

**Fulbright College Eight Semester Degree Completion Program**  
**Bachelor of Science in Physics, Optics Concentration *Departmental Honors*\* 2006<sup>1</sup>**

<b>Fall Semester 1</b>	<b>Hours</b>	<b>Spring Semester 1</b>	<b>Hours</b>
ENGL 1013 Composition I	3	ENGL 1023 Composition II	3
†MATH 2554 Calculus I	4	†MATH 2564 Calculus II	4
Core from areas a, b, c or e (as needed)	3	Core from areas a, b, c or e (as needed)	3
†PHYS 2054H Honors University Physics I*	4	PHYS 220V/320V Electronics I/II <sup>2</sup>	2
PHYS 220V Electronics I <sup>2</sup>	1	†PHYS 2074H Honors University Physics II*	4
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>16</b>
<b>Fall Semester 2</b>	<b>Hours</b>	<b>Spring Semester 2</b>	<b>Hours</b>
†PHYS 2094 University Physics III	4	‡†PHYS 3614 Modern Physics	4
CHEM 1103/1101L University Chemistry I and Lab	4	Core from areas a, b, c or e (as needed)	3
†MATH 2574 Calculus III	4	‡†MATH 3404 Differential Equations	4
PHYS 320V Electronics II <sup>2</sup>	1	CHEM 1123/1121L University Chemistry II and Lab	4
Core from areas a, b, c or e (as needed)	3	<b>Total Hours</b>	<b>15</b>
<b>Total Hours</b>	<b>16</b>		
<b>Fall Semester 3</b>	<b>Hours</b>	<b>Spring Semester 3</b>	<b>Hours</b>
‡†PHYS 3414 Electromagnetic Theory	4	‡†PHYS Optics Elective (4734, 4754, 4774, or 4794)	4
‡†PHYS 3544 Optics	4	Core from areas a, b, c or e (as needed)	3
‡†MATH 3423 Advanced Applied Math I	3	Core from areas a, b, c or e (as needed)	3
Core from areas a, b, c or e (as needed)	3	†Core from area f (if needed) or General Elective	3
<b>Total Hours</b>	<b>14</b>	‡†PHYS 3923H Physics Colloquium*	3
		<b>Total Hours</b>	<b>16</b>
<b>Fall Semester 4</b>	<b>Hours</b>	<b>Spring Semester 4</b>	<b>Hours</b>
‡†PHYS 4073 Introduction to Quantum Mechanics	3	Core from areas a, b, c or e (as needed)	4
‡†PHYS/ASTR Group A or General Elective	4	General Elective	4
‡†PHYS 399VH Honors Research*	3	‡†PHYS 399VH Honors Research*	3
Core from areas a, b, c or e (as needed)	3	‡†PHYS 4991 Senior Seminar	1
Core from areas a, b, c or e (as needed)	3	‡†PHYS Optics Elective (4734, 4754, 4774, or 4794)	4
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>16</b>

Core areas must be completed as outlined in Catalog of Studies or in the "Additional Fulbright College Core Requirement Areas" table on the reverse side.

Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

**PHYS/ASTR Group A: Four hours required (*Pre-requisite requirement in italics*)**

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> PHYS 320V Electronics II ( <i>PHYS 220V</i> )                       | <input type="checkbox"/> PHYS 306V Projects   | <input type="checkbox"/> PHYS 3544 Optics ( <i>PHYS 2074</i> )                                 |
| <input type="checkbox"/> PHYS 3923H Honors Colloquium  | <input type="checkbox"/> PHYS 399VH Independent Honors Study ( <i>Junior standing</i> ) | <input type="checkbox"/> PHYS 4113 Physics in Perspective ( <i>PHYS 3614</i> )                 |
| <input type="checkbox"/> PHYS 4213 Physics of Devices ( <i>PHYS 3614</i> )                   | <input type="checkbox"/> PHYS 4621L Modern Physics Lab ( <i>PHYS 3614</i> )             | <input type="checkbox"/> PHYS 4713 Solid State Physics ( <i>PHYS 3614</i> )                    |
| <input type="checkbox"/> PHYS 4734 Laser Physics ( <i>PHYS 3414, 3544</i> )                  | <input type="checkbox"/> PHYS 4754 Non-linear Optics ( <i>co-req PHYS 3414, 3544</i> )  | <input type="checkbox"/> PHYS 4774 Optical Properties ( <i>PHYS 3414, 3544</i> )               |
| <input type="checkbox"/> PHYS 4794 Lightwave Communications ( <i>PHYS 3414</i> )             | <input type="checkbox"/> PHYS 4803 Mathematical Physics ( <i>MATH 3404</i> )            | <input type="checkbox"/> PHYS 498V Senior Thesis   |
| <input type="checkbox"/> ASTR 3033 Solar System Astronomy ( <i>PHYS 2033/2031L or 2074</i> ) | <input type="checkbox"/> ASTR 3053 Stellar Systems ( <i>PHYS 2033/2031L or 2074</i> )   | <input type="checkbox"/> ASTR 4013 Astrophysics ( <i>PHYS 3614, or CHEM 3504, or consent</i> ) |

