

SIMON FRASER UNIVERSITY

S.72-58

MEMORANDUM

To SENATE

From SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Subject PHYSICS MAJOR PROGRAM

Date APRIL 12, 1972

MOTION: "That Senate approve the proposed Physics
Major Program, as set forth in Paper S.72-58,
effective immediately."

SIMON FRASER UNIVERSITY

S.72-58

MEMORANDUM

To..... Mr. H. Evans

From..... Senate Committee on Undergraduate Studies

..... Secretary of Senate

Subject..... PhysicsMajor Program

Date..... April 11th, 1972

The Senate Committee on Undergraduate Studies approved the submission of the Faculty of Science relating to changes in the requirements for the B.Sc. degree for a major in Physics, as set forth in SCUS 72-6, and recommends approval to Senate.

John Chase

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SIMON FRASER UNIVERSITY

SCUS 72-6

MEMORANDUM

Mr. H. Evans, Secretary
Senate Committee on Undergraduate Studies
Subject Physics Major Program

From S. Aronoff
Dean of Science
Date March 22, 1972

The enclosed document, embodying changes in the requirements for the B.Sc. degree for a Major in Physics, has been found acceptable to the Faculty of Science at its meeting of March 21, 1972, and is now being forwarded for the approval of the Senate Committee on Undergraduate Studies and Senate.

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Enclosures

SIMON FRASER UNIVERSITY

F-72-1

MEMORANDUM

Dr. S. Aronoff	From J. F. Cochran, Chairman
Dean of Science	Department of Physics
Subject NEW PHYSICS MAJOR PROGRAM	Date March 14, 1972

In order that the Physics Department may better serve the University by offering educational programs pertinent to a wider variety of professional goals of students, it is desirable to modify the requirements of its Major program. Flexibility is desirable where possible in the courses required for the Physics Major, so that other pertinent courses may more easily be included in student curricula.

In order to make our Physics programs more flexible we have reduced the number of specifically required courses in upper levels Physics and Mathematics without reducing at all the total number of upper-level course hours required.

— In practice, this has resulted in the removal from the present Physics curriculum the following required courses: Physics 421-4 and 431-4, plus Math 241-2, 414-4 and 422-4. The effect of this is a liberalization of the program with no decrease in standard of course content required of the graduate of the program. He is still required to complete as many upper-level units in Physics as were formerly required and he may select his additional units at upper levels from the broad offerings of the University. In practice these too will usually be selected from Mathematics and Physics courses, but other combinations are now more accessible to the student.

The specific course requirements of our Major program still make it slightly higher in level than the comparable U.B.C. program. For this reason we believe our graduates will still receive the relatively enthusiastic treatment from employers in Canada which they have had in the past.

J. F. Cochran
J. F. Cochran

SIMON FRASER UNIVERSITY

MEMORANDUM

Sam Aronoff, Dean of Science

From J.F. Cochran, Chairman,

Physics Department

Subject PHYSICS MAJORS PROGRAM

Date 20th December, 1971.

14733-PC

The Physics Department recommends that the enclosed document, embodying changes in the requirements for the B.Sc. degree with a Major in Physics, be adopted by the Faculty of Science. The document is already in a form suitable for inclusion in the Undergraduate Calendar.

J.F. Cochran

JFC/j11

Passed at the Faculty of Science Undergraduate Curriculum
Committee meeting of February 4, 1972.

PHYSICS MAJORS

A student intending to pursue postgraduate studies in Physics is advised to undertake the Physics Honors program. A student intending to stop at the B.Sc. or to enrol in postgraduate studies in a physics-related discipline is advised to undertake a Physics Majors program, as detailed below, selecting his elective courses in consultation with the Physics Department in such a manner that they contribute to the intended discipline.

Required Courses for Physics Majors:

Levels 1 & 2	Physics 201-2, 202-2, 233-2 Mathematics 151-3, 152-3, 232-3 Chemistry 104-3, 105-3
Levels 3 & 4	Physics 203-2, 204-2, 205-2, 206-2, 234-2, 235-2 Mathematics 253-4, 352-2
Levels 5,6,7 & 8	Physics 331-3, 332-3, 341-4, 351-4, 381-4, 382-4 Mathematics 311-4

In addition to the courses listed above, the student must elect sufficient unspecified courses to complete a minimum of 120 semester hours. Of these unspecified courses a minimum of 16 semester hours must be selected from courses numbered 300 and above, of which 8 semester hours must be in Physics courses.

Examples of coherent electives are given below. These are meant to be illustrative of the flexibility possible within the Physics Major.

A student who wants a traditional physics major program should elect:

Physics 412-4, 431-4
47 semester hours of electives of which at least
8 semester hours must be selected from Mathematics
and Physics courses numbered 300 and above.

A student who wishes to combine his physics major program with extensive chemistry electives should elect:

Physics 412-4, 431-4
Chemistry 115-2, 117-2, 232-3, 251-3, 256-2, 261-3,
331-3, 336-2, 361-3
24 semester hours of electives, among which could
appear, for example, Chemistry 362-3, 366-2, 462-3,
and other Physics, Chemistry, or Mathematics courses.

A student planning to go into a postgraduate degree program in Biophysics should elect:

Physics 412-4, 431-4
Biological Sciences 201-3, 202-3, 203-3, 481-3, and
either 305-3 or 315-3
Chemistry 115-2, 117-2, 251-3, 252-3, 256-2, 421-3,
426-3
14 semester hours of electives. If time permits, it
would be valuable to include Chemistry 261-3, 422-3
and 426-2. In that case the other six semester
hours must be taken outside the Science Faculty
course offerings.

A student intending to pursue a career as an experimental or technological assistant in industrial physics should elect:

Physics 431-4, 461-4
Two of: Physics 411-4, 412-4, 421-4, 432-4, 471-4
Mathematics 106-3
36 semester hours of electives, with Mathematics 406-4
strongly recommended

A student who wishes to work in the administration of a technologically based industry, or who plans to enter an M.B.A. program at another university should elect:

Two Physics courses numbered 400 or above
Mathematics 106-3
18 semester hours of Commerce courses numbered 300
and above
26 semester hours of electives including the Commerce
prerequisites for the above courses.