

## Program Completion Plan (Eight Semester Plan)

**Department:** \_\_\_\_\_ Physics and Astronomy \_\_\_\_\_ **Degree:** \_\_\_\_\_ BS \_\_\_\_\_  
**Program/Major:** \_\_\_\_\_ Physics \_\_\_\_\_  
**Track/Emphasis:** \_\_\_\_\_ Physics \_\_\_\_\_  
**Does this program require a minor? (Yes/No)** \_\_\_\_\_ Yes<sup>1</sup> \_\_\_\_\_

**Important program information in the online *Undergraduate Bulletin*:**

**UCA Core Requirements:** <http://uca.edu/ubulletin2014/general-policies-information/uca-core/>  
**Degree Requirements:** <http://uca.edu/ubulletin2014/general-policies-information/degree-requirements/>  
**Program Description:** <http://uca.edu/ubulletin2014/colleges-departments-programs/college-of-natural-sciences-and-mathematics/department-of-physics-and-astronomy/>  
**Course Descriptions:** <http://uca.edu/ubulletin2014/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/go/ubulletin2014-ldcore/) (<http://uca.edu/go/ubulletin2014-ldcore/>) takes the user to the *Undergraduate Bulletin's* UCA Core page, where UCA Core options and ACTS course numbers are listed in full; an [acts link](http://uca.edu/go/acts/) takes the user to the *Undergraduate Bulletin's* ACTS page (<http://uca.edu/go/acts/>) for additional information and a full UCA-ACTS crosswalk.

### Year 1

#### Fall – Semester 1 (credit hours: 15)

| SUBJ | NUM  | TITLE                                       | SCH | ACTS                      |
|------|------|---|-----|---------------------------|
| PHYS | 1441 | University Physics 1                        | 4   | <a href="#">PHYS2034</a>  |
| MATH | 1496 | Calculus I                                  | 4   | <a href="#">MATH2405</a>  |
| WRG  | 1310 | Introduction to College Writing             | 3   | <a href="#">ENGL1013</a>  |
|      |      | Lower Division UCA Core Course <sup>2</sup> | 3   | <a href="#">core link</a> |
|      |      | General Elective Course <sup>3</sup>        | 1   |                           |

#### Spring – Semester 2 (credit hours: 15)

| SUBJ        | NUM          | TITLE   | SCH | ACTS   |
|-------------|--------------|---|-----|--|
| PHYS        | 1442         | University Physics 2  | 4   | <a href="#">PHYS2044</a>                             |
| MATH        | 1497         | Calculus II   | 4   | <a href="#">MATH2505</a>                             |
| WRG<br>ENGL | 1320<br>1320 | Academic Writing and Research or<br>Interdisciplinary Writing and Research or<br>Other approved alternative | 3   | <a href="#">ENGL1023</a><br><a href="#">ENGL1023</a> |
| CSCI        | 1340         | Introduction to Programming   | 3   |  |
|             |              | General Elective Course <sup>3</sup>  | 1   |  |

**Year 2****Fall – Semester 3 (credit hours: 17)**

| SUBJ | NUM  | TITLE  | SCH | ACTS                      |
|------|------|--|-----|---------------------------|
| PHYS | 2443 | University Physics 3   | 4   |                           |
| MATH | 2471 | Calculus III   | 4   | <a href="#">MATH2603</a>  |
|      |      | Lower Division UCA Core Course <small>Error! Bookmark not defined.</small> | 3   | <a href="#">core link</a> |
|      |      | Lower Division UCA Core Course <small>Error! Bookmark not defined.</small> | 3   | <a href="#">core link</a> |
|      |      | Lower Division UCA Core Course <small>Error! Bookmark not defined.</small> | 3   | <a href="#">core link</a> |

**Spring – Semester 4 (credit hours: 15)**

| SUBJ | NUM  | TITLE  | SCH | ACTS                      |
|------|------|--|-----|---------------------------|
| PHYS | 2320 | Introductory Computational Physics   | 3   |                           |
| PHYS | 3341 | Mathematical Methods in Physics  | 3   |                           |
| MATH | 3331 | Ordinary Differential Equations  | 3   |                           |
|      |      | Lower Division UCA Core Course <small>Error! Bookmark not defined.</small> | 3   | <a href="#">core link</a> |
|      |      | Lower Division UCA Core Course <small>Error! Bookmark not defined.</small> | 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   |                          |
| PHYS | 3342 | Mechanics                     | 3   |                          |
| PHYS | 3360 | Electromagnetism 1            | 3   |                          |
| BIOL | 1400 | Biology for General Education | 4   | <a href="#">BIOL1004</a> |
| WRTG | 3310 | Technical Writing             | 3   |                          |

**Spring – Semester 6 (credit hours: 15)**

| SUBJ | NUM  | TITLE                                       | SCH | ACTS |
|------|------|---|-----|------|
| PHYS | 3220 | Experiments in Physics 2                    | 2   |      |
| PHYS | 3343 | Thermal Physics                             | 3   |      |
| PHYS | 3361 | Electromagnetism 2                          | 3   |      |
|      |      | Lower Division UCA Core Course <sup>2</sup> | 3   |      |
|      |      | General Elective Course <sup>3</sup>        | 3   |      |
|      |      | General Elective Course <sup>3</sup>        | 1   |      |

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

| SUBJ | NUM  | TITLE                                | SCH | ACTS |
|------|------|--------------------------------------|-----|------|
| PHYS | 4111 | Senior Capstone 1                    | 1   |      |
| PHYS | 3353 | Quantum Mechanics 1                  | 3   |      |
|      |      | Major Elective <sup>3,4</sup>        | 3   |      |
|      |      | General Elective Course <sup>3</sup> | 3   |      |
|      |      | General Elective Course <sup>3</sup> | 3   |      |
|      |      | General Elective Course <sup>3</sup> | 2   |      |

**Spring – Semester 8 (Credit hours: 13)**

| SUBJ | NUM  | TITLE                                | SCH | ACTS |
|------|------|--------------------------------------|-----|------|
| PHYS | 4211 | Senior Capstone 2                    | 2   |      |
|      |      | Major Elective <sup>3,4</sup>        | 3   |      |
|      |      | General Elective Course <sup>3</sup> | 3   |      |
|      |      | General Elective Course <sup>3</sup> | 3   |      |
|      |      | General Elective Course <sup>3</sup> | 2   |      |

\_\_\_\_\_  
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> Students completing the requirements for the program complete the requirements for a minor in Mathematics.

<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.

<sup>3</sup> Major Elective and General Elective courses must be selected so that a minimum of 40 hours of credit is earned at the 3000 level of above.

<sup>4</sup> Major elective courses must be approved by the Chair of the Department of Physics and Astronomy.