



Cornell University

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Subject: Memorandum:
[Receiving Cornell chemistry course credit for a chemistry course taken elsewhere](#)
Date: August 19, 2015
From: Director of Undergraduate Studies
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One of the jobs of the Department of Chemistry and Chemical Biology's Director of Undergraduate Studies (C&CB DUS) is assessing whether an Arts and Sciences student should be awarded Cornell course credit for a chemistry course taken elsewhere. The DUS also makes transfer-credit recommendations to Registrars and Directors of Undergraduate Studies in other colleges within Cornell. The purpose of this memo is to list and explain the information that a student must present to the C&CB DUS when applying for transfer credit. To accelerate the evaluation of transfer credit from foreign universities, I explain below in some detail the information that I need in order to consider awarding transfer credit for a course taken abroad.

OVERVIEW OF CORNELL CHEMISTRY COURSES

Freshman and sophomore courses are the chemistry courses that students request transfer credit for the most. These courses fall into three categories.

1. Honors chemistry courses. We do not award transfer credit for chemistry courses with an honors designation:

CHEM 2150 – Honors General and Inorganic Chemistry (**w/ lab**; 4 credits, Fall)
CHEM 3590 – Honors Organic Chemistry I (4 credits, Spring)
CHEM 3600 – Honors Organic Chemistry II (4 credits, Fall)

2. Courses taken by chemistry majors, engineers, and/or premedical students.

CHEM 2070 – General Chemistry I (**w/ lab**; 4 credits, Fall and Summer)
CHEM 2080 – General Chemistry II (**w/lab**; 4 credits, Fall and Summer)
CHEM 2090 – Engineering General Chemistry (**w/ lab**; 4 credits, Fall) [similar to CHEM 2070]
CHEM 2510 – Introduction to Experimental Organic Chemistry (**lab**; 2 credits, Fall and Spring)
CHEM 3530 – Principles of Organic Chemistry (3 credits, Fall)
CHEM 3570 – Organic Chemistry for the Life Sciences I (3 credits, Fall and Summer)
CHEM 3580 – Organic Chemistry for the Life Sciences II (3 credits, Fall and Summer)

These are rigorous courses that satisfy requirements for both premedical training and for a chemistry degree accredited by the American Chemical Society (ACS). Consequently, to receive transfer credit for these courses, the external course should be (1) taught at a school offering an ACS-accredited chemistry degree and (2) satisfy chemistry-major requirements at that school. See the detailed checklist below.

3. Courses that satisfy College of Agriculture and Life Sciences chemistry requirements.

CHEM 1560 – Introduction to General Chemistry (**w/ lab**; 4 credits, Fall and Summer)
CHEM 1570 – Introduction to Organic & Biological Chemistry (3 credits, Spring and Summer)

Because these courses do not satisfy chemistry-major requirements at Cornell, the rules for awarding transfer credit are relaxed. To receive transfer credit, the course still needs to be taught at a school offering an ACS-certified chemistry degree, but the external course does not have to satisfy chemistry-major requirements at that school. As with CHEM 2070, 2080, and 2090, if you are asking for transfer credit for CHEM 1560, then you need to demonstrate that you have also completed a general-chemistry laboratory.

For courses taken by chemistry majors, engineers, and/or premedical students, we have created the following detailed checklist for receiving transfer credit that covers courses taken in the U.S. and abroad.

CHEMISTRY TRANSFER CREDIT APPLICATION CHECKLIST

Before taking a chemistry course outside Cornell, read the following checklist carefully. If you have any questions then please discuss the course with the Director of Undergraduate Studies for Chemistry and Chemical Biology *before* taking it (chemdus@cornell.edu, jam99@cornell.edu).

A. DOMESTIC

1. We do not award transfer credit for courses taken at community colleges in the U.S.
2. If transfer credit is sought from a 4-year college or university in the U.S., then the school must offer an **American Chemical Society (ACS) approved chemistry degree**. For a list of ACS-approved chemistry programs, please see:

<http://chemistry.cornell.edu/courses/transfer-credit.cfm> or
<http://tinyurl.com/lz3qogq>

3. The course must be **acceptable for a student majoring in chemistry** at that school.

Quite a few ACS-certified degree programs elsewhere offer special premedical chemistry courses that are not rigorous enough to count towards an ACS-certified chemistry degree. That is not the case here. Cornell's premed general chemistry courses, CHEM 2070 and 2080, are rigorous courses that count towards the chemistry degree. If you are seeking transfer credit for CHEM 2070/2080 or CHEM 3570/3580, for example, then we require that the course(s) elsewhere likewise be rigorous enough to count towards an ACS-certified chemistry degree.

