

SIMON FRASER UNIVERSITY

S.78-7

MEMORANDUM

To Senate

From Senate Committee on
Undergraduate StudiesSubject Mathematics New Course Proposals
and Discontinuing of Math 450-8

Date December 23, 1977

Action taken by the Senate Committee on Undergraduate Studies at its meeting of November 29, 1977 gives rise to the following motions:

MOTION 1:

That Senate approve, and recommend approval to the Board of Governors, the proposed new courses: Math 336-0 (Job Practicum I), Math 337-0 (Job Practicum II), Math 436-0 (Job Practicum III), Math 437-0 (Job Practicum IV), as set forth in S78- 7 . These courses are to be graded on a P/W basis with the implications as stated on page 71 of the 1977-78 calendar.

Note

Although Senate has not yet been asked to approve a general university model for Co-operative Education, a number of departments including Mathematics have developed opportunities for students to undertake in a systematic way alternate semesters of study and related work experience. The proposals for Co-operative Education programs have included four work semesters and the Mathematics Department has proposed four job practicum courses without credit to accommodate students wishing to undertake that many work semesters in approved placements.

The scale of fees appropriate for job practicum courses has not yet been determined and it is a question which must be addressed by the Board of Governors before these courses are finally approved and listed for offering. Those universities which currently offer Co-operative Education programs either charge fees for the work semester or charge larger fees in the study semester for those students enrolled in the Co-op program. No doubt these practices reflect costs to the University in obtaining approved positions and arranging for placement of students.

MOTION 2: (If Motion 1 is approved)

That Senate approve, and recommend approval to the Board of Governors, the discontinuance of Math 450-8 (Job Practicum), as set forth in S78- 7 .

David Birch

SIMON FRASER UNIVERSITY

SCUS 77-57

MEMORANDUM

To..... H.M. Evans

From..... N. Heath

Secretary, SCUS

Assistant to the Dean of Science

New Course Proposals: MATH 336-0,

Subject..... 337-0, 436-0 and 437-0

Date..... October 31, 1977

At its meeting of October 28, 1977 the Faculty of Science unanimously approved the following new course proposals:

MATH 336-0: Job Practicum I
MATH 337-0: Job Practicum II
MATH 436-0: Job Practicum III
MATH 437-0: Job Practicum IV

The budgetary implications of these courses are set out in the attached memorandum from Dr. N.R. Reilly dated October 31, 1977.

The proposed courses have been circulated for course overlap; to date no replies have been received indicating any overlap.

The proposed courses are also being reviewed by Mr. L. Thomas, who has been requested to confirm the statements on the New Course Proposal Forms concerning the library collection.

The course proposals are herewith submitted to the Senate Committee on Undergraduate Studies for further consideration.

N. Heath for:

N. Heath

/ad
Attachments

SIMON FRASER UNIVERSITY

MEMORANDUM

Dr. D. Ryeburn
Chairman, Faculty of Science
Undergraduate Curriculum Cttee.
Subject Budgetary Implications of MATH 336-0,
337-0, 436-0, 437-0, 404-3 & 480-3.

From Dr. N.R. Reilly
Chairman
Mathematics Department

Date October 31, 1977

The SCUS forms list these courses as having no faculty budgetary implications. MATH 336-0, 337-0, 436-0 and 437-0 replace MATH 450-8. The faculty members now supervising MATH 450-8 will supervise these four Job Practicum courses. No increase in teaching credit is envisaged.

MATH 404-3 (Statistical Design and Analysis of Experiments) and MATH 480-3 (Non-Parametric Statistics) will be taught by present members of the Department specializing in statistics. An additional faculty position in statistics was authorized and filled last year. That appointment provided the necessary manpower to mount these courses and was authorized, in part, with this specific objective in mind.

Norman R. Reilly
N.R. Reilly

NRR/lh

SIMON FRASER UNIVERSITY

MEMORANDUM

To Dr. D. Ryeburn
Chairman
Faculty of Science U.G.C.C.

From Dr. N.R. Reilly
Chairman
Mathematics Department

Subject Job Practicum Courses in
Mathematics

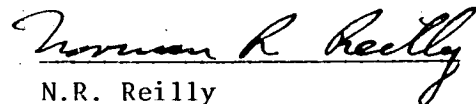
Date October 3, 1977

The Department of Mathematics wishes to drop Math 450-8 Job Practicum from its list of course offerings and to introduce four job practicum courses Math 336, Math 337, Math 436 and Math 437.

A key feature of the proposal is the removal of all credit for involvement in job practicum courses. There are two main reasons for this. On the one hand, companies do not wish to become involved in the assignment of grades to the students whom they employ. On the other hand, they wish their students to work full-time during their practicum and consequently it is difficult to monitor the activities of the students during the semester. It is felt that it would not be appropriate to award a grade solely on the basis of the end of semester report.

