

## Academic Map: Physics, Physical Science

**Department:** \_\_\_\_\_ Physics and Astronomy \_\_\_\_\_ **Degree:** \_\_\_\_\_ BS \_\_\_\_\_  
**Program/Major:** \_\_\_\_\_ Physics \_\_\_\_\_  
**Track/Emphasis:** \_\_\_\_\_ Physical Science \_\_\_\_\_  
**Does this program require a minor? (Yes/No)** \_\_\_\_\_ Yes \_\_\_\_\_

Important program information in the online *Undergraduate Bulletin*:

**UCA Core Requirements:** <http://uca.edu/ubulletin2015/general-policies-information/uca-core/>

**LD Core Check Sheet:** <http://uca.edu/ubulletin/ldcore/>

**Degree Requirements:** <http://uca.edu/ubulletin2015/general-policies-information/degree-requirements/>

**Program Description:** <http://uca.edu/ubulletin2015/colleges-departments-programs/college-of-natural-sciences-and-mathematics/department-of-physics-and-astronomy/>

**Course Descriptions:** <http://uca.edu/ubulletin2015/courses/>

This degree program requires a total of **120** semester credit hours, including at least **40** upper-division credit hours.

Comparable courses in the Arkansas Course Transfer System (ACTS) are cross-referenced in the ACTS column of each semester block below; a [core link](http://uca.edu/ubulletin/ldcore/) (http://uca.edu/ubulletin/ldcore/) takes the user to the *Undergraduate Bulletin's* UCA Lower-Division Core check sheet, where UCA Core options and ACTS course numbers are listed in full; an [acts link](http://uca.edu/ubulletin/arkansas-course-transfer-system/) takes the user to the *Undergraduate Bulletin's* ACTS page (http://uca.edu/ubulletin/arkansas-course-transfer-system/) for additional information and a UCA-ACTS crosswalk.

### Year 1

#### Fall – Semester 1 (credit hours: 15)<sup>1</sup>

| SUBJ         | NUM          | TITLE   | SCH | ACTS  |
|--------------|--------------|---|-----|---|
| PHYS<br>PHYS | 1441<br>1410 | University Physics 1 or<br>College Physics 1  | 4   | <a href="#">PHYS2034</a><br><a href="#">PHYS2014</a>  |
| MATH         | 1496         | Calculus I  | 4   | <a href="#">MATH2405</a>                              |
| WRTG         | 1310         | Introduction to College Writing   | 3   | <a href="#">ENGL1013</a>                              |
| BIOL         | 1400         | Exploring Concepts in Biology or<br>Approved alternative (LD UCA Core: Life Science) <sup>2</sup> | 4   | <a href="#">BIOL1004</a><br><a href="#">core link</a> |

#### Spring – Semester 2 (credit hours: 15)<sup>1</sup>

| SUBJ         | NUM          | TITLE  | SCH | ACTS  |
|--------------|--------------|--|-----|---|
| PHYS<br>PHYS | 1442<br>1420 | University Physics 2 or<br>College Physics 2   | 4   | <a href="#">PHYS2044</a><br><a href="#">PHYS2024</a>                              |
| MATH         | 1497         | Calculus II  | 4   | <a href="#">MATH2505</a>  |
| WRTG<br>ENGL | 1320<br>1320 | Academic Writing and Research or<br>Interdisciplinary Writing and Research or<br>Other approved alternative (LD UCA Core: Research/Writing) <sup>2</sup> | 3   | <a href="#">ENGL1023</a><br><a href="#">ENGL1023</a><br><a href="#">core link</a> |
|              |              | LD UCA Core <sup>2</sup>   | 3   | <a href="#">core link</a>   |
|              |              | General Elective   | 1   |   |

**Year 2****Fall – Semester 3 (credit hours: 15)**

| SUBJ | NUM  | TITLE                           | SCH | ACTS                      |
|------|------|---------------------------------|-----|---------------------------|
| PHYS | 2443 | University Physics 3            | 4   |                           |
| MATH | 2471 | Calculus III                    | 4   | <a href="#">MATH2603</a>  |
| CHEM | 1450 | College Chemistry I             | 4   | <a href="#">CHEM1414</a>  |
|      |      | LD UCA Core Course <sup>2</sup> | 3   | <a href="#">core link</a> |

**Spring – Semester 4 (credit hours: 16)**

| SUBJ | NUM  | TITLE                           | SCH | ACTS                      |
|------|------|---------------------------------|-----|---------------------------|
| CHEM | 1451 | College Chemistry II            | 4   | <a href="#">CHEM1424</a>  |
|      |      | LD UCA Core Course <sup>2</sup> | 3   | <a href="#">core link</a> |
|      |      | LD UCA Core Course <sup>2</sup> | 3   | <a href="#">core link</a> |
|      |      | LD UCA Core Course <sup>2</sup> | 3   | <a href="#">core link</a> |
|      |      | LD UCA Core Course <sup>2</sup> | 3   | <a href="#">core link</a> |

