



CATALOG YEAR 2008-2009

(Please use a separate form for each add/change/delete)

COLLEGE/SCHOOL/SECTION: Arts and Sciences

Current Catalog Page(s) Affected: pp. 87, 107

Course: Add: _____ Delete: _____
(Check all that apply) Change: Number ___ Title ___ SCH ___ Description ___ Prerequisite ___

If new, provide Course Prefix, Number, Title, SCH Value, Description, Prerequisite, Lecture/Lab hours (if applicable), and **student learning outcomes**. If in current catalog, copy and paste the text from the [on-line catalog](#) and indicate changes in red and provide a brief justification.

Program: Add: _____ Change: Attach new/changed Program of Study description and 4-year plan. If in current catalog, copy and paste the text from the [on-line catalog](#) and indicate changes in red.

BA with a Major in Physical Science (See attached / following pages for details and justification.)

Minor: Add: _____ Delete: _____ Change: _____ Attach new/changed minor. If in current catalog, copy and paste the text from the [on-line catalog](#) and indicate changes in red.

Faculty: Add: _____ Delete: _____ Change: _____ Attach new/changed faculty entry. If in current catalog, copy and paste the text from the [on-line catalog](#) and indicate changes in red.

College Introductory Pages: Add information: _____ Change information: _____ Attach new/changed information. If in current catalog, copy and paste the text from the [on-line catalog](#) and indicate changes in red.

Other: Add information: _____ Change information: _____ Attach new/changed information. If in current catalog, copy and paste the text from the [on-line catalog](#) and indicate changes in red.

Approvals:	Signature	Date
Chair Department Curriculum Committee	_____	_____
Chair Department	_____	_____
Chair College Curriculum Committee	_____	_____
Dean	_____	_____

Degree Requirements for the BA with a Major in Physical Science

- ~~1. **Hours Required:** A minimum of **124** semester credit hours (SCH): 45 hours must be advanced, and fulfillment of degree requirements as specified in the "[Requirements for Graduation](#)" section of this catalog.~~
- ~~2. **University Core Curriculum:** 42 SCH as outlined in the suggested plans and as specified in the "[Requirements for Graduation](#)".~~
- ~~3. **Major:** **61** SCH and CHEM 1411, 1412 and MATH 2413 taken as part of the core with 1 SCH excess. Lower-level requirements include CHEM 2423, 2425, PHYS 2325, 2125, 2326 and 2126, MATH 2414 and 2415. Advanced requirements include MATH 3330, CHEM 3405, 3431, 3432, PHYS 3305, 3310, 3315, 3320, 3325, 4305 and PHYS 4399.~~
- ~~4. **Minor:** A minimum of **18** SCH from one discipline at least twelve of which must be at the 3000-4000 level. See [Appendix B](#).~~
- ~~5. **Electives:** 3 SCH.~~

Degree Requirements for the BA with a Major in Physical Science

- Hours Required:** A minimum of **120** semester credit hours (SCH): 45 hours must be advanced, and fulfillment of degree requirements as specified in the "[Requirements for Graduation](#)" section of this catalog.
- University Core Curriculum:** 42 SCH as outlined in the suggested plans and as specified in the "[Requirements for Graduation](#)". (The course options for Science and Mathematics requirement of the core are PHYS 2325, 2125, 2326, 2126 and MATH 2413 with 1 SCH excess included in the 50 SCH requirements for the major.) MATH 2371 must be taken as part of the Communication's core.
- Major:** **50** SCH and PHYS 2325, 2125, 2326, 2126 and MATH 2413 taken as part of the core with 1 SCH excess included here. Lower-level requirements include COSC 1336, 1136, 1337 and 1137, MATH 2414 and 2415. Advanced requirements include MATH 3310, 3330, 4340 and 4350, PHYS 3305, 3310, 3315, 3320, 3325, 4305, and 4399.
- Minor:** A minimum of **18** SCH from one discipline at least twelve of which must be at the 3000-4000 level. See [Appendix C](#). (May complete Professional Development and Support Area option in lieu of Minor.)
- Electives:** **10** SCH.

Justifications for changes to the degree requirements for BA with a Major in Physical Science are:

- Enhance the curriculum with addition of computer science and mathematics courses;
- Make the students graduating with this degree more marketable in an increasingly technical workplace;
- Options for minor remains, so that students wishing to pursue further studies in chemistry, for instance, may do so as part of the minor;
- Provide degree option to students wishing to pursue composite certification in mathematics and physics to teach at the high school level (education courses could be taken in lieu of the minor option);
- Provide academic preparation to students wishing to pursue graduate studies in physics, physical science or a related field.

