

SIMON FRASER UNIVERSITY

S.86-90

MEMORANDUM

To..... Senate

From..... Office of the Dean of Graduate Studies

Subject..... New Graduate Course - Stat 650-5

Date..... November 12, 1986

Action undertaken by the Senate Graduate Studies Committee, at its Meeting of November 10, 1986, gives rise to the following motion:

MOTION:

"That Senate approve and recommend approval to the Board of Governors, as set forth in S.86-90, the proposed new Graduate Course - Stat 650-5 - Quantitative Analysis in Resource Management and Field Biology and delete: MRM 643 - Quantitative Analysis in Resource Management"



B.P. Clayman
Dean of Graduate Studies

mm/
attach.

**SIMON FRASER UNIVERSITY
MEMORANDUM**

To: Dr. B. Clayman,
Dean of Graduate Studies,
Chairman of the Senate Committee
on Graduate Studies

From: G. Geen, Dean
Dean of Science

Subject: Curriculum Changes

Date: October 6, 1986

Please find attached the documentation related to the Curriculum Changes to the Graduate Program of the departments of: Chemistry, Mathematics and Statistics, and Physics. These Curriculum Changes were approved by the Faculty of Science Graduate Studies Committee and by the Faculty of Science.

I would appreciate it very much if you would place these items on the Agenda of the next Senate Graduate Studies Committee for consideration and approval.

- ✓ a) ***"To approve the new Course proposal for STAT 650-5 : Quantitative Analysis in Resource Management and Field Biology as contained in paper FSC 86-7".***
- b) ***"To approve the Changes In the Graduate Course Offering of the Chemistry Department as contained in the paper FSC 86-8."***
- c) ***"To approve the new graduate course PHYS 875-3: Advanced Nuclear Physics (PAPER :FSC 86-9)."***

Thank you.


G. Geen

cc: Dr. A. R. Freedman, Chairman Faculty of Science Graduate Studies Committee,
Chairman Department of Mathematics and Statistics.
Dr. C. H. W. Jones, Chairman Department of Chemistry.
Dr. J. C. Irwin, Chairman Department of Physics.

SIMON FRASER UNIVERSITY

FSC 86-7

MEMORANDUM

To..... Faculty of Science - Graduate Studies
..... Committee
Subject. STAT 650

From... A. R. Freedman
Chairman GSC
..... Dept. of Mathematics & Statistics....

Date... June 20, 1986

A proposal to introduce STAT 650-5 into the list of Math-Stats graduate courses is attached. Note this is only a relabelling of MRM 643-5. It was approved at the Math-Stats departmental meeting of May 12, 1986.

Please continue the approval process through the faculty of Science on the way to senate.

Enclosed please find:

1. The proposal form with course outline.
2. Letters of support from Drs. Day (NRM) and Dill (BISC).
3. Minutes of MRM Executive Committee (item 2d).



A. R. Freedman

ARF/dp
Enclosure

SIMON FRASER UNIVERSITY

New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: Mathematics and Statistics Course Number: STAT 650

Title: Quantitative Analysis in Resource Management and Field Biology.

Description: The use of statistical techniques and mathematical models in resource management with special emphasis on experimentation, survey techniques, and statistical model construction.

Credit Hours: 5 Vector: 5-0-0 Prerequisite(s) if any: A course in parametric and nonparametric statistics. This course may not be used for the satisfaction of degree requirements in the Department of Mathematics and Statistics.

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: 10-20 When will the course first be offered: 88-1

How often will the course be offered: Every second year.

JUSTIFICATION: This proposal constitutes a relabelling of the existing course, MRM 643-5. This course has been administered by the MRM program but taught by the Mathematics and Statistics Department, and taken by graduate students in MRM and Bio-Sciences. The relabelling is designed to ease administrative problems.

RESOURCES:

Which Faculty member will normally teach the course: R. Routledge

What are the budgetary implications of mounting the course: The course would be funded directly through the Mathematics and Statistics Department. The present arrangement involves ad hoc transfers of teaching funds each time the course is taught.

