

SIMON FRASER UNIVERSITY

MEMORANDUM

To: Senate
From: J. Munro, Chair
Senate Committee on
Academic Planning
Subject: Faculty of Applied Sciences -
Graduate Curriculum Revisions
Date: November 16, 1994

Action undertaken by the Senate Graduate Studies Committee 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 the curriculum revisions for the Faculty of Applied Sciences as set forth in S.94-71 as follows

S.94-71a School of Kinesiology
~~S.94-71b School of Resource and Environmental Management.~~ *withdrawn from agenda*

In all cases agreement has been reached between the Faculty and the Library in the assessment of library costs associated with new courses.

School of Kinesiology

Summary of Graduate Curriculum Revisions

SGSC Reference: Mtg. of October 31, 1994
SCAP Reference: SCAP 94 - 61 a

- i) Changes to Ph.D. calendar entry
- ii) Deletion of Biochemistry Option
- iii) Change to calendar entry for Comprehensive Exams
- iv) Deletion of "Time Required for a Degree" from Calendar entry
- v) Deletion of KIN 830 - Functional Human Anatomy
- vi) Change of title KIN 885
- vii) Change to calendar entry for comprehensive exams for the Ph.D.
- vii) Change to calendar entry for oral comprehensive exam for the Ph.D.

SIMON FRASER UNIVERSITY



MEMORANDUM

TO: Senate Graduate Studies Ctte.

FROM: Glen Tibbits, Chair
Kinesiology GPC

RE: Kinesiology Calendar Changes

DATE: 11 October, 1994

The following calendar changes were approved by the School of Kinesiology at meetings on Sept. 8th and 15th 1994 and by the Faculty of Applied Science GPC at a meeting on Sept. 27th 1994.

1) With respect to course work for the Ph.D, currently the calendar reads:

"Normally no further course requirements over and above those for a Masters degree will be required. In cases where it is important to the student's program supervisory committee may require additional courses."

The following was adopted:

"Normally the supervisory committee will prescribe courses necessary to complete the student's academic preparation. In exceptional circumstances, the supervisory committee may allow the student to proceed without additional course work over and above that for a Master's degree."

Rationale: We have found in the comprehensive exams that our Ph.D. students often do not have sufficient academic preparation and the change in wording is intended to reflect that need.

2) The entire section entitled "Biochemistry Option" is to be deleted.

Rationale: This option in reality doesn't exist in our department and it's in contradiction to the description of graduate studies in Biochemistry and Molecular Biology in the calendar (p 318).

3) In the section on Comprehensive Exams, the current reading is:

"The examination committee will consist of a minimum of 5 people at least 4 of whom will be faculty members of the school (sic)."

The adopted text reads:

"The examination committee will consist of a minimum of 5 people at least 3 of whom must be faculty members of the School of Kinesiology."

Rationale: The new wording is intended to give increased flexibility in the composition of the Comprehensive Examination Committee.

4) The section entitled "Time Required for a Degree" (15 semesters for those from a B.Sc. and twelve for those from an M.Sc.) will be deleted.

Rationale: This statement does not reflect the norm in our School and serves no obvious purpose.

- 5) The course K830 "Functional Human Anatomy" will be dropped.

Rationale: This course has not been taught in the last decade.

- 6) The course name for K885 will be changed from "Seminar on Man-Machine Systems" to "Seminar on Human-Machine Systems".

Rationale: Gender Neutral

- 7) With respect to the written comprehensive exams for the Ph.D., the calendar currently reads:

"A student who fails one examination may rewrite. Failure of more than one of the comprehensives will require a complete rewrite of all 4 examinations at a subsequent sitting."

The following wording has been adopted by the School:

"The outcome of each written examination will be pass, defer or fail. A deferral is used only in cases in which the examiner wishes to defer judgment until after the oral examination. A student who fails one examination must rewrite that component. A complete rewrite of all 4 examinations at a subsequent sitting will be required in the case of either failure of more than one or passing less than two of the written comprehensive examinations."

Rationale: This change in wording allows an examiner who may not be sure of the student's capabilities in a specific area after the written exam to proceed to the oral examination at which the area in question can be probed further prior to assessment.

- 8) With respect to the oral comprehensive exam for the Ph.D., the calendar currently reads:

"Upon successful conclusion of all written examinations, an oral examination will be held by the Comprehensive Examination Committee. The student will be examined primarily in the areas covered by the written examination, but questions may range over the entire discipline. A student who fails the oral examination may retake the oral examination once."

The following wording has been adopted by the School:

"A student can proceed to the oral examination when s/he has achieved a pass or deferred (maximum of two) grade on all four sections of the written examination. The oral examination will be held by the comprehensive examination committee. The student will be examined primarily in the areas covered by the written examination, but questions may range over the entire discipline. The outcome of the oral examination shall be graded as pass, defer or fail. A student who fails the oral examination may retake the oral examination once. A deferral will result in specific conditions of remedial work or retesting as determined by the examining committee. A deferred evaluation will not be converted to a pass unless the conditions set by the Comprehensive examination committee have been met within the established time frame. Otherwise the deferral will lapse to a fail. The student cannot proceed to the dissertation proposal until the oral comprehensive examination has been passed."

Rationale: The wording change allows for a deferred grade to be assigned in cases in which a specific deficiency has been noted and needs to be addressed. In the past examination committees have been reluctant to fail a student for a weakness that has been recognized in a specific (and perhaps narrow) area. The new wording will allow the pass to be held in abeyance until the weakness has been rectified.