**NOTES:**

1. **Boldface** indicates required courses for this track. Honors Math should be taken when possible.
2. These are examples of elective courses in Physics. Electronics I & II are unusual in that they can be taken for variable amounts of credit.

\* In addition to the course requirements outlined here, physics departmental honors students must complete 12 hours of Honors Studies courses and orally defend an honors thesis based on the project carried out in PHYS 3923H. Students must earn a 3.125 grade-point average in physics classes and a minimum 3.25 cumulative grade-point average.

† Meets 40-hour advanced credit hour requirement. See 3 on Graduation Requirements Checklist or see the Catalog of Studies.

‡ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See 2b on Graduation Requirements Checklist or see the Catalog of Studies.

## Additional Fulbright College BS Core Requirement Areas *(Pre-requisite requirements in italics)*

Core Area	Hours	Courses
a. US History/American National Government and Western Civilization	9	<p><b>U.S. History/American National Government- 3 hours from:</b>                      HIST 2003 History of the American People to 1877 or HIST 2013 History of the American People from 1877 or                      PLSC 2003 American National Government</p> <p><b>Western Civilization – 6 hours from:</b>                      WCIV 1003 Western Civilization I and WCIV 1013 Western Civilization II  <b>OR</b> HIST 1113 World Civilizations I and HIST 1123 World Civilizations II</p>
b. Foreign Language	Up to 9 hours (depending on placement)	<p>Completion through the Intermediate I (2003) level in a single language (Includes course numbers 1003*, 1013, 2003)                      * 1003 is non-degree credit unless student completed two years in a single foreign language and takes 1003 in a different language. <b>Students under this plan must begin with a degree-credit course in foreign language.</b></p>
c. Fine Arts/ World Literature/Philosophy	9 hours total selected from at least 2 different areas	<p><b>Fine Arts:</b>                      ARCH 1003 Architecture Lecture or LARC 1003 Landscape Architecture                      ARHS 1003 Art History or ARTS 1003 Art Studio                      COMM 1003 Film Lecture                      DANC 1003 Movement and Dance                      DRAM 1003 Theater Lecture                      HUMN 1003 Introduction to the Arts and Aesthetics                      MLIT 1003 Music Lecture</p> <p><b>World Literature:</b>                      WLIT 1113 World Literature I                      WLIT 1123 World Literature II (<i>WLIT 1113</i>) OR                      a) a foreign language literature course                      b) any other WLIT course</p> <p><b>Philosophy:</b>                      PHIL 2003 Introduction to Philosophy                      PHIL 2103 Introduction to Ethics                      PHIL 2203 Introduction to Logic</p>
d. Natural Sciences	Determined by the department of the major	
e. Social Sciences	3	<p>ANTH 1023 Introduction to Cultural Anthropology                      ECON 2013 Principles of Macroeconomics (<i>MATH 1203</i>) or ECON 2143 Basic Economics                      GEOG 2103 Emerging Nations or GEOG 2203 Developed Nations                      PSYC 2003 General Psychology                      SOCI 2013 General Sociology</p>
f. Advanced Composition	3 hours - Exemption may be granted by either: a) grades of "A" or "B" in ENGL 1013 and "A" in ENGL 1023 taken at UA or b) passing the Advanced Composition Exam*	<p>ENGL 2003 Advanced Composition or ENGL 2013 Essay Writing                      *(Students must satisfy the ENGL 1013 and 1023 requirement and complete 30 credit hours before taking the Advanced Composition Exam. The exam must be taken before the student has completed 96 credit hours. Students who do not pass the Advanced Composition Exam must take ENGL 2003.)</p>

# Graduation Requirements Checklist

In addition to the specific course requirements for your degree plan and your major, be aware that there are general graduation requirements that every student in Fulbright College must complete. University graduation requirements are outlined in the Catalog of Studies, as are the College requirements. Some of that information is highlighted here. Refer to the Catalog of Studies when necessary.