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: June 10, 1986

Faculty Graduate Studies Committee: [Signature] Date: _____

Faculty: [Signature] Date: Dec 6, 1986

Senate Graduate Studies Committee: _____ Date: _____

Senate: _____ Date: _____

(a) Outline of course:

Department of Mathematics and Statistics

Statistics 650-5 (5-0-0)

Quantitative Analysis in Resource Management and Field Biology

This course is aimed at developing facility in the use of statistical techniques in conjunction with elementary mathematical models to study problems arising in field biology and natural resource management. Introductory lectures will involve a comprehensive review of basic statistics with special emphasis on the need to search for causal relationships and the role of randomization, controls, and judgement in this pursuit. Time constraints dictate that the review will not be leisurely paced. Students are encouraged to refresh their understanding of basic statistical procedures before the first lecture.

Further lectures will discuss the use of statistical models in resource management. Special emphasis will be placed on sampling techniques for vegetation, fish, wildlife, social, and economic variables, and on regression models. The role of common sense and background knowledge in the construction of statistical models will be stressed.

According to the students' interests and backgrounds, further material will be selected from such topics as (1) optimization with complete information, (2) optimization under uncertainty, and (3) further aspects of experimental design.

- (b) This course has been, and will likely continue to be, taught by R. Routledge, an active researcher in the field of biometrics and its applications in resource management and population biology.
- (c) The library's holdings in this area are adequate at present. Barring any shift in its acquisition policy, the library's resources should continue to serve the needs of this course adequately.

SIMON FRASER UNIVERSITY

MEMORANDUM

G.A.C. Graham, Chairman
Department of Mathematics
and Statistics

From..... Dr. J.C. Day, Director
..... Natural Resources Management Program

Subject.....

Date..... 2 January 1986

I am delighted to support the introduction of STAT 650: Quantitative Analysis in Resource Management & Field Biology. Dr. Rick Routledge has done an excellent job teaching the same course for us numbered MRM 643-5, over the past few years. We shall drop MRM 643 from the calendar as soon as Senate adopts STAT 650.

We have been grateful for the willingness of the Department of Mathematics and Statistics to teach MRM 643 biannually for us. However, in view of the fact that significant numbers of students from both Biology and Natural Resources Management have regularly enrolled in this course, it is now more appropriate to have it listed as a Statistics course.

Chad Day

JCD:rk

SIMON FRASER UNIVERSITY

MEMORANDUM

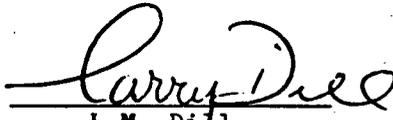
To..... R. Routledge.....
..... Math and Stats.....
Subject..... MRM 643.....

From..... L.M. Dill, Chairman.....
..... BioSciences GSC.....
Date..... February 12, 1986.....

The Biological Sciences Graduate Studies Committee does not see the need for relabelling MRM 643 (to STAT 650), but does not oppose the change.

The Committee feels that the course is a valuable one, which has benefitted a number of graduate students in this Department. We wish to ensure that it continues to be offered, under whatever course designation.

Have you given any thought to double-numbering the course, i.e., to having it listed in the Biological Sciences section of the Calendar as BISC 8XX-5? If you were interested, I could propose that to our Department.


L.M. Dill

LMD:adj

Minutes of Meeting

MRM Executive Committee

Monday, 28 April 1986
2:30 p.m., Room 9511/12 MPX

Present: Dr. Chad Day, Director
Dr. Tom Gunton
Dr. Alison Gill

1. Brock Friesen's appointment as adjunct professor. (J.C. Day) Day
Appointment approved. Appointment form will be forwarded to Dean, Faculty of Applied Sciences for approval.
2. MRM course deletions in the SFU Calendar. (J.C. Day) Day
 - (a) MRM 632 - Terrain Evaluation
Approved
 - (b) MRM 633 - Remote Sensing
Arthur Roberts will be notified and a new GEOG graduate number will be included in MRM brochure.
 - (c) MRM 634 - Slope Stability and Snow Avalanches in Resource Management
Approved
 - * (d) MRM 643 - Quantitative Analysis in Resource Management
Richard Routledge will be notified and the new STAT 650 course will be included in MRM course offerings.
Approved
3. Review applications to MRM Program for the Fall 1986 Semester.
Applications were reviewed and recommendations made regarding full-time, qualifying and reversion-list students.
4. Other business.

S. 86-92

November 14, 1986

TO: Senate

SUBJECT: Notice of Motion - Senate, November 3, 1986

At the meeting of Senate held on November 3, 1986, the following Notice of Motion was presented:

MOTION: "That members of the Board of Governors be invited to join and participate in a special session of Senate at least once annually"

Motion Referred to
SCAR by Senate
1/12/86