

UC 11717 125

APPROVED FEB 22 2012

Memorandum

To: Jeannette Morales
From: Ian Evans, Associate Dean, NSM
Subject: Catalog changes
Date: 9 February 2012.

RECEIVED FEB 10 2012

The Curriculum Committee has reviewed and approved changes to the Chemistry degree. I have attached a file – one showing the old and new requirements for the degree, along with the rationale for the changes. I have also attached a revision to the change of major requirements for the college. There is currently a draft of an earlier set of changes to the change of major policy (submitted on November 4) in review. I have included three pieces of information:

1. ~~Current Catalog Language (change of major)~~
2. Proposed changes to the current catalog language (November 4 submittal).
3. Proposed changes to item 2 on this list.

YOU ARE THE PRIDE

All changes affect the degree plan details as listed at:

<http://www.uh.edu/academics/catalog/colleges/nsm/majors/chemistry/index.php>

Chemistry Major - Bachelor of Science Degree

OLD

Students who choose to major in chemistry must meet the following requirements in addition to the special requirements for a Bachelor of Science degree:

Courses	Requirements	Hours
Physics:	PHYS 1321 , 1121 , 1322 , and 1122	8
Mathematics:	MATH 1431 , 1432 , 2433 , and 3321	15
Chemistry:	CHEM 1111 , 1112 , 1331 , 1332 , 2133 , 2233 , 3119 , 3221 , 3222 , 3331 , 3332 , 3369 , 4115 , 4229 , 4270 , 4272 , either 3336 or 4336 , 4365 , 4369 , 4370 , and 4372	47
Approved advanced chemistry elective		3

NEW

Students who choose to major in chemistry must meet the following requirements in addition to the special requirements for a Bachelor of Science degree:

50 credit hours of Chemistry courses of which at least 36 hours must be at the advanced (3000 or 4000) level.

At least 15 credit hours must be hands-on laboratory experiences, that include a minimum of 450 contact hours in physical (i.e., not virtual or computer-based) laboratories.

Requirements	
Courses	Hours
Physics: PHYS 1321 , 1121 , 1322 , and 1122	8
Mathematics: MATH 1431 , 1432 , 2433 , and 3321	15
Chemistry: CHEM 1111 , 1112 , 1331 , 1332 , 2133 , 2233 , 3119 , 3221 , 3222 , 3331 , 3332 , 3369 , 4115 , 4229 , 4270 , 4272 , 4336 , 4365 , 4369 , 4370 , and 4372	47
Approved advanced chemistry elective	3

RATIONAL:

Removal of CHEM 3336: This course has not been taught for many years and there are no plans to teach it again. In any case, it is not sufficiently rigorous to meet the requirements for ACS Degree Certification.

Real vs. Virtual Labs: It has become fashionable at some schools to offer virtual laboratory classes in lieu of actual hands-on ones. While these computer-based applications are good augmentations to real-life laboratory experience, they are not replacements. The Department of Chemistry will not accept computer-based courses as equivalent to hands-on laboratories.

Chemistry Major - Bachelor of Arts Degree

OLD

Students who choose to major in chemistry must meet the following requirements in addition to the special requirements for a Bachelor of Arts degree:

Requirements	
Courses	Hours
Physics: PHYS 1321 , 1121 , 1322 , and 1122	8
Mathematics: MATH 1431 , 1432 , 2433 , and 3321	15
Chemistry: CHEM 1111 , 1112 , 1331 , 1332 , 3221 , 3222 , 3331 , and 3332	18
CHEM 4370 or 4373	3
Approved chemistry electives (at least seven semester hours must be advanced)	11

NEW

Students who choose to major in chemistry must meet the following requirements in addition to the special requirements for a Bachelor of Arts degree:

32 hours of chemistry courses of which 21 hours must be advanced hours.

At least 8 credit hours must be hands-on laboratory experiences, that include a minimum of 250 contact hours in physical (i.e., not virtual or computer-based) laboratories.

Requirements	
Courses	Hours
Physics: PHYS 1321 , 1121 , 1322 , and 1122	8
Mathematics: MATH 1431 , 1432 , 2433 , and 3321	15
Chemistry: CHEM 1111 , 1112 , 1331 , 1332 , 3119 , 3221 , 3222 , 3331 , 3332 and 3369	22
CHEM 4370 or 4372	3
Approved advanced chemistry electives (which must include at least	7

one lab course)

Laboratory Courses Changes: Students have been graduating with too few laboratory classes. To remedy this, we have added analytical chemistry, which is crucial for jobs in the industry as a requirement, added an additional lab requirement, and specified the minimum credit and contact hours.

CHEM 4373 Removal: Over time, this course has become more focused and appropriate as a class for chemistry minors and other science majors. To enhance the rigor of the courses taken by chemistry majors, we have removed this option and allowed only the more rigorous courses in the same area.

The new suggested changes schedule for a BA would read as follows:

Third Year

Fall Semester Suggested Program

Courses	Hours
CHEM 4370 or 4372. Physical Chemistry I or Physical Chemistry II	3
PHYS 1122. Physics Laboratory II	1
POLS 1336. U.S. and Texas Constitutions and Politics or equivalent	3
Foreign Language (2000-level)	3
Visual/Performing Arts Core Course	3
Total	13

Spring Semester Suggested Program

Courses	Hours
CHEM 3369 and 3119. Analytical Chemistry and Laboratory	4
NSM Capstone, Minor or Elective Courses	3
Foreign Language (2000-level)	3
Humanities Core Course	3
POLS 1337. U.S. Government: Congress, President and Courts or equivalent	3
Total	16

Fourth Year

Fall Semester Suggested Program

Courses	Hours
Chemistry Electives	4
NSM Capstone, Minor or Elective Courses	11
Total	15

Spring Semester Suggested Program

Courses	Hours
Chemistry Electives	3
NSM Capstone, Minor or Elective Courses	12
Total	15