



Department of Chemistry
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August 20, 2020

To: Scott Furlong, Provost
Kristin Croyle, Dean of CLAS
Elizabeth Schmitt, Faculty Assembly Chair

From: Fehmi Damkaci, Chair of Department of Chemistry

Re: Program Revision request for Chemistry B.S. Major Track 2- Environmental Chemistry

We would like to make the following revision in our Chemistry B.S. major track 2- Environmental Chemistry, as shown in the attached document.

There are two changes:

- 1- Instead of allowing only biology or geology elective as cognate requirement (current language under cognate requirement: "Biology or geology elective, under advisement, at 300-400 level") we would like to also allow student to take "400 level chemistry courses as elective".
- 2- Move the requirement from "cognate requirement" to "elective requirement" due to addition of chemistry elective.

The goal of the revision is to provide more flexibility within this track for students. It will provide more options to students to tailor their curriculum according to their interest.

Most Bio and GEO 300/400 courses have pre-requirements that the students in this track may not need to take as part of their major. Therefore, the pre-reqs of the Bio/Geo 300/400 courses can be seen as a hidden requirement and can hurt students chance to graduate on time.

The revision does not change total number of the credits for the major nor requires a new course. The revision does not require any additional resources to be implemented, since existing courses will satisfy the change.

Thank you for your consideration in this matter.

A handwritten signature in blue ink, appearing to read "fehmi damkaci".

**Current Catalog Chemistry BS Major Track II
Track II—Environmental Chemistry (79-80 cr)**

A. Core Requirements (46-47 cr)

CHE 111 - General Chemistry Credit: 4
CHE 113 - Laboratory (for CHE 111) Credit: 0
CHE 212 - General Chemistry II Credit: 4
CHE 214 - General Chemistry II Lab Credit: 0
CHE 322 - Analytical Chemistry Credit: 4
CHE 323 - Analytical Chemistry Lab Credit: 0
CHE 331 - Organic Chemistry Credit: 3
CHE 333 - Organic Chemistry Lab Credit: 1
CHE 332 - Organic Chemistry II Credit: 3
CHE 341 - Physical Chemistry Credit: 3
CHE 342 - Physical Chemistry II Credit: 3
CHE 343 - Comprehensive Physical Chemistry Laboratory Credit: 1
CHE 425 - Instrumental Analysis Credit: 4
CHE 426 - Instrumental Analysis Lab Credit: 0
CHE 451 - Inorganic Chemistry Credit: 3
CHE 473 - Environmental Chemistry Credit: 3

Select one of the following choices (7 credits)

OPTION 1. CHE 360 - Introductory Biochemistry Credit: 3
CHE 363 - Introductory Biochemistry Lab Credit: 1

OPTION 2. CHE 461 - Biochemistry Credit: 3
CHE 462 - Biochemistry II Credit: 3

Select one lab: CHE 463 or 464.

CHE 463 - Biochemistry Lab Credit: 1
CHE 464 - Biochemistry II Lab Credit: 1

Select one of the following choices:

CHE 494 - Capstone Research Credit: 2
CHE 498 - Internship Credit: 2

Select one of the following two courses:

CHE 434 - Advanced Organic Chemistry Laboratory Credit: 1
CHE 453 - Inorganic Chemistry Lab Credit: 1

Select one of the following three courses:

GCH 436 - Solid Earth Geochemistry Credit: 4
GCH 437 - Earth Surface Geochemistry Credit: 4
GCH 438 - Isotope Geochemistry Credit: 3

B. Elective Requirements (None)

C. Cognate Requirements (29 cr)

MAT 210 - Calculus I Credit: 4
MAT 220 - Calculus II Credit: 4
MAT 318 - Statistics in the Sciences Credit: 3
BIO 120 - Molecular and Cellular Foundations Credit: 4
GEO 100 - Physical Geology Credit: 3

Biology or geology elective, under advisement, at 300-400 level

Select one sequence from the following:

Sequence 1. PHY 111 - College Physics I Credit: 4
PHY 212 - College Physics II Credit: 4

Sequence 2. PHY 112 - General University Physics I Credit: 4
PHY 213 - General University Physics II Credit: 4

Note: American Chemical Society certification requirements are satisfied in the BS Chemistry degree curriculum in Liberal Arts and Sciences.

**Proposed Catalog Chemistry BS Major Track II
Track II—Environmental Chemistry (79-80 cr)**

A. Core Requirements (46-47 cr)

CHE 111 - General Chemistry Credit: 4
CHE 113 - Laboratory (for CHE 111) Credit: 0
CHE 212 - General Chemistry II Credit: 4
CHE 214 - General Chemistry II Lab Credit: 0
CHE 322 - Analytical Chemistry Credit: 4
CHE 323 - Analytical Chemistry Lab Credit: 0
CHE 331 - Organic Chemistry Credit: 3
CHE 333 - Organic Chemistry Lab Credit: 1
CHE 332 - Organic Chemistry II Credit: 3
CHE 341 - Physical Chemistry Credit: 3
CHE 342 - Physical Chemistry II Credit: 3
CHE 343 - Comprehensive Physical Chemistry Laboratory Credit: 1
CHE 425 - Instrumental Analysis Credit: 4
CHE 426 - Instrumental Analysis Lab Credit: 0
CHE 451 - Inorganic Chemistry Credit: 3
CHE 473 - Environmental Chemistry Credit: 3

Select one of the following choices (7 credits)

OPTION 1. CHE 360 - Introductory Biochemistry Credit: 3
CHE 363 - Introductory Biochemistry Lab Credit: 1

OPTION 2. CHE 461 - Biochemistry Credit: 3
CHE 462 - Biochemistry II Credit: 3

Select one lab: CHE 463 or 464.

CHE 463 - Biochemistry Lab Credit: 1
CHE 464 - Biochemistry II Lab Credit: 1

Select one of the following choices:

CHE 494 - Capstone Research Credit: 2
CHE 498 - Internship Credit: 2

Select one of the following two courses:

CHE 434 - Advanced Organic Chemistry Laboratory Credit: 1
CHE 453 - Inorganic Chemistry Lab Credit: 1

Select one of the following three courses:

GCH 436 - Solid Earth Geochemistry Credit: 4
GCH 437 - Earth Surface Geochemistry Credit: 4
GCH 438 - Isotope Geochemistry Credit: 3

B. Elective Requirements (3 cr)

300-400 level Biology or geology elective, or 400 level chemistry elective under advisement Credit 3

C. Cognate Requirements (26 cr)

MAT 210 - Calculus I Credit: 4
MAT 220 - Calculus II Credit: 4
MAT 318 - Statistics in the Sciences Credit: 3
BIO 120 - Molecular and Cellular Foundations Credit: 4
GEO 100 - Physical Geology Credit: 3

Select one sequence from the following:

Sequence 1. PHY 111 - College Physics I Credit: 4
PHY 212 - College Physics II Credit: 4

Sequence 2. PHY 112 - General University Physics I Credit: 4
PHY 213 - General University Physics II Credit: 4

Note: American Chemical Society certification requirements are satisfied in the BS Chemistry degree curriculum in Liberal Arts and Sciences.