## 1. *Minimum Total Semester Hour Requirement*

B. A., B.S., B.M. Degrees: 124 hours      B. F. A.: 128 hours

## 2. Residency Requirement

### a) 30 Hour Rule (University Requirement)

The full senior year must be completed in residence except that a senior who has already met the minimum residency requirement will be permitted to earn not more than 12 of the last 30 hours in extension or correspondence courses or in residence at another accredited institution granting the baccalaureate degree. No more than six of these 12 hours may be correspondence courses. The minimum residence requirement is 36 weeks and 30 semester hours. Residency for the senior year is defined as a period during which the student must be enrolled in courses offered on the campus in Fayetteville. This is intended to provide adequate contact with the University and its faculty for each student who is awarded a degree. Colleges and departments have the authority to prescribe residence requirements that exceed those described here. *Fulbright College requires that no fewer than 30 hours of credit must be in courses offered by the college.*

### b) 24 Hour Rule (College Requirement)

A student graduating from Fulbright College must have completed at least 24 hours of 3000 and 4000 level courses from departments in Fulbright College.

## 3. 40 Hour Rule

Students must present for degree credit at least 40 hours of work in courses numbered 3000 and above. Included in this 40 hours can be courses numbered 2000 if each has a specific course designated as a prerequisite. The following courses are excluded: MILS 2001 and 2011, AERO 2001 and 2011, and foreign language courses numbered 2003 and 2013. These courses may be taken from other colleges or universities. However, do not forget the college residency requirement, specifically the 24 HOUR RULE.

## 4. Grade-Point Average

Students graduating from Fulbright College must have a minimum cumulative GPA of 2.00.

## 5. "D" Rule

If a student has grades of "D" in more than 25 percent of the hours presented for graduation credit, she/he will not be allowed to graduate.

## 6. Eight Hour Rule

Students may submit no more than eight semester credit hours from the following list of course alpha codes. These may be used for degree credit only with the specific recommendation of the advisor.

AEED (Agricultural and Extension Education), \*AERO (Aerospace Studies), AGAD (Agricultural Administration), \*DEAC (Dance Education Activity), EXED (Extension Education), HLSC (Health Science), HLED (Health Education), IRED (Instructional Resources), \*MILS (Military Science), OFSM (Office Systems Management), \*PEAC (Physical Education Activity), PHED (Physical Education), RECR (Recreation), VOED (Vocational Education)

\*No more than four of the eight hours may be applied from AERO, MILS, PEAC, or DEAC (combined), unless a student completes an ROTC program and receives a commission.

## 7. 68 Hour Rule

Students who transfer into the University may present for degree credit no more than 68 hours of lower division course work (1000 and 2000 level).

## 8. Writing Requirement

Students graduating from Fulbright College must write a research/analytical paper for at least one upper division course in his/her major. Satisfactory completion of an honors project or a senior thesis may fulfill this requirement. Each department has determined its own procedures for certifying completion of this requirement. Questions should be referred to the departmental chairperson.

## 9. Degree Application

To receive their degree, students must complete the degree application process. The official application deadline is printed each semester in the Schedule of Classes. Typically, the deadline is in mid-October for fall applications and in mid-February for spring applications. **For spring graduates, it is particularly important to meet the deadline to ensure that the student's name will appear in the commencement program.** Early application is encouraged (i.e. the semester before graduation) so the certification process can begin in advance. Students with up to 12 hours remaining to graduate can participate in commencement if they agree to complete the hours in the summer. It is important to note that the names of these students will not appear in the program, or in the sidewalk, for that year.

To apply for graduation, students must first go to the Dean's office in MAIN 525 to complete a card which they will submit to the Office of the Registrar, along with the graduation fee. The certification process will then begin.