

## Academic Map: Physics, Physical Science (Calculus-Prep Start)

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

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

**UCA Core Requirements:** <https://uca.edu/ubulletin/general-policies-information/uca-core/>  
**LD UCA Core Check Sheet:** <https://uca.edu/academicbulletins/ld-uca-core/>  
**UD UCA Core Course List:** <https://uca.edu/academicbulletins/ud-uca-core/>  
**Degree Requirements:** <https://uca.edu/ubulletin/general-policies-information/degree-requirements/>  
**Program Description:** <https://uca.edu/ubulletin/colleges-departments/cn/physics-astronomy/>  
**Course Descriptions:** <https://uca.edu/ubulletin/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](https://uca.edu/academicbulletins/ld-uca-core/) (https://uca.edu/academicbulletins/ld-uca-core/) 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](https://uca.edu/academicbulletins/acts/) takes the user to the *Undergraduate Bulletin's* ACTS page (https://uca.edu/academicbulletins/acts/) for additional information and a UCA-ACTS crosswalk.

**Scholarship recipients:** Please be aware of eligibility criteria for your scholarship(s). In particular, pay attention to (1) the enrollment requirements each semester for disbursement of your scholarship(s) and (2) the number of hours and GPA required each semester and/or year for renewal of your scholarship(s). Some Academic Maps may suggest enrollment in fewer hours than required for disbursement of your scholarship(s). In such cases, work with your academic advisor to adjust your schedule to meet requirements most efficiently. Contact the Office of Student Financial Aid at (501) 450-3140 with any questions regarding enrollment/renewal requirements of your scholarship(s). For online information resources, see endnote 1.

### Year 1

#### Fall – Semester 1 (credit hours: **14**)

SUBJ	NUM	TITLE	SCH	ACTS
PHYS	1301	Introduction to Physics	3	
MATH	1486	Calculus Preparation	4	
WRTG	1310	Introduction to College Writing	3	ENGL1013
BIOL	1400	Exploring Concepts in Biology or Approved alternative (LD UCA Core: Life Science) <sup>2</sup>	4	BIOL1004 core link

#### Spring – Semester 2 (credit hours: **14**)

SUBJ	NUM	TITLE	SCH	ACTS
PHYS PHYS	1441 1410	University Physics 1 or College Physics 1	4	PHYS2034 PHYS2014
MATH	1496	Calculus I	4	MATH2405
WRTG ENGL	1320 1320	Academic Writing and Research or Interdisciplinary Writing and Research or Other approved alternative (LD UCA Core: Research/Writing) <sup>2</sup>	3	ENGL1023 ENGL1023 core link
		LD UCA Core Course <sup>2</sup> (FYS)	3	core link

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

SUBJ	NUM	TITLE	SCH	ACTS
PHYS PHYS	1442 1420	University Physics 2 or College Physics 2	4	PHYS2044 PHYS2024
MATH	1497	Calculus II	4	MATH2505
CHEM	1450	College Chemistry I	4	CHEM1414
		LD UCA Core Course <sup>2</sup>	3	core link

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

SUBJ	NUM	TITLE	SCH	ACTS
PHYS	2443	University Physics 3	4	
CHEM	1451	College Chemistry II	4	CHEM1424
MATH	2471	Calculus III	4	MATH2603
		LD UCA Core Course <sup>2</sup>	3	core link

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

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

**Year 4****Fall – Semester 7 (Credit hours: 16)**

SUBJ	NUM	TITLE	SCH	ACTS
PHYS	4111	Senior Capstone	1	
PHYS		Physics Elective <sup>3,4</sup>	3	
		Minor Elective <sup>4,5</sup> (UD UCA Core: D, I, or R)	3	
		Minor Elective <sup>4,5</sup>	3	
		LD UCA Core Course <sup>2</sup>	3	core link
		LD UCA Core Course <sup>2</sup>	3	core link

**Spring – Semester 8 (Credit hours: 14)**

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	
		Minor Elective <sup>4,5</sup>	3	
		General Elective Course <sup>4</sup> (UD UCA Core: D, I, or R)	3	

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 SIGNED – DEPARTMENT CHAIR

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 DATE

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 SIGNED – COLLEGE DEAN

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 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> See online information resources for UCA scholarships at <https://uca.edu/scholarships/> and for state scholarships at <https://scholarships.adhe.edu/scholarships-and-programs/a-z/>.

<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, Minor, 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.