

SIMON FRASER UNIVERSITY

MEMORANDUM

S.76-186

To SENATE

From SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Subject Changes to Chemistry Program

Date 15th December, 1976

Action taken by the Senate Committee on Undergraduate Studies at its meeting of December 14, 1976 gives rise to the following motion:

MOTION

That Senate approve, and recommend approval by the Board of Governors, the Department of Chemistry changes as a result of the Physics changes, as set forth in S.76-186.



Daniel R. Birch

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SIMON FRASER UNIVERSITY

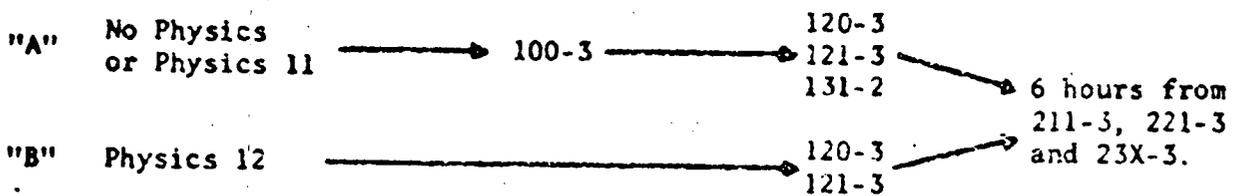
MEMORANDUM

To: Members of Faculty
 Faculty of Science
 Subject: Rationale for Re-revision of
 Calendar Entry

From: L.K. Peterson
 Department of Chemistry
 Date: December 9, 1976

1. The re-revision is necessitated by the proposed new program in Physics (approved by Faculty UGCC).
2. In its previous Calendar revision, the Department of Chemistry moved to make the Major program accessible to a broader range of student interests. This philosophy has been maintained in the current revision.
3. In the previous revision, the academically "elitist" character of the Honours program was maintained. This philosophy also applied in the current revision.
4. The following motions were approved by the Faculty UGCC, and are acceptable to the Department of Chemistry:
 - a) That Honours students in Chemistry must attain a level in Physics corresponding to the completion of Physics 211-3, 221-3 and at least 2-semester hours of 200 division laboratory work.
 - b) That Major students in Chemistry must attain a level in Physics corresponding to the completion of at least 6-semester hours of credit at the 200-division selected from Physics 211-3, 221-3 and three semester hours of laboratory courses.

Thus the course sequences become:



5. The above motions were based upon the following considerations:
 - a) the current entry requirements of the Faculty of Science are High School Math 11 and English 12. Thus access to Chemistry programs must be available from this point, since most of our Major students will follow "A" sequence; i.e. start at Physics 100-3.
 - b) The new courses, Physics 120-3 and 121-3, provide an overview of first year university physics.
 - c) Academic expectations for the Major and Honours students are distinguished in the second year.
 - d) Our scheme for Major students compares as follows with the Physics sequence at UBC:

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	<u>UBC</u>	<u>SFU</u>
110	{ 3-1-2 3-1-2	100-3 3-1-0
115 or 120	{ 2-1-3 2-1-3	120-3 3-1-0
231	{ 2-1-0 2-1-0	121-3 3-1-0
239	{ 0-0-3 0-0-3	131-2 0-0-4
		2XX-3 3-1-0
		23X-2 0-0-4

- e) The Physics requirements allow theoretically inclined chemists to benefit from a 211/221 combination.
- f) The Physics requirements are appropriate for "experimentalists", and allow immediate entry into Physics 331-3 (electronics lab).

LKP/pel

CHEMISTRY: Revised Calendar Revision

CHEMISTRY MAJOR PROGRAM (120 semester hours)

Required Courses (55 semester hours)

CHEM ...

PHYS 120-3, 121-3, and a minimum of 6 semester hours of 200-division credit selected from PHYS 211-3, 221-3 and laboratory courses. At least one of PHYS 211-3, 221-3 must be taken.

Electives

iii) 30 semester hours of free electives...

Two typical lower division programs for students entering with Physics 12 (left-hand column) and without Physics 12 (right-hand column), respectively, are listed below:

Level 1	CHEM 104-3, 115-2 MATH 151-3 PHYS 120-3 CMPT 103-3	CHEM 104-3, 115-2 MATH 151-3 PHYS 100-3 CMPT 103-3
Level 2	CHEM 105-3, 117-2 MATH 152-3 PHYS 121-3, 131-2 (optional) Elective	CHEM 105-3, 117-2 MATH 152-3 PHYS 120-3 Elective
Level 3	CHEM 251-3, 256-2, 232-3 MATH 253-4 PHYS 211-3 or 221-3	CHEM 251-3, 256-2, 232-3 MATH 253-4 PHYS 121-3, 131-2
Level 4	CHEM 252-3, 261-3 MATH 310-3 (or 232-3) PHYS 211-3 or 221-3 or 23X-3 Elective	CHEM 252-3, 261-3 MATH 310-3 (or 232-3) PHYS Two of 211-3, 221-3, 23X-3

The Mathematics and Physics courses should be taken as early as possible so that they will be of benefit in the study of Chemistry. CMPT 103-3 (or CMPT 105-3) is highly recommended as an elective (see Level 1). Students intending to specialize in physical or theoretical chemistry are advised to take more Mathematics and Physics courses than specified above.

CHEMISTRY HONORS PROGRAM (132 semester hours)

Required Courses (79 semester hours)

CHEM 367-2, 481-5 (or 483-15) (52 semester hours)

PHYS 120-3, 121-3, 211-3, 221-3 & a minimum of 2 semester hours
of 200-level laboratory credit (14 semester hours)

MATH 151-3, 152-3, 253-4, 310-3 (13 semester hours)

Electives

- ii) 24 semester hours of free electives to include a minimum
of 6 hours in the Faculties of Arts, Education (excluding
EDUC 401, 402 and 405) or Interdisciplinary Studies.
MATH 232-3 is highly recommended.

Other Minor Revisions:

CHEM 105: PHYS 120-3 (or 101-3) or 121-3 (or 102-3) should
ordinarily be taken concurrently (replacing:
PHYS 201-2 or PHYS 102-3).

CHEM 261: Prerequisites: ... PHYS 121-3 (or 102-3)
(replacing 201-2 or 102-3)

CHEM 361: Prerequisites: ... PHYS 211-3 (replacing 203-2)