A second important feature of the proposal is the introduction of four job practicum semesters. A key feature of any cooperative education program is the alternating of work experience semesters with regular study semesters. The introduction of four job practicum semesters will allow students to pursue such an alternating cooperative education programme.

We are aware that the University is currently working on a university-wide model for cooperative education. However, it could be quite some time before that is developed to the point where it is suitable for all the departments involved in cooperative education and until it is finally set in place. In the meantime we feel that it is of the utmost importance that the proposed changes in the mathematics programme be approved in order that our own programme continue to develop and in order to meet the needs of those students who already wish to be involved in a second job practicum semester. In addition, we feel that the changes that we are currently proposing will in fact move the Department very much closer to the ultimate model adopted by the University.


N.R. Reilly

SIMON FRASER UNIVERSITY

MEMORANDUM

Dr. C.Y. Shen, Chairman
Undergraduate Studies Committee
Mathematics Department

From Dr. B. Alspach
Mathematics Department

Subject Job Practicum (Math 450-8)

Date September 30, 1977

At the time that Bob Russell and I spoke to various committees and groups who were considering the original proposal for the Computational Mathematics Option, we freely admitted that we were neophytes in the realm of cooperative education and would undoubtedly learn much as we gained experience. That has, indeed, been the case. The following proposal represents one substantial change based on over a year of discussion with several companies and two trimesters' experience with placing students in the Job Practicum.

The essence of the recommended change is that we wish to drop Math 450-8 (Job Practicum) and replace it with four non-credit job practica. Following is a brief history of why we originally felt the practicum should be for credit, a rationale for removing the credit and having four practica instead of one, and a brief description of how the practica will be administered.

One of the first potential job situations of which we became aware, was one where it was likely they would be unable to pay students. Consequently, we felt that the practicum should be able to be accompanied by sufficient coursework to enable students to qualify for scholarships and/or bursaries. We thought in terms of the practicum involving 3 days per week and giving it 8 credits so a student could easily take one more course. This was the principal reason we argued for 8 credits.

In actual fact, all companies thus far involved want students five days a week and want to pay students. This essentially removes the possibility of a student doing course work during a job practicum term. It also destroys what we felt was the strongest argument for giving credit for the course.

We also became aware of administrative problems if the course is to carry credit. One, the companies want the students full-time and want to treat them as much like full-time employees as possible. They feel somewhat impeded in this if the course carries credit. Two, companies are emphatic in wanting nothing to do with giving students a grade. Three, we schedule evening seminars for students in the practicum to add some academic justification to giving credit in the course. We have discovered that there is not really much point in having such seminars for students working full-time with a company. This leads us to strongly feel that there should be no credit for the practicum.

A second important desirable feature from the companies' viewpoints that emerged is that they would like to see the same students for a second job practicum. There are several good reasons for this which I shall not discuss here. After discussing this with a University Committee on Cooperative Education, Bob and I both feel four work experiences are ideal (this was, in fact, what the University Committee recommended in its report). Four work experiences allow a student to be involved in two different work atmospheres and to have taken on some responsible projects. Furthermore, if a student takes courses for four trimesters followed by alternating work and study trimesters, a student will be able to finish in four calendar years and to have earned money towards financing the four years. Hopefully, employment prospects will be greatly enhanced as well.

The administration of these courses may be of concern to some people. Following is an outline of how this is being (and will be) done. It should be emphasized that we are still learning and certain fine details will have to be worked out as they arise.

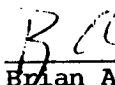
All undergraduate mathematics majors and honors students are eligible to join the cooperative education programme. We are urging students interested in joining the program to identify themselves to the department as early in their careers as possible for proper counselling. For example, a student attending SFU in alternate trimesters must plan courses with care.

We are recommending a minimum gpa of 2.5 for entrance into Math 336-0 (Job Practicum I) and completion of 60 credits; however, students who do not meet both these requirements and who are seriously interested in being in the Cooperative Education program should talk to departmental advisors. Their cases will be judged on an individual basis by the Cooperative Education Committee. Also, a student who is not hired for two consecutive terms in which he/she applies for a practicum will have his/her standing in the program reviewed.

The preceding are considered minimal requirements for entering the program. Hiring is done only on the basis of mutual consent between companies and students. We can neither guarantee a given student employment nor can we coerce a given company into hiring a student. Basically, companies provide job descriptions, students apply for interviews with companies for which they think they are suited, interviews are held, companies then make offers, and students accept or reject the offers. A more detailed flowchart is provided in Appendix A.

