytic Geometry I (Core I)               | 3   | MATH 2423, Calculus & Analytic Geometry II                       | 3         |
|                  | PHYS 1205, Introductory Physics I for Physics Majors             | 5   | PHYS 1215, Intro. Physics II for Physics Majors                  | 5         |
|                  | Beginning Foreign Language (Core I)                              | 5   | Beginning Foreign Language continued (Core I)                    | 5         |
|                  | <b>TOTAL CREDIT HOURS</b>  | <b>16</b>                                       | <b>TOTAL CREDIT HOURS</b>  | <b>18</b> |
| <b>SOPHOMORE</b> | ASTR 2513, Observatory Methods                                   | 3   | HIST 1483, United States 1492-1865, <b>or</b>                    | 3         |
|                  | ENGL 1213, Principles of English Composition (Core I), <b>or</b> | 3   | 1493, United States 1865-Present (Core IV)                       |           |
|                  | EXPO 1213, Expository Writing (Core I)                           |   | MATH 2443, Calculus & Analytic Geometry IV                       | 3         |
|                  | MATH 2433, Calculus & Analytic Geometry III                      | 3   | MATH 3413, Physical Mathematics I                                | 3         |
|                  | PHYS 2203, Intro. Physics III: Modern Physics                    | 3   | PHYS 3043, Physical Mechanics I                                  | 3         |
|                  | Intermediate Foreign Language                                    | 3   | Social Science (Core III)  | 3         |
|                  | <b>TOTAL CREDIT HOURS</b>  | <b>15</b>                                       | <b>TOTAL CREDIT HOURS</b>  | <b>15</b> |
| <b>JUNIOR</b>    | ASTR 3103, Stars   | 3   | ASTR 3113, Galaxies and Cosmology                                | 3         |
|                  | P SC 1113, American Federal Government (Core III)                | 3   | PHYS Major Elective, upper-division (3000-4000-level), <b>or</b> | 3         |
|                  | PHYS 3053, Physical Mechanics II                                 | 3   | HSCI 3013, History of Science to the Age of Newton, <b>or</b>    |           |
|                  | Understanding Artistic Forms (Core IV)                           | 3   | HSCI 3023, History of Science since the Seventeenth Century      | 3         |
|                  | Free Elective, upper-division (3000-4000-level)                  | 3   | Western Civilization & Culture (Core IV)                         | 3         |
|                  |  |   | Free Elective, upper-division (3000-4000-level)                  | 3         |
|                  |  | Free Elective, upper-division (3000-4000-level) | 3  |           |
|                  | <b>TOTAL CREDIT HOURS</b>  | <b>15</b>                                       | <b>TOTAL CREDIT HOURS</b>  | <b>15</b> |
| <b>SENIOR</b>    | PHYS 4300, Senior Research Project (Capstone)                    | 2   | PHYS 4300, Senior Research Project (Capstone)                    | 2         |
|                  | Biological Science without lab (Core II)                         | 3   | Humanities, upper-division, outside major (Gen. Ed.)             | 3         |
|                  | Humanities, upper-division, outside major (Gen. Ed.)             | 3   | Free Elective, upper-division (3000-4000-level)                  | 3         |
|                  | Non-Western Culture (Core IV)                                    | 3   | Free Elective, upper-division (3000-4000-level)                  | 3         |
|                  | Free Elective, upper-division (3000-4000-level)                  | 3   | Free Elective, upper-division (3000-4000-level)                  | 3         |
|                  |  |   | Free Elective, upper-division (3000-4000-level)                  | 3         |
|                  | <b>TOTAL CREDIT HOURS</b>  | <b>14</b>                                       | <b>TOTAL CREDIT HOURS</b>  | <b>14</b> |

\*If deficient in computer literacy, contact your college academic counselor in the Hobson Academic Services Center, ELLH 124, 325-4411, for approved courses.

**Bachelor's degrees require a minimum of 48 hours of upper-division (3000-4000) coursework.**  
This plan of study should not be used in lieu of academic advisement.

Students who transfer from other institutions (particularly community colleges) must verify credit hour and course requirements with their college academic counselor, ELLH 124, 325-4411, <http://ou.edu/cas>.  
Please make an appointment for a degree check with your college academic counselor once you have earned 90 hours. Appointments may be scheduled at <https://iadvise.ou.edu/>.