## REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN PHYSICS

**College of Arts and Sciences**

**The University of Oklahoma**

### For Students Entering the Oklahoma State System for Higher Education:

**Summer 2000 through Spring 2001**

**Physics (Professional Option)**

### 1902B Bachelor of Science in Physics

#### Minimum Credit Hours and Grade Averages Required

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>Total - 124</th>
<th>Upper-Division Within Total - 48</th>
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<tbody>
<tr>
<td>Major - 45</td>
<td>Lower-Division Within Major - 27</td>
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<tr>
<th>Grade Point Averages:</th>
<th>Overall: Combined OU/Transfer - 2.00 OU - 2.00</th>
<th>Major: Combined OU/Transfer - 2.00 OU - 2.00</th>
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### GENERAL EDUCATION AND COLLEGE REQUIREMENTS

Courses graded S/U or P/NP will not apply.

Courses for fulfillment of General Education and College of Arts & Sciences requirements must be from the approved General Education course list.

#### University-Wide General Education Requirements

**(minimum 40 hours)**

**Core Area I: Symbolic and Oral Communication (9-19 hours, 3-5 courses)**

- 1. English 1113, Principles of English Composition
- 2. English 1213, Principles of English Composition

**Core Area II: Foreign Language (0-10 hours, 2 courses in the same language).** May be met by successful completion of 2 years of the same foreign language in high school.

- 1. Beginning Course, 0-5 hours
- 2. Beginning Course, continued, 0-5 hours

**Core Area III: Mathematics (3 hours, 1 course)**

- 1. Beginning Course, 0-5 hours

**Core Area IV: Humanities (12 hours, 4 courses)**

- a: Understanding Artistic Forms (3 hours, 1 course)

- b: Western Civilization and Culture (6 hours, 2 courses)

- 1. History 1483, U.S., 1492-1865, or History 1493, U.S., 1865-Present, and one additional course:
- 2. ________________ (excluding HIST 1483 and 1493)

**Core Area V: Social Science (6 hours, 2 courses)**

- 1. Political Science 1113, American Federal Government and one additional course:
- 2. ________________

**Core Area VI: Natural Science (see specific College of Arts & Sciences requirements)**

- 1. Biological Science _______________
- 2. Physical Science _______________

**Senior Capstone Experience (3 hours, 1 course): ________________**

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### Major Requirements

A total of 45 hours in Physics is required, including the courses listed below.

#### Physics

- 1205 Introductory Physics I for Physics Majors
- 1215 Introductory Physics II for Physics Majors
- 2064 Waves, Optics & Relativity
- 2302 Electronics Laboratory I
- 2312 Electronics Laboratory II
- 3054 Physical Mechanics
- 3113 Quantum Physics
- 3130 Electricity & Magnetism I
- 3302 Junior Laboratory I
- 3312 Junior Laboratory II
- 3803 Introduction to Quantum Mechanics I
- 4153 Statistical Physics and Thermodynamics
- 4183 Electricity and Magnetism II
- 4213 Nuclear and Particle Physics
- 4243 Solid State Physics
- 4813 Atomic and Molecular Physics
- 4300 Senior Laboratory Project (Capstone Course)
- 4300 Senior Laboratory Project (2 enrollments required)
- 4813 Atomic and Molecular Physics

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### Additional College of Arts & Sciences College Requirements

**I. Science (7 hours, 2 courses). One of the areas must include a laboratory.**

- 1. Biological Science _______________
- 2. Physical Science _______________

**II. Foreign Language (0-3 hours). One course at the intermediate level or demonstrated competency at that level**

Intermediate Course, 3 hours

**III. Western Civilization (6 upper-division hours, 2 courses). Must be outside the major and in addition to University General Education Core IV**

- 1. ________________
- 2. ________________

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### Electives

Electives to bring total applicable hours to 124 including 48 upper-division hours.
INFORMATION CONCERNING GENERAL RULES, REGULATIONS AND MINIMUM REQUIREMENTS

TOTAL HOURS: A minimum of 124 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 will be counted as lower-division or upper-division credit depending on the level at which it was offered at the institution where the work was taken. All two-year college work is considered to be lower-division.

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: At least 30 semester hours in the major must be completed.

HOURS BY EXAM, CORRESPONDENCE STUDY AND/OR EXTENSION: A maximum of 31 semester hours (or 1/4 of the total hours required for a preprofessional program of study) may be completed by a combination of exam, correspondence study and/or extension credit.

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.

REPEAT OF FAILED COURSEWORK: A student earning a grade of “F” in an upper-division course at OU may not repeat the course for credit at another institution without the prior written permission of the department that offered the course at OU.

MILITARY, MILITARY IN-SERVICE, AND P.E. COURSES: A maximum of 16 semester hours total of basic skills courses; aerospace studies, military science, and naval science courses; advanced military in-service experience; and PE activity courses may be included in the minimum 124 semester hours required for graduation. No more than four of the 16 semester hours may be in PE activity courses.

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

RESIDENCY:
- A minimum of 30 semester hours acceptable toward graduation must be earned in residence at OU, including at least 15 of the last 30 hours applied toward the degree.
- 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, Physical Sciences Center, Room 429. The deadline for completion of all coursework to graduate in a particular term is the last day of classes in that term.

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**GRADUATION PLAN**

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<tr>
<th>Freshman Year</th>
<th>Sophomore Year</th>
<th>Junior Year</th>
<th>Senior Year</th>
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Total Upper-
Hours _____ Division _____