4. If you are seeking credit for a Cornell general chemistry course with an **integrated laboratory** (CHEM 1560, 2070, 2080, or 2090) then you must demonstrate that you have taken the corresponding laboratory course elsewhere, either as a stand-alone 1-credit course or as part of an integrated lecture and laboratory course.
5. The external course should be a have **the same number of hours and credits** as the corresponding Cornell course.

A number of schools – e.g., Stanford, Northwestern, and some University of California schools – operate on the trimester/quarter system and not on the semester system like Cornell. No transfer credit for a Cornell course will be given for a single course taught on the trimester/quarter system. One semester of Cornell course credit may be awarded for *two* trimesters/quarters of course work taken elsewhere.

An exception to this rule will be made for CHEM 2510. This organic laboratory course is assigned 2 credits at Cornell. At nearly every other ACS-accredited school on the semester system, however, the corresponding course is assigned 1-credit or is integrated into the schools corresponding Organic Chemistry for the Life Sciences I course, which is then assigned 4 or 5 credits. Two transfer credits for CHEM 2510 will be awarded for taking a comparable stand-alone one-semester 1- or 2-credit organic laboratory course elsewhere. If a student takes an Organic Chemistry for the Life Sciences I course with an integrated laboratory elsewhere, then they can expect to be awarded transfer credit for both CHEM 2510 and CHEM 3570.

6. No transfer credit will be awarded for an **online course**, unless the course is taught at a school offering an ACS-certified chemistry degree *and* it can be proven that the online course satisfies chemistry-major requirements at that school *and* the course's structure and content has been reviewed by the DUS in consultation with appropriate Cornell chemistry faculty. In no cases will transfer credit be awarded for an online, virtual laboratory course.
7. Only a few schools offer a general chemistry course for engineers. With prior permission, a student may therefore receive transfer credit for CHEM 2090 having taken a General Chemistry I course (plus lab) elsewhere.

B. FOREIGN

The C&CB DUS, at his or her discretion, may consider accepting transfer credit from an institution outside the U.S. The following criteria are used to evaluate an application to receive transfer credit for a Cornell chemistry course.

1. Does the course have a **laboratory**?
 - a. If the course *does not* have a lab, then you may only seek credit for a Cornell chemistry course without a lab. Cornell chemistry courses without a lab include CHEM 1150 (3 credits; The Language of Chemistry), CHEM 1570 (3 credits; Introduction to Organic and Biological Chemistry), and upper-level lecture courses.
 - b. If the summer course *does* have a lab, or has a separate lab course that you also take, then you may apply for credit for a 4-credit chemistry course with an integrated lab – CHEM 1560, CHEM 2070, CHEM 2080, or CHEM 2090, for example.
2. To assess whether the course is comparable in **course hours** to a Cornell course, I need to know the following information:
 - a. How many lecture hours?
 - b. How many laboratory hours?
 - c. How many problem sets?
 - d. How many exams (in units of hours)?

For comparison, a 4-credit Cornell chemistry course will have 42 hours of lecture, at least 5.5 hours of (hand-graded) examinations, approximately 25 hours of laboratory, and approximately 12 problem sets.

3. I need a detailed **course syllabus**. The syllabus should describe the *scientific content* of the course by, for example, giving a detailed list of the topics covered.
4. I need the following **course textbook** information: author(s), title, publisher, and year. Knowing the textbook helps me assess the rigor of the course.
5. Please give me the name, email, and title of the **courses instructor** so that I can contact them, if needed, with questions about the course structure or syllabus.

Revision history

- 2014/12/19. Original memo.
- 2015/04/14. Added requirement **A3** to spell out that the chemistry course taken elsewhere *must be acceptable for a chemistry major* at that (ACS certified) school.
- 2015/08/19. Removed the introductory paragraph explaining that the DUS will now consider courses taken abroad. Added a list enumerating the categories of Cornell freshman and sophomore courses. Added items 4 through 7 in the “A. DOMESTIC” checklist.