S.95-28

SIMON FRASER UNIVERSITY

OFFICE OF THE VICE-PRESIDENT, ACADEMIC

MEMORANDUM

To: Senate

From: J. M. Munro, Chair
Senate Committee on Academic Planning

Subject: Faculty of Science

Date: April 10, 1995

Action undertaken by the Senate Committee on Undergraduate Studies and the Senate Committee on Academic Planning gives rise to the following motion:

Motion:

"that Senate approve and recommend approval to the Board of Governors, as set forth in S.95 - 28, the changes to the requirements for the B.Sc. - General Science Program, effective September 1996"

J. M. Munro

SIMON FRASER UNIVERSITY
MEMORANDUM

To: R. Heath
Secretary to Senate

From: C.H.W. Jones, Dean
Faculty of Science

Subject: **B.Sc. General Science Degree** Date: March 2, 1995

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At its meeting of February 28th, the Faculty of Science approved the attached revised calendar description for the B.Sc. General Science Degree. It is now being forwarded to SCUS for consideration and approval.

The key elements of this proposal are:

1. The B.Sc. General Science degree remains a double minor degree, but the range of possible minors from which the selection may be made has been significantly broadened.

2. Some combinations of minors are prohibited because of the close proximity of the subject matter.

3. The lower division requirements for the degree are decreased: lower division courses in geography, computing and statistics are no longer required.

CHW Jones.
C.H.W. Jones

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TO:

General Science Program

Location: P9447 Shrum Science Centre
Telephone: 291-4222
Fax: 291-3424
Advisor: Dr. K.L. Stuart

The General Science Program, which consists of 120 semester hours of credit, provides the opportunity for a broad general education in several fields of study with some specialization in at least two fields.

This degree program requires two minor programs, as described in the calendar. One of these minors must be a Faculty of Science minor program and the combination of minors is subject to the following restrictions. Only one minor may be selected from each of the following six groups of subject areas:

Biological Sciences, Environmental Toxicology, Kinesiology
Chemistry, Biochemistry, Environmental Chemistry
Mathematics, Statistics, Computing Science
Physics, Nuclear Science
Earth Science, Physical Geography, Quaternary Studies
Archaeology, Psychology

In addition, because of proximity of subject matter, the following combinations of minors are <u>not acceptable:</u>

Biosciences --- Biochemistry
Biochemistry --- Environmental Toxicology
Chemistry --- Nuclear Science
Biochemistry --- Kinesiology
Environmental Chemistry --- Environmental Toxicology

Lower Division Requirements

BISC 101-4 Introduction to Biology
102-4 Introduction to Biology
(8 semester hours)

and

CHEM 102-3 General Chemistry I
103-3 General Chemistry II
115-2 General Chemistry Laboratory I
118-2 General Chemistry Laboratory II

or

CHEM 102-3 General Chemistry I
115-2 General Chemistry Laboratory I
150-3 Organic Chemistry
155-2 Organic Chemistry Laboratory I
(10 semester hours)

and

PHYS 101-3 General Physics I
102-3 General Physics II
130-2 General Physics Laboratory A

or PHYS 120-3 Modern Physics and Mechanics
121-3 Optics, Electricity and Magnetism
131-2 General Physics Laboratory B

(8 semester hours)

and

MATH 154-3 Calculus I for the Biological Sciences
155-3 Calculus II for the Biological Sciences

or MATH 151-3 Calculus I
MATH 152-3 Calculus II

(6 semester hours)

Other Requirements

The student must also satisfy the following general requirements:

- One Statistics course at either the upper or lower level
- Additional upper division courses (excluding EDUC 401 to 407) to accumulate a minimum total of 44 semester hours of upper division credit
- A minimum of 12 semester hours in subjects outside the Faculty of Science, including a minimum of 6 semester hours from the Faculty of Arts
- A grade point average of 2.0 in the upper division courses required for each of the two subject area minors, and a minimum grade of C- in each course used for the subject area minors.

Students should consult Departmental advisors regarding the selection of upper division courses in their subject area minors. Students are encouraged to include science-related courses such as PHIL 244, 341 or HIST 360, 361 in their programs.

FROM:

General Science Program

Location: P9447 Shrum Science Centre
Telephone: 291-4222
291-3424 Fax
Advisor: Dr. K. Stuart, B.Sc. (McG), PhD (Lond)

The General Science Program, which consists of 120 semester hours of credit, provides the opportunity for a broad general education in several fields of study with some specialization in at least two fields.

This degree program requires two Faculty of Science minors in each of two subject areas, including the lower division prerequisites, chosen from two of the six groupings noted below. Completion of two minors will require a minimum of 28 semester hours, but some additional credit hours may be required depending on the stated individual requirements for the minors chosen.

Choose one minor each from two of the following groups. You may not choose two minors from the same group.

Biological Sciences, Environmental Toxicology
Biochemistry, Chemistry
Mathematics, Statistics
Physics
Quaternary Studies, Physical Geography
Nuclear Science

Lower Division Requirements

BISC 101-4 Introduction to Biology
102-4 Introduction to Biology
(8 semester hours)

and

CHEM 102-3 General Chemistry I
103-3 General Chemistry II
115-2 General Chemistry Laboratory I
118-2 General Chemistry Laboratory II

or

CHEM 102-3 General Chemistry I
115-2 General Chemistry Laboratory I
150-3 Organic Chemistry
155-2 Organic Chemistry Laboratory 1
(10 semester hours)

and

PHYS 101-3 General Physics I
102-3 General Physics II
130-2 General Physics Laboratory A

or

PHYS 120-3 Modern Physics and Mechanics
121-3 Optics, Electricity and Magnetism
131-2 General Physics Laboratory B
(8 semester hours)

and

MATH 154-3 Calculus I for the Biological Sciences
155-3 Calculus II for the Biological Sciences

or

MATH 151-3 Calculus I
152-3 Calculus II

(6 semester hours)

and

STAT 102-3 Introduction to Statistics, Option B

or

STAT 270-3 Introduction to Probability and Statistics

(3 semester hours)

and

GEOG 111-3 Physical Geography

or

GEOG 112-3 Introductory Geology

(3 semester hours)

one of

CMPT 101-4 Modula 2
102-3 Introduction to FORTRAN for Science Students
103-3 Introduction to PASCAL Programming

(3 or 4 semester hours)

Upper Level Requirements

STAT 302-3 Analysis of Experimental and Observational Data

or

330-3 Linear Models in Applied Statistics

In addition, students must complete the upper level requirements for the two chosen minors (see list of possible minor combinations above).

(3 semester hours)

Other Requirements

The student must also satisfy the following general requirements:

- additional upper division courses in Science (including Physical Geography) to give a minimum of 44 semester hours of upper division credit
- a minimum of 12 semester hours taken outside the Faculty of Science and Physical Geography including a minimum of 6 semesters hours from the Faculty of Arts
- a grade point average of 2.0 in the upper division courses required for each of the two subject area minors with a minimum grade of C- in each course used for the subject area minors
- students should consult departmental advisors regarding the selection of upper division courses in their subject area minors. Students are encouraged to include Science-related courses such as PHIL 244, 341 and HIST 360, 361 in their programs.