School of Resource and Environmental Management

Summary of Graduate Curriculum Revisions

SGSC Reference: Mtg. of October 31, 1994
SCAP Reference: SCAP 94 - 61 b

- i) Change to calendar entry for graduate program
- ii) Change to description of Co-operative Education
- iii) Add section on Tourism under Co-operative Education calendar entry
- iv) Add heading to Masters Program calendar entry
- v) Changes to list of required courses for MRM Degree
- vi) Change to list of elective courses

For Information:

Acting under delegated authority of Senate, the SGSC has approved the following course revisions:

Change of title and description: MRM 601, 602, 631
Change of description: MRM 610, 613, 647, 671, 690, 699
Change of title: MRM 664

*Withdrawn from
agenda*

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School of Resource and Environmental Management Changes for 1995-96 Calendar

1. Change: *Replace old description of the graduate program on page 275 with a slightly reorganized version. The page numbers below refer to the pages in the current SFU Calendar (1994-95).*

Rationale: *The new wording is organized better and makes our points more clearly. There is no substantial change otherwise.*

Old

The School of Resource and Environmental Management offers an interdisciplinary graduate program in the Faculty of Applied Sciences that leads to a professional Masters level degree in resource management (MRM degree). Under certain circumstances, doctoral programs may also be set up under special arrangements. Post-doctoral positions are also available. The school is designed for individuals with experience in private organizations or public agencies dealing with natural resources and the environment, or for recent graduates in various disciplines related to natural resources. From time to time, courses are scheduled in the evening or week-long blocks to permit students to complete courses on a part-time basis.

Effective management of natural resources and the environment requires interdisciplinary skills as well as expertise in appropriate specialties. Problems in the management of forest, fisheries, energy, wildlife, mineral, water, tourism and agricultural resources are intensifying as competing demands increase. Expertise in traditional resource disciplines is currently needed and will continue to be in demand. But such experts are more effective managers if their experience and background could be supplemented by an exposure to several disciplines involved in resource problems.

The purpose of the school is to meet this need for deeper and broader graduate training in natural resources. It is intended for individuals with undergraduate training and experience in fields such as biology, engineering, forestry and geology as well as business administration, economics, geography, planning and other social sciences. Students take an integrated sequence of courses in complementary fields, take further courses in their area of specialization and do a research project on a topic involving more than one traditional discipline. The aim is to give students increased familiarity and competence in understanding the natural dynamics of resources, strategies and techniques of natural resource planning and management, and the biological, physical, social, economic and institutional implications of resource decisions. Students also become familiar with various quantitative methods of analysis and aids to decision-making. This integrated, interdisciplinary emphasis has been part of the school since its inception in 1979.

In the field of natural resources, in particular, it is important that an academic program stress problem-solving and critical thinking rather than focus primarily on subject matter such as fisheries, economics or wildlife biology. To this end, the methods of integrating and synthesizing specialist approaches are stressed in the school.

Research by faculty and students is intended to evaluate the effectiveness of existing natural resource management policies and to develop new strategies where appropriate. These strategies often emerge from research into the biological dynamics of natural resources, of the institutional, social, economic or public policy aspects of their management. Researchers apply a range of approaches including cost-benefit analysis, simulation modelling, legal and institutional assessment frameworks, and social surveys to address critical and emerging natural resource management issues. The School of Resource and Environmental Management is primarily staffed by faculty who have a full time appointment. The courses, therefore, are designed specifically for resource and environmental management students. This full time faculty complement provides a strong focus and integration which significantly enhances the educational experience for graduate students. Considerable research is done in direct collaboration with resource management agencies to ensure implementation of research results.

Overview

The School of Resource and Environmental Management (formerly the Natural Resource Management Program) offers interdisciplinary graduate programs in resource and environmental management. The School grants three degrees: a masters degree (MRM) in resource management, a combined Masters degree in resource management and business administration (in cooperation with the Faculty of Business Administration), and a Ph.D. degree in resource and environmental management.

These degrees are designed for recent graduates from a range of disciplines and individuals with experience in private organizations or public agencies dealing with natural resources and the environment. Relevant disciplines of undergraduate training or experience include fields such as biology, engineering, chemistry, forestry, and geology, as well as business administration, economics, geography, planning and a variety of social sciences. The graduate programs provide training for professional careers in private or public organizations and preparation for further training for research and academic careers. Some courses are scheduled in the evening or week-long blocks to allow working

professionals to complete the program on a part-time basis. An optional co-operative education program permits students to work in a private organization or a resource management agency to gain first-hand experience.

The study and resolution of resource and environmental problems increasingly demand the type of applied interdisciplinary analysis that is the focus of the School of Resource and Environmental Management. Effective management of natural resources and the environment requires interdisciplinary skills and an appreciation of the principles and research findings in several fields as well as expertise in appropriate specialties. While proficiency in traditional resource disciplines will continue to be demanded, resource managers can be more effective and productive if such training is supplemented by focused attention on complementary disciplines.

The School of Resource and Environmental Management is designed to meet this need for interdisciplinary research and training. Students take an integrated sequence of courses in complementary fields, pursue further courses in their area of specialization in the School and throughout the university, and complete a research project on a topic involving more than one traditional discipline. The aim is to give students increased familiarity and competence in understanding the dynamics of natural resources, the strategies