

MEMORANDUM

To..... Senate	From..... Senate Committee on Undergraduate Studies
..... For Information.....
Subject..... Chemistry Changes; Biochemistry Program Changes	Date..... 1980-03-27.....

Under its delegated authority SCUS approved, as set forth in S.80-37, the proposed change from Chemistry 233-2 to Chemistry 333-3 Inorganic Chemistry of Biological Processes including the change in course number, credits, vector and prerequisites, with deletion of Chemistry 233-2; and it approved the prerequisite changes for Chemistry 336-2 Inorganic Chemistry Laboratory I, Chemistry 362-3 Physical Chemistry III, Chemistry 462-3 Molecular Spectroscopy, Chemistry 472-3 Special Topics in Theoretical Chemistry; and it approved the resulting changes in the Biochemistry Major and Honors Programs as set forth in S.80-

Dan R. Birch

SIMON FRASER UNIVERSITY

SCUS 80-70


MEMORANDUM

To H. M. Evans, Secretary
Senate Committee on Undergraduate Studies
Subject Chemistry Curriculum Changes

From N. Heath
Assistant to the Dean of Science
Date 1980 02 28

At its meeting of 1980 02 20, the Faculty of Science approved the following motion:

" That the prerequisite changes for CHEM 336-2, 362-3, 462-3 and 472-3, the new course proposal CHEM 333-3 and the deletion of CHEM 233-2, as described in the documentation provided, be approved and forwarded to SCUS and Senate for consideration and approval."



N. Heath

/rw

attach.

SIMON FRASER UNIVERSITY

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MEMORANDUM

To..... Faculty of Science.....
.....
Subject..... Chemistry Curriculum Changes.....

From..... N. Heath, Assistant to the Dean.....
..... of Science.....
Date..... 1980 02 12.....

The Faculty of Science Undergraduate Curriculum Committee approved the following changes at its meeting of 1979 12 14.

(i) Prerequisite change: CHEM 362-3

Some years ago it was decided to "decouple" 362-3 (Phys. Chem. II) from 361-3 (Phys. Chem. I). This was partly to meet the vagaries of the students' own programs, partly to allow these courses to be offered, singly, in different semesters, and partly to allow majors students to take either course as their Group III (Physical Chemistry) requirements. It has been commonly acknowledged by faculty now teaching 362-3 that the basic quantum mechanics taught in 361-3 is essential to the development of statistical mechanics in 362-3.

The prerequisite should be changed to:

MATH 251-3, CHEM 361-3 and either CHEM 261-3 or PHYS 344-3.

(ii) Prerequisite change: CHEM 462-3

(iii) Prerequisite change: CHEM 472-3

The Chemical Physics Committee met to discuss a formal request of the Physics Department to allow Physics 385-3 (Quantum Physics) as an alternative and equivalent for Chemistry 361-3 (Physics Chemistry II) in the Majors and Honours Programmes in Chemical Physics.

"The chairman request that the Departments of Physics and Chemistry make the following changes in the prerequisites:

Chemistry 462-3 - Prerequisite Chemistry 361-3 or Physics 385-3

Chemistry 472-3 - Prerequisite Chemistry 361-3 or Physics 385-3

Alternative Physics Pre-requisites for Certain Chemistry Courses

Following the appended request from the Chemical Physics Committee, the Chemistry Department has approved that the pre-requisites for the following courses should now read as follows:

for CHEM 462-3 pre-requisite CHEM 361-3 or PHYS 385-3

for CHEM 472-3 pre-requisite CHEM 361-3 or PHYS 385-3

and that where appropriate in the calendar the following clause should be inserted to reflect the above changes.

PHYS 385-3 may be used as an alternative to CHEM 361-3 as a pre-requisite for CHEM 462-3 and CHEM 472-3.

cont. p. 2.

- (iv) New course proposal CHEM 333-3
- (v) Deletion of existing course CHEM 233-2

See memo below from D. Sutton to the Chemistry D.U.S.C. and attached course proposal form. (Extract given below)

I support the proposed change in course number, vector and level for this course proposed by the Biochemistry Committee. As the individual with prime responsibility for this course since its inception, I see the rationale as:

1. The fundamental inorganic chemistry and a reasonably thorough presentation of its impact in biometallic systems cannot be accomplished within two credit hours. It needs 3 hours. This is especially true in view of the explosion in published work in the subject, so that there is much more to say of importance and relevance now than there was in 1975.
2. The audience has spanned a wide range of chemical sophistication, from post-105'ers to 400-level people, due to the low prerequisites. This has meant a longer than usual shakedown period in which I have had to go over some basic organic and biochemistry, so that we could all speak the same language. It is not the lack of inorganic that is the problem - I am happy to deal with that and we do not need an inorganic prerequisite. It is the necessity to have people already well grounded in organic and bio. So I agree with the new prerequisite.
3. 233 is quite different from 232 and sufficiently different from 332 that I feel students should freely get credit for it and not be barred from the other courses also if they want to take that much more inorganic.