BACHELOR OF ARTS MAJOR IN PHYSICAL SCIENCE

Following is ~~one~~ suggested four-year degree plan. Students are encouraged to see their advisor each semester for help with program decisions and enrollment. Students are responsible for reviewing the **Program of Study**

Requirements:

*See [Appendix A](#) *Core Curriculum and Optional Course Information.*

** See [Appendix C](#) for approved list of minors and requirements.

FALL	HOURS	SPRING	HOURS
FRESHMAN YEAR		FRESHMAN YEAR	
CHEM 1411 General Chemistry I	4	CHEM 1412 General Chemistry II	4
ENGL 1301 English Composition I	3	ENGL 1302 English Composition II	3
HIST 1301 The U.S. to 1877	3	HIST 1302 The U.S. Since 1877	3
MATH 2413 Calculus I	4	MATH 2414 Calculus II	4
PSCI 2305 American National Govt	3	PSCI 2306 American State Govt	3
Total	17	-	17
SOPHOMORE YEAR		SOPHOMORE YEAR	
CHEM 2423 Organic Chemistry I	4	CHEM 2425 Organic Chemistry II	4
MATH 2415 Calculus III	4	MATH 3330 Ordinary Diff Equations	3
PHYS 2325 University Physics I	3	PHYS 2326 University Physics II	3
PHYS 2125 University Physics I Lab	1	PHYS 2126 University Physics II Lab	1
ENGL - Survey of Literature*	3	- - Soc/Behavioral Science*	3
- - Activity/Wellness*	1	ENGL 2314 Technical Writing	3
Total	16	-	17
JUNIOR YEAR		JUNIOR YEAR	
CHEM 3431 Physical Chemistry I	4	CHEM 3432 Physical Chemistry II	4
PHYS 3320 Electromagnetic Theory	3	PHYS 3305 Optics & Wave Theory	3
PHYS 3315 Classical Mechanics	3	- - Minor Curriculum**	3
- - Minor Curriculum**	3	- - Adv Minor Curriculum**	3
- - Visual/Performing Arts*	3	- - Elective	3
Total	16	-	16
SENIOR YEAR		SENIOR YEAR	
PHYS 3310 Modern Physics	3	CHEM 3405 Analytical Chemistry	4
PHYS 3325 Thermodynamics	3	PHYS 4305 Quantum Mechanics	3

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-	-	Adv Minor Curriculum**	3	PHYS	4399	Special Topics in Phys	3
	-	Adv Minor Curriculum**	3		-	Adv Minor Curriculum**	3
Total			12	-			13

TOTAL SEMESTER CREDIT HOURS: 124

*Actual degree plans may vary depending on availability of courses in a given semester.
Some courses may require prerequisites not listed.*

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BACHELOR OF ARTS MAJOR IN PHYSICAL SCIENCE

Following is **one** suggested four-year degree plan. Students are encouraged to see their advisor each semester for help with program decisions and enrollment. Students are responsible for reviewing the **Program of Study**

Requirements.

*See [Appendix A](#) *Core Curriculum and Optional Course Information.*

** See [Appendix C](#) for approved list of minors and requirements.

FALL	HOURS	SPRING	HOURS
FRESHMAN YEAR		FRESHMAN YEAR	
COSC 1336	3	COSC 1337	3
Fundamentals of Programming		Object Oriented Programming	
COSC 1136	1	COSC 1137	1
Fundamentals of Programming Laboratory		Object-Oriented Programming Laboratory	
ENGL 1301	3	ENGL 1302	3
English Composition I		English Composition II	
HIST 1301	3	HIST 1302	3
The U.S. to 1877		The U.S. Since 1877	
MATH 2413	4	MATH 2414	4
Calculus I		Calculus II	
PSCI 2305	3	PSCI 2306	3
American National Govt		American State Govt	
Total	17		17
SOPHOMORE YEAR		SOPHOMORE YEAR	
	3		3
Minor Curriculum**		Minor Curriculum**	
MATH 2415	4	MATH 3330	3
Calculus III		Ordinary Diff Equations	
PHYS 2325	3	PHYS 2326	3
University Physics I		University Physics II	
PHYS 2125	1	PHYS 2126	1
University Physics I Lab		University Physics II Lab	
MATH 2371	3		3
Communications in Mathematics		Soc/Behavioral Science*	
	1	ENGL	3
Activity/Wellness*		Survey of Literature*	
Total	15		16
JUNIOR YEAR		JUNIOR YEAR	
MATH 3310	3	MATH 4350	3
Introduction to Linear Algebra		Partial Differential Equations	
PHYS 3320	3	PHYS 3305	3
Electromagnetic Theory		Optics&Wave Theory	
PHYS 3315	3		3
Classical Mechanics		Adv Minor Curriculum**	
	3		3
Adv Minor Curriculum**		Adv Minor Curriculum**	
	3		3
Visual/Performing Arts*		Elective	
Total	15		15

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SENIOR YEAR				SENIOR YEAR			
PHYS	3310	Modern Physics	3	MATH	4340	Numerical Analysis I	3
PHYS	3325	Thermodynamics	3	PHYS	4305	Quantum Mechanics	3
		Adv Minor Curriculum**	3	PHYS	4399	Special Topics in Phys	3
		Elective	3			Elective	<u>3</u>
MATH	3195	Seminar (free elective)	<u>1</u>				
Total			13				12

TOTAL SEMESTER CREDIT HOURS: 120

*Actual degree plans may vary depending on availability of courses in a given semester.
Some courses may require prerequisites not listed.*