

Memorandum

To: Academic Policies Council
From: Lawrence Fuller, Chemistry Dept Chair
Date: 11/22/2013
Re: Program changes to:
BS Biochemistry

We are replacing & updating our Physical Chemistry Laboratory courses (CHE 341L & CHE 342L) as suggested by the American Chemical Society 5 year accreditation review dated 18 November 2011. We are replacing both of them with a new, single and redesigned comprehensive laboratory course.

This new and updated course: CHE 343L – Comprehensive Physical Chemistry Laboratory was submitted to UCC on 21 Sept 2013. This is a one credit 4 contact hour laboratory course that will replace CHE 341L & CHE 342L in all our chemistry programs. We anticipate that this course will be offered in both the fall and spring semesters.

The CHE 341L course will no longer be offered after the Spring 2014 semester. Currently enrolled students will be able to complete the major with CHE 341L.

We are eliminating the CHE 344-Physical Chemistry for Life Sciences program option with the future discontinuance of the CHE 341L – Physical Chemistry Lab course.

We are also removing the CHE 434L-Advanced Chemistry Lab course from the program to lighten the laboratory load. The Biochemistry major currently has 492 hours of laboratory and the ACS recommendation is for a minimum of 400 laboratory hours. This will put this major more in line with our other chemistry major programs in regards to laboratory load.

There are no new resources needed to implement any of these changes.

Current Biochemistry Major B.S. Degree

Biochemistry Major – B.S. Degree* **76-79cr**
American Chemical Society certification requirements are satisfied in the BS Biochemistry degree curriculum in Arts and Sciences.

A. Core Requirements **43-46 cr**

CHE 111/212 - General Chemistry 8
CHE 322 - Analytical Chemistry 4
CHE 331/332 - Organic Chemistry 8
CHE 425 - Instrumental Analysis 4
~~CHE 434L - Advanced Chemistry Lab 4~~
CHE 451 - Inorganic Chemistry 3
CHE 461/461L and 462/462L – Biochemistry with Lab 8
CHE 494 Capstone Research 2

Select one of the following:

1. CHE 341, 341L, 342, 342L - Physical Chemistry with Lab 5-8
2. ~~CHE 344 - Physical Chemistry for Life Sciences and CHE 344L - Physical Chemistry Lab~~

B. Cognate Requirements **33 cr**

MAT 210 – Calculus I 4
Math 220 – Calculus II 4
MAT 318 – Statistics in the Sciences 3
PHY 111 OR 112 – College or General University Physics I 4
PHY 212 OR 213 – College or General University Physics II 4
Bio 120 – Molecular and Cellular Foundations 4
Bio 309 – Cellular Physiology 3
Bio 310 – Microbiology 3
Bio 315 – Genetics 3
Bio 316 – Genetics Lab 1

*American Chemical Society certification requirements are satisfied in the BS Biochemistry degree curriculum in Liberal Arts and Sciences.

Proposed changes

Biochemistry Major – B.S. Degree* **77cr**
American Chemical Society certification requirements are satisfied in the BS Biochemistry degree curriculum in Arts and Sciences.

A. Core Requirements **44 cr**

CHE 111/212 - General Chemistry 8
CHE 322 - Analytical Chemistry 4
CHE 331/332 - Organic Chemistry 8
CHE 425 - Instrumental Analysis 4
CHE 451 - Inorganic Chemistry 3
CHE 461/461L and 462/462L – Biochemistry with Lab 8
CHE 494 Capstone Research 2

CHE 341/342 - Physical Chemistry **6**

CHE 341L or 343L – Physical Chemistry Lab 1

B. Cognate Requirements **33 cr**

MAT 210 – Calculus I 4
Math 220 – Calculus II 4
MAT 318 – Statistics in the Sciences 3
PHY 111 OR 112 – College or General University Physics I 4
PHY 212 OR 213 – College or General University Physics II 4
Bio 120 – Molecular and Cellular Foundations 4
Bio 309 – Cellular Physiology 3
Bio 310 – Microbiology 3
Bio 315 – Genetics 3
Bio 316 – Genetics Lab 1

*American Chemical Society certification requirements are satisfied in the BS Biochemistry degree curriculum in Liberal Arts and Sciences.