(vi) Prerequisite change: CHEM 336-2

As a consequence of the proposed replacement of Chem. 233-2 with 333-3, there will necessarily be a change in the prerequisite for Chem. 336-2, Inorganic Chemistry Laboratory I. The present prerequisite is "Chem. 232-2 or Chem. 233-2". This should be replaced by "Chem 232-2 or 333-3".

For chemistry Major and Honors students, the necessary preparation for this laboratory course is provided by Chem. 232-2. Students whose interest in inorganic chemistry has been aroused by Chem. 333-2 will also be adequately prepared for the lab course.

There are no obvious detrimental effects of this change of prerequisites on chemistry related programs. Those students who use 333-3 as the prerequisite to 336-2 will take the laboratory course in a Semester after that in which 333-3 is taken. This presents no great difficulty since a good selection of 300 level courses is offered to provide for the fifth Semester of work.

Change in number,
credits, vector,
prerequisites

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

NEW COURSE PROPOSAL FORM

1. Calendar Information

Department: CHEMISTRY

Abbreviation Code: CHEM Course Number: 333 Credit Hours: 3 Vector: 3-1-0

Title of Course: Inorganic Chemistry of Biological Processes

Calendar Description of Course: An introduction to the principles governing the formation properties and investigation of metal-liquid complexes with special reference to the role of metals in biological processes.

Nature of Course Lecture (Tutorial)

Prerequisites (or special instructions): BICH 301-3, or BISC 301-3, or CHEM 252-3 and CHEM 232-3. Students with credit for CHEM 233-2 may not take CHEM 333-3 for further credit.

What course (courses), if any, is being dropped from the calendar if this course is approved: CHEM 233-2

2. Scheduling

How frequently will the course be offered? once per year

Semester in which the course will first be offered? Fall 1980

Which of your present faculty would be available to make the proposed offering possible? Dr. D. Sutton, Dr. F.W.B. Einstein

3. Objectives of the Course

To replace CHEM 233-2. It has been found that over the past four years it is not possible to teach the appropriate material in a 2-unit course at the 200 level. A 3-unit course will allow a treatment in greater depth. The new prerequisites will ensure that students have a good grounding in organic and/or biochemistry.

4. Budgetary and Space Requirements (for information only)

What additional resources will be required in the following areas:

Faculty Nil

Staff Nil

Library Nil

Audio Visual Nil

Space Nil

Equipment Nil

5. Approval

Date: 31st October 1979 3 March '80

MAR 11 80

W.H. Jones
Department Chairman

[Signature]
Dean

[Signature]
Chairman, SCUS

MEMORANDUM

To H. M. Evans, Secretary
 Senate Committee on Undergraduate Studies
 Subject Biochemistry Program Changes

From N. Heath
 Assistant to the Dean of Science
 Date 1980 03 03

At its meeting of 1980 02 20, the Faculty of Science approved the following motion:

"That the Biochemistry Major and Honors Programs be amended to include, in the core of required courses, the new course CHEM 333-3, in place of CHEM 233-2."

This change results from the deletion of CHEM 233-2 and its replacement by CHEM 333-3.

The required Chemistry courses in the Core Program in Biochemistry should read as follows: (page 385 in the 1979-80 Calendar refers.)

CHEM 104-3, 105-3, 115-2, 117-2, 251-3, 252-3, 256-2, 261-3, 333-3 and 356-2.

As a result of this change, which adds one credit hour to the core program and is upper rather than lower division credit, the following changes are needed to P. 386 of the 1979-80 Calendar: (changes underlined).

"Biochemistry Majors (120 semester hours). In addition to the "Core Program", students majoring in Biochemistry must complete an additional 41 semester hours of electives, at least 6 of which must be outside the Faculty of Science, and at least 9 of which should be upper division (i.e. 300 and 400 level) courses."

"Biochemistry Honors (132 semester hours). In addition to the "Core Program", students taking honors in Biochemistry must complete an additional 53 semester hours as follows: MATH 251-3 and Biochemistry Research (BICH 491-5) and 45 semester hours of electives. At least 6 semester hours of electives must be outside the Faculty of Science and at least 20 should be upper division (ie. 300 and 400 level) courses of which 8 comprise a coherent area of specialization approved by the Program Adviser of the Biochemistry Curriculum Committee."

Further, editorial changes to the "typical program" listed in the Calendar will be necessary.


 N. Heath