**Year 3****Fall – Semester 5 (credit hours: 15)**

| SUBJ | NUM  | TITLE                              | SCH | ACTS |
|------|------|------------------------------------|-----|------|
| PHYS | 3210 | Experiments in Physics 1           | 2   |      |
| CHEM | 2401 | Organic Chemistry I                | 4   |      |
| PHYS |      | Physics Elective <sup>3, 4</sup>   | 3   |      |
|      |      | Minor Elective <sup>4, 5</sup>     | 3   |      |
| WRTG | 3310 | Technical Writing (UD UCA Core: C) | 3   |      |

**Spring – Semester 6 (credit hours: 17)**

| SUBJ | NUM  | TITLE                              | SCH | ACTS                      |
|------|------|------------------------------------|-----|---------------------------|
| PHYS | 3220 | Experiments in Physics 2           | 2   |                           |
| PHYS |      | Physics Elective <sup>3, 4</sup>   | 3   |                           |
| CHEM |      | Chemistry Elective <sup>3, 4</sup> | 3   |                           |
|      |      | LD UCA Core Course <sup>2</sup>    | 3   | <a href="#">core link</a> |
|      |      | Minor Elective <sup>4, 5</sup>     | 3   |                           |
|      |      | Minor Elective <sup>4, 5</sup>     | 3   |                           |

**Year 4****Fall – Semester 7 (Credit hours: 15)**

| SUBJ | NUM  | TITLE                                | SCH | ACTS |
|------|------|--------------------------------------|-----|------|
| PHYS | 4111 | Senior Capstone                      | 1   |      |
| PHYS |      | Physics Elective <sup>3, 4</sup>     | 3   |      |
|      |      | Minor Elective <sup>4, 5</sup>       | 3   |      |
|      |      | Minor Elective <sup>4, 5</sup>       | 3   |      |
|      |      | General Elective Course <sup>4</sup> | 3   |      |
|      |      | General Elective Course <sup>4</sup> | 2   |      |

**Spring – Semester 8 (Credit hours: 12)**

| SUBJ | NUM          | TITLE  | SCH | ACTS |
|------|--------------|--|-----|------|
| PHYS | 4211         | Senior Capstone (UD UCA Core: Z)                                       | 2   |      |
|      |              | Minor Elective <sup>4, 5</sup>   | 3   |      |
|      |              | Minor Elective <sup>4, 5</sup>   | 3   |      |
| PHIL | 3320<br>3325 | Ethics (UD UCA Core: I, R)<br>Political Philosophy (UD UCA Core: I, R) | 3   |      |
|      |              | General Elective Course <sup>4</sup>                                   | 1   |      |

\_\_\_\_\_  
SIGNED – DEPARTMENT CHAIR

\_\_\_\_\_  
DATE

\_\_\_\_\_  
SIGNED – COLLEGE DEAN

\_\_\_\_\_  
DATE

**To be completed by the advisor when an Eight-Semester plan is accepted by the student:**

**If applicable, has student selected a minor? Type “x” as appropriate. \_\_\_\_\_ No \_\_\_\_\_ Yes**

**If “yes,” specify: \_\_\_\_\_**

**Notes**

<sup>1</sup> Prior to completion of 30 semester hours, a student must complete a LD UCA Core course designated as a First-Year Seminar (FYS) in Critical Inquiry, Diversity, or Responsible Living.

<sup>2</sup> See appropriate choices, alternatives, or substitutions under “UCA Core” in the *Undergraduate Bulletin*. Prior to completion of 30 semester hours, a student must complete a UCA Core course designated as a First-Year Seminar (FYS) in Critical Inquiry, Diversity, or Responsible Living. The student will also need to complete major, minor, or general elective courses designated as fulfilling the upper-division and capstone requirements of the UCA Core. See annotations in this Academic Map for courses that fulfill these requirements. Consult the *Undergraduate Bulletin* and your academic advisor for other available courses.

<sup>3</sup> PHYS and CHEM elective courses must be approved by the Chair of the Department of Physics and Astronomy.

<sup>4</sup> Major Elective, Minor Elective, and General Elective courses must be selected so that a minimum of 40 hours of credit is earned at the 3000 level or above.

<sup>5</sup> This Academic Map includes 21 credit hours in the Minor field of study. Minor requirements range from 15 to 27 credit hours. Depending on the minor selected, the student will need to adjust the number of general elective and minor elective credit hours in this AMAP.