S.74-102

SIMON FRASER UNIVERSITY

MEMORANDUM

To: SENATE

From: SENATE GRADUATE STUDIES COMMITTEE

Subject: NEW GRADUATE COURSE, CHEM 881-3

Date: JUNE 18, 1974

MOTION: "That Senate approve, as set forth in S.74-102 the new graduate course CHEM 881-3 - Free Radical Chemistry."

S.74-102

SIMON FRASER UNIVERSITY

MEMORANDUM

To Senate

From Office of the Dean of Graduate Studies

Subject New Graduate Course, Chem 881-3

Date June 18, 1974

MOTION: "That Senate approve the new course, Chem 881-3, Free Radical Chemistry"

This course was approved by the Executive Committee of the Senate Graduate Studies Committee on June 17, 1974.

Jon Wheatley
Dean of Graduate Studies.

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SIMON FRASER UNIVERSITY

EGS.74-71

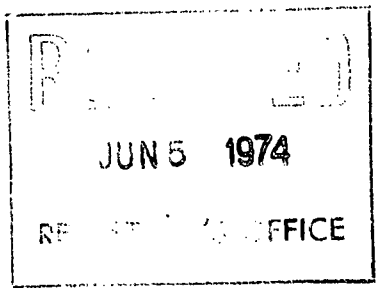
MEMORANDUM

To: Senate Graduate Studies Committee	From: J.S. Barlow, Associate Dean of Science
Subject: NEW COURSE PROPOSAL - CHEM 881-3	Date: June 4, 1974

At its meeting of May 16, 1974 the Faculty of Science approved the attached course proposal for CHEM 881-3 "Free Radical Chemistry". This course is now submitted to the Senate Graduate Studies Committee for consideration.

lw

cc: T. Bell, Chemistry



SIMON FRASER UNIVERSITY

New Graduate Course Proposal Form — Form GS.8

1. CALENDAR INFORMATION:

Department: Chemistry **Course Number:** 881

Title: Free Radical Chemistry

Description: This course will focus on the reactions of free radicals and their significance in various branches of chemistry.

Credit Hours: 3 **Vector:** **Prerequisite(s) if any:**

2. ENROLLMENT AND SCHEDULING:

Estimated Enrollment: 5 **When will the course first be offered:** Spring 75

How often will the course be offered: annually

3. JUSTIFICATION:

Free radical reactions have impact on and importance in many chemical fields. By combining the presentation in one course for physical, organic, inorganic and biochemistry an interesting and effective blend of topics can be presente

4. RESOURCES:

Which Faculty member will normally teach the course: Joint, with Chow, Funt, Sherwood Bell, Gay, Peterson

What are the budgetary implications of mounting the course:

None: This will be an optional course in the graduate program.

Are there sufficient Library resources (append details): Yes

Appended:
a) Outline of the Course
b) An indication of the competence of the Faculty member to give the course
c) Library resources

Approved:

Departmental Graduate Studies Committee: [signature] **Date:**

Faculty Graduate Studies Committee: [signature] **Date:** March 8/74

Faculty: [signature] **Date:** May 16/74

Senate Graduate Studies Committee: **Date:**

New Graduate Course Proposal

Course Number: Chem 881 Free Radical Chemistry

Nature of the Course:

A graduate course concerning the fundamentals of free radical reactions related to organic, physical, inorganic polymer and biochemists.

Rationale of the Course:

1) While about 50% of the chemistry staff are engaged at one stage or another in research related to free radical chemistry, lectures on free radical reactions are only few and scattered. In view of the importance of free radical reaction in the synthetic macromolecular industry, air pollution and other fields, it is desirable to equip our graduate students with the various aspects of free radical reactions as traditionally studied by organic, inorganic, physical and polymer chemists.

2) Artificial division of chemistry into various fields of organic, inorganic, etc. has created a mental barrier for learners and hampers the flow of knowledge among the specialists in the various fields. As the modern trend of learning process emphasises on an "interdiciplinary" or "multi-field" approach, it is timely that a course covering a broad spectrum of a subject (e.g. Free Radical Chemistry) will be presented as a packaged unit rather than in scattered efforts.

3) In the past few years, the scarcity of graduate students make enrollment in each graduate course very low. In terms of its relevance to the major portion of the chemical industry and to the modern socio-economic phenomena a multi-field course such as this one may attract most of the graduate students in various fields and consequently, may have better enrollment.

4) As the lectures will be presented by several lecturers from various fields, there will be good flexibility for constructing the course content.

Field of Interest in Chemistry Department:

Professor	Field	Aspects of radical reaction
Y.L. Chow	Organic	Radical reaction in solution.
B.L. Funt	Physical-polymer	Radical chemistry in polymerization process.
A.G. Sherwood T.N. Bell	Physical Physical	Radical chemistry in gas phases.
L.K. Peterson	Inorganic	Free radical chemistry of the elements other than the first row elements.
I.D. Gay		Chemistry of atoms.

Mode of Operation:

1) Generally one member will be responsible for organizing and coordinating the course.

2) One member will give the introduction to the course covering the nature, structure and energetics of free radicals.

3) The final examination will be a written one. It will be the responsibility of the coordinator to gather the problems and to administer this examination.

A Model of Operation in Fall, 1974

Introduction	Y.L. Chow	3 hrs.
Radical Chemistry in Solution	Y.L. Chow	9 hrs.
Radical Chemistry in Polymer	B.L. Funt	12 hrs.
Gas Phase Radical Chemistry	A.G. Sherwood or T.N. Bell	12 hrs.
Chemistry of Atoms	I.D. Gay	6 hrs.

Prepared by Y.L.C.