Until there is a University Cooperative Education Coordinator, Brian Alspach and Bob Russell shall coordinate the hiring within our department and consult with a Cooperative Education Committee in the Department. This committee should consist of Brian Alspach, Bob Russell, an interested statistician, and an interested applied mathematician. It should be under the direct control of the Undergraduate Studies Committee.

Each trimester a summary of the practicum activities should be filed with the Undergraduate Studies Committee: A list of students who applied for the practica, job descriptions from the companies, a list of students actually hired, the final reports filed by the students about their projects, and the reports about the students filed by the companies.


Brian Alspach

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

NEW COURSE PROPOSAL FORM

1. Calendar Information

Department: MATHEMATICS

Abbreviation Code: MATH Course Number: 336 Credit Hours: 0 Vector: -

Title of Course: JOB PRACTICUM I

Calendar Description of Course: This is the first semester of work experience in a cooperative education programme available to mathematics students. Interested students should contact departmental advisors as early in their careers as possible for proper counselling.

Nature of Course Work experience

Prerequisites (or special instructions): Students must apply to the Mathematics Department at least one semester in advance. They will normally be required to have completed 60 semester hours of credit with a G.P.A. of 2.5 .

What course (courses), if any, is being dropped from the calendar if this course is approved: MATH 450-8

2. Scheduling

How frequently will the course be offered? Every semester

Semester in which the course will first be offered? Summer 78

Which of your present faculty would be available to make the proposed offering possible? Departmentally, the course will be supervised by Drs. Alspach and Russell

3. Objectives of the Course

See attached memo

4. Budgetary and Space Requirements (for information only)

What additional resources will be required in the following areas:

Faculty

Staff

Library

Audio Visual

Space

Equipment

NONE

5. Approval

Date: 4 Oct 1977

Lawrence R. Kelly
Department Chairman

D. R. Birch
D. R. Birch

Chairman, SCUS

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

NEW COURSE PROPOSAL FORM

1. Calendar Information

Department: MATHEMATICS

Abbreviation Code: MATH Course Number: 337 Credit Hours: 0 Vector: -

Title of Course: JOB PRACTICUM II

Calendar Description of Course: This is the second semester of work experience in a cooperative education programme available to mathematics students.

Nature of Course Work experience

Prerequisites (or special instructions): Math 336-0 and completion of 75 credits

What course (courses), if any, is being dropped from the calendar if this course is approved: Math 450-8

2. Scheduling

How frequently will the course be offered? Every semester

Semester in which the course will first be offered? Summer 1978

Which of your present faculty would be available to make the proposed offering possible? Departmentally, the course will be supervised by Drs. Alspach and Russell

3. Objectives of the Course

See attached memo

4. Budgetary and Space Requirements (for information only)

What additional resources will be required in the following areas:

Faculty

Staff

Library

Audio Visual

Space

Equipment

NONE

5. Approval

Date: 4 Oct 1977

Norman R. Riedley
Department Chairman

D. R. Birch
D. R. Birch

Chairman, SCUS

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

NEW COURSE PROPOSAL FORM

1. Calendar Information

Department: MATHEMATICS

Abbreviation Code: MATH Course Number: 436 Credit Hours: 0 Vector: -

Title of Course: JOB PRACTICUM III

Calendar Description of Course: This is the third semester of work experience in a cooperative education programme available to mathematics students.

Nature of Course Work experience

Prerequisites (or special instructions): MATH 337-0 and completion of 90 credits

What course (courses), if any, is being dropped from the calendar if this course is approved: Math 450-8

2. Scheduling

How frequently will the course be offered? Every semester

Semester in which the course will first be offered? Fall 1978

Which of your present faculty would be available to make the proposed offering possible? Departmentally, the course will be supervised by Drs. Alspach and Russell

3. Objectives of the Course

See attached memo

4. Budgetary and Space Requirements (for information only)

What additional resources will be required in the following areas:

Faculty

Staff

Library

NONE

Audio Visual

Space

Equipment

5. Approval

Date: 4 Oct 1977

Norman R. Rootley
Department Chairman

D. R. Birch
Chairman, SCUS

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

NEW COURSE PROPOSAL FORM

1. Calendar Information

Department: MATHEMATICS

Abbreviation Code: MATH Course Number: 437 Credit Hours: 0 Vector: -

Title of Course: JOB PRACTICUM IV

Calendar Description of Course: This is the last semester of work experience in a cooperative education programme available to mathematics students.

Nature of Course Work experience

Prerequisites (or special instructions): MATH 436-0 and completion of 105 credits

What course (courses), if any, is being dropped from the calendar if this course is approved: MATH 450-8

2. Scheduling

How frequently will the course be offered? Every Semester

Semester in which the course will first be offered? Fall 1978

Which of your present faculty would be available to make the proposed offering possible? Departmentally, the course will be supervised by Drs. Alspach and Russell

3. Objectives of the Course

See attached memo

4. Budgetary and Space Requirements (for information only)

What additional resources will be required in the following areas:

Faculty

Staff

Library

Audio Visual

Space

Equipment

NONE

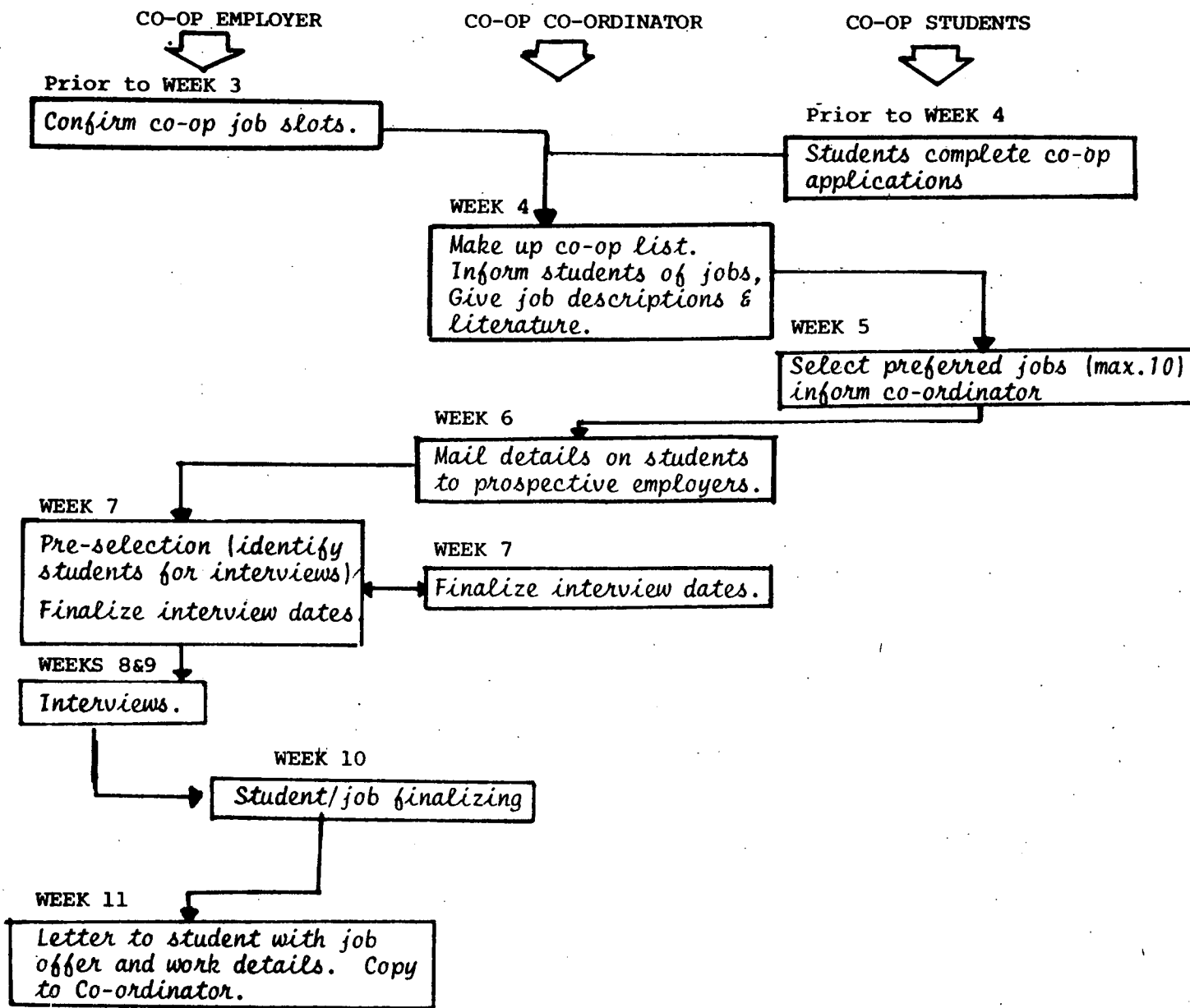
5. Approval

Date: 4 Oct 1977

Norman R. Reilly
Department Chairman

D. R. Birch
D. R. Birch

Chairman, SCUS

MODUS OPERANDI FOR CO-OP EMPLOYERS1. Pre-Work Term Arrangements:2. Work Term Arrangements: