

SIMON FRASER UNIVERSITY

S. 430

MEMORANDUM

To Dr. Kelsey

From Mr. H. M. Evans, Secretary  
Executive Committee  
Senate Committee On Graduate Studies

Subject

Date October 13, 1970

This is to advise that the Executive Committee of the Senate Committee on Graduate Studies at their meeting on October 6, 1970 approved the Faculty of Science graduate course - Chemistry 812-2 and that the course be forwarded to Senate for approval.

H. M. Evans

c.c. Dr. J. M. Webster

Encls.  
/olm

# SIMON FRASER UNIVERSITY

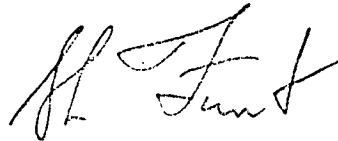
EGS. 164

## MEMORANDUM

Mr. H. M. Evans, Registrar and Secretary to Senate	From..... B. L. Funt Dean of Science
Subject..... New Graduate Course Proposal in Chemistry	Date..... September 22, 1970 Our File G-2-8

At its meeting of September 21st, the Faculty of Science approved a new graduate course proposal in Chemistry, Chem 812-2, Crystal Structure Analysis (II). This course had been previously considered and recommended by the Faculty of Science Graduate Studies Committee.

I would appreciate it if you would ensure that this proposal is considered at the earliest opportunity by the Executive Committee of the Senate Committee on Graduate Studies and subsequently by Senate.



B. L. Funt

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cc: Dr. T. N. Bell  
Miss M. McGinn

# SIMON FRASER UNIVERSITY

EGS. 164

## MEMORANDUM

Mr. H. M. Evans, Registrar and

Secretary to Senate

Subject: New Graduate Course Proposal in  
Chemistry

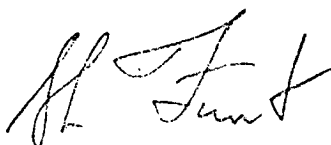
From: B. L. Funt

Dean of Science

Date: September 22, 1970  
Our File G-2-8

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B. L. Funt

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cc: Dr. T. N. Bell  
Miss M. McGinn

REPORT OF GRADUATE STUDIES COMMITTEE

A NEW CHEMISTRY GRADUATE COURSE PROPOSAL

Details of the chemistry course proposal for the new course Chemistry 812-2 Crystal Structure Analysis (II) were considered by the Faculty Graduate Studies Committee at its meeting of May 26th. It is recommended that this course be approved by Faculty and forwarded to the Senate.

B. L. Funt

# SIMON FRASER UNIVERSITY

## MEMORANDUM

B.L. Funt, Dean of Science

From T.N. Bell, Acting Chairman

Department of Chemistry

Subject New Chemistry Graduate Course  
Proposal

Date April 1st, 1970

Attached is a proposal from the Department of Chemistry for a change in the calendar description for Chem 811-3, Crystal Structure Analysis, and the introduction of a new, two unit course Chem 812-2, Crystal Structure Analysis (II).

The principal justification for this change is that it has never been possible to cover all the material in the present calendar description for 811-3. Therefore this part has been detached and made the subject of a separate course. We see no reason to renumber Chem 811 in that the course as given will remain the same.



T.N. Bell

TNB:sjs

c.c.

D. Sutton, Chairman  
Department Graduate Studies  
Committee



Approved by Faculty Graduate Studies  
Committee: - APR 23 1970

## New Graduate Course Proposal

### Summary and Calendar Information

1. Replace the present title and course description for Chem 811-3  
by

Chem 811-3      Crystal Structure Analysis I

Point groups, space groups, periodic structures with atoms in general and special positions. The crystal as a 3-dimensional diffraction grating; the Laue conditions; Bragg's Law. Single crystal methods with X-rays. Electron density as the transform of structure amplitudes. Fourier maps. An introduction to the phase problem. Structure refinement and accuracy assessment.

2. Add the new course

Chem 812-2      Crystal Structure Analysis II

The phase problem and its solution by direct and vector space techniques. Neutron and electron diffraction: Application of these techniques to problems of the solid state.

### Justification

The change represents an attempt to revise an initially over-ambitious course description for the present Chem 811-3. It has never been possible to cover all the material intended within the 3 unit course. We would still like to have the additional material in the graduate program to meet the needs of chemistry students interested in problems of the solid state (and possibly some physics students also), and to indicate that the Department has the teaching capability for this material. The proposed Chem 812-2 is therefore comprised of this. The new description for Chem 811-3 simply represents an accurate account of what has in fact been the content of the lectures to date.

Prerequisites      None. Students intending to take Chem 811-3 will be advised as to the suitability of their background.

### Enrolment and Scheduling

Estimated enrolment:	811	5 students
	812	5 students
Frequency:	811	about once a year
	812	about once every 2 years according to demand
Next offering:	811	presently in program
	812	Spring 1971

Budgetary and space factors

Faculty to teach courses 811-3 and 812-2: F. Einstein

Special space and/or equipment required: None

Other budgetary implications: None

Faculty of Science Graduate Studies Committee

Faculty of Science

Executive Committee, Senate Committee on  
Graduate Studies

Senate

May 26, 1970  
September 21, 1970  
Oct 6, 1970.  
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SIMON FRASER UNIVERSITY

S. 431

MEMORANDUM

To..... SENATE

From..... GREG BASHAM

..... STUDENT SENATOR

Subject..... INDEPENDENT STUDY PROPOSALS

Date..... OCTOBER 22, 1970

Independent Study Proposals

Motion 1. "That Senate approve, in principle, the offering of a 400 level course of independent semester study by the departments of the Faculty of Arts and the Faculty of Science and that credit be granted as follows:

Majors Program 15 hours  
Honours Program 18 hours

The implementation of such proposals be subject to ratification by Senate in the normal manner and that only one such course be permitted for credit towards the degree."

Motion 2. "That Senate approve, in principle, departments in the Faculty of Arts and the Faculty of Science offering of a 300 level course of independent study and that credit granted be ten hours. A minimum of 45 hours is required for entry to the course.

The implementation of such proposals be subject to ratification by Senate in the normal manner and that only one such course be permitted for credit towards the degree."

GB/dp



# SIMON FRASER UNIVERSITY

## MEMORANDUM

To..... SENATE.....  
.....  
Subject..... INDEPENDENT STUDY PROPOSALS.....

From..... GREG BASHAM.....  
..... STUDENT SENATOR.....  
Date..... OCTOBER 23, 1970.....

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The purpose of these proposals is to provide undergraduate students with a means to formulate, research and ascertain solutions to problems of their own selection by intensive study. The present course structure entails both incremental learning and some forms of independent study and directed research.

The proposals are to extend and further evolve the present undergraduate program as offered. Their classification is not, however, entirely innovative, experimental and/or interdisciplinary. The existence of similarly structured courses precludes these classifications. For example:

B.S.F. 498-18 (Honours)  
B.S.F. 499-15  
C.C.A. 499-15  
History 499-18 (Honours Program only)

There are several other proposals concerning interdisciplinary studies, experimental programs, and innovative educational techniques including a general studies degree, currently being discussed at various stages. These are complementary and, hopefully, soon to be instituted.

The implementation of these does not necessarily strengthen or enhance the present linear and organized programs in a way which allows for the most adequate demonstration of learned skills and abilities. In other words, it is time to create an institutional framework in which a student has the greatest opportunity to apply the knowledge gained from the core programs.

The semester operation is designed to maximize course selection in line with student preferences and needs. The semester system further enables a portion, or the full semester, to be devoted to independent study and research to complement the concept of a wide selection of course. The two are not necessarily mutually exclusive as future departmental recommendations will take this into account. This is mentioned again later.

The inclusion of a 300 level course (10 hours) is based on several academic arguments. It initially presents itself as an intermediate level of independent study while permitting work to continue towards fulfilling majors, honours or group requirements. It has the further feature of an option to the 400 level course.

The maximum amount of independent study will remain as initially stated: One 300 level course and one 400 level course in a different department or subject area. This would be determined by the departments.

An alternative to this could be a maximum of two 300 level courses in different areas or departments. Once again, it is a consideration the department and Senate can give at a later date.

Further implications involve changes in upper and lower level hour requirements in the department. In cases where departments require 30 semester hours at the 300 and 400 level in the department, it will be necessary to determine the amount of independent study credit which may be applied towards that requirement.

Also to be considered is the basic philosophy of a wide selection of courses. These are best developed by normal departmental reviews of the curricula.

These proposals serve as guidelines with which departments may work to facilitate program changes as well as to provide stimulation and leadership by Senate in improving the academic program. Thus, approval will enable the greater development and extension of a good undergraduate education.

GB/dp