



CATALOG YEAR 2011-2012 UCC 110
(Please use separate form for each add/change)

COLLEGE/SCHOOL/SECTION: Arts and Sciences

Course: Add: ___ Delete: ___
(check all that apply) Change: Number ___ Title ___ SCH ___ Description ___ Prerequisite ___
New course will be part of major ___ minor ___ as a required ___
or elective ___ course
New course will introduce ___, reinforce ___, or apply ___ concepts

If new, provide Course Prefix, Number, Title, **Measurable** Student Learning Outcomes, SCH Value, Description, prerequisite, and lecture/lab hours if applicable. If in current online catalog, provide change and attach text with changes in red and provide a brief justification.

Program: Delete: ___ Add: ___ Change: X Attach new/changed Program of Study description and 4-year plan. If in current online catalog, provide change and attach text with changes in red.

**BACHELOR OF SCIENCE
MAJOR IN CHEMISTRY**

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**.

| FALL | HOURS | SPRING | HOURS |
|--|-----------|--|-----------|
| FRESHMAN YEAR | | FRESHMAN YEAR | |
| CHEM1411 General Chemistry I | 4 | CHEM1412 General Chemistry II | 4 |
| ENGL 1301 English Composition I | 3 | ENGL 1302 English Composition II | 3 |
| BIOL 1406 Cell & Molecular Biology | 4 | Minor Elective | 4 |
| | | BIOL _____ Biology Elective | 4 |
| HIST 1301 The U.S. to 1877 | 3 | HIST 1302 The U.S. Since 1877 | 3 |
| MATH2412 Pre-Calculus | 4 | Activity/Wellness | 1 |
| | | MATH2413 Calculus I | 4 |
| Total | 14 | | 15 |
| SOPHOMORE YEAR | | SOPHOMORE YEAR | |
| CHEM2423 Organic Chemistry I | 4 | CHEM2425 Organic Chemistry II | 4 |
| MATH2413 Calculus I | 4 | MATH2414 Calculus II | 4 |
| MATH2414 Calculus II | 4 | HIST 1301 The U.S. to 1877 | 3 |
| Minor Elective | 4 | ENGL 2311 Technical Writing | 3 |
| ENGL _____ Survey of Literature | 3 | | |

| | | | |
|---------------------------------|-----------|----------------------------------|-----------|
| PHYS 1301 General Physics I | 3 | PHYS 1302 General Physics II | 3 |
| PHYS 1101 General Physics I Lab | 1 | PHYS 1102 General Physics II Lab | 1 |
| Total | 16 | | 15 |

JUNIOR YEAR

| | |
|--------------------------------------|--------------|
| CHEM3405 Analytical Chemistry I | 4 |
| CHEM3451 Biochemistry I | 4 |
| Visual/Performing Arts | 3 |
| Minor Elective | 4 |
| CHEM4498 Research in Chem | 4 |
| Total | 15 |

JUNIOR YEAR

| | |
|---|--------------|
| CHEM Advanced Chem Elective ¹ | 4 |
| CHEM Advanced Chem Elective ¹ | 4 |
| MATH3330 Differential Equations | 3 |
| Minor Elective | 4 |
| CHEM3406 Analytical Chemistry II | 4 |
| HIST 1302 The U.S. since 1877 | 3 |
| Total | 15 |

SENIOR YEAR

| | |
|----------------------------------|-----------|
| CHEM 3431 Physical Chemistry I | 4 |
| CHEM 4411 Inorganic Chemistry | 4 |
| CHEM 4120 Senior Seminar | 1 |
| PSCI 2305 American National Govt | 3 |
| Soc/Behavioral Science | 3 |
| Total | 15 |

SENIOR YEAR

| | |
|---|--------------|
| CHEM Advanced Chem Elective ¹ | 4 |
| Minor Elective | 4 |
| CHEM 4120 Senior Seminar | 1 |
| PSCI 2306 American State Govt | 3 |
| ENGL Survey of Literature | 3 |
| CHEM3432 Physical Chemistry II | 4 |
| CHEM Advanced Chem Elective | 4 |
| Activity/Wellness | 1 |
| Total | 15 |

TOTAL SEMESTER CREDIT HOURS: 120

¹ Advanced Chemistry Electives. Select 12 SCH from any CHEM 3000 or 4000 course.

Justification:

This plan adds a minor to the chemistry major and raises the math requirement to differential equations. The minor will allow the chemistry major to fulfill the requirements for medical school within the program of study. The additional math will better prepare the students for physical and analytical chemistry.

Minor: Add: ___ Delete: ___ Change: ___ Attach new/changed minor. If in current online catalog, provide change and attach text with changes in red.

Faculty: Add: ___ Delete: ___ Change: ___ Attach new/changed faculty entry. If in current online catalog, provide change and attach text with changes in red.

College Introductory Pages: Add information: ___ Change information: ___ Attach new/changed information. If in current online catalog, provide change and attach text with changes in red.

Other: Add information: ___ Change information: ___ Attach new/changed information. If in current online catalog, provide change and attach text with changes in red.

Approvals:

Signature

Date

Chair
Department Curriculum Committee

Tom Vaughan

Digitally signed by Tom Vaughan
DN: cn=Tom Vaughan, o=TAMU, ou=Biology and
Chemistry, email=troughan@tamuedu, c=US
Date: 2011.02.09 16:33:47 -0600

Chair
Department

Dan Mott

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Chair
College Curriculum Committee

James A Norris

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Sciences, email=jnorriss@tamui.edu, c=US
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Dean

Kevin Lindberg

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Date: 2011.03.21 17:41:56 -0500

10/19/10



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Degree Requirements for the BS with a Major in Chemistry

1. **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.
2. **University Core Curriculum:** 42 SCH as outlined in the suggested plans and as specified in the "Requirements for Graduation".
3. **MATH Elective:** ~~5 SCH designated as MATH 2413 and 1 SCH surplus from core.~~ ⁷ Should be 8 SCH designated as MATH 2414 and 3330 and the ~~4~~ SCH of MATH 2413 taken as part of the core. Should be 1 SCH surplus from core.
4. **Major:** ~~53- 38~~ SCH and the 8 SCH of CHEM 1411 and 1412 taken as part of the core; additional lower level requirements of CHEM 2423, 2425; upper level requirements of CHEM 3405, ~~3406~~, 3431, ~~3432~~, 3451, 4120, and 4411 ~~and 4498;~~ ~~and 16 SCH selected from CHEM 3400, 3452, 4409, 4410, 4411, 4431, 4451 or 4198-4498~~ 12 SCH selected from any additional CHEM course at the 3000-4000 level: and 1 excess SCH from the Core Curriculum. ~~CHEM 4198-4498 may be repeated for up to 6 SCH of credit within the degree program.~~ ~~CHEM 4120 may be repeated for up to 2 SCH of credit within the degree program.~~ CHEM 4120 should be taken twice for the major.
5. **Minor:** A minimum of **20** SCH from one discipline at least twelve of which must be at the 3000-4000 level. See Appendix C.
6. **Supporting Sciences Curriculum:** ~~20-12~~ SCH including ~~MATH 2414~~, PHYS 1301/1101, 1302/1102 and BIOL 1406 ~~and 1411 or BIOL 1413.~~

Justification:

Corrections based on e-mails from
Dr. Mott and Dr. Jaramillo 3/29/11.

This plan adds a minor to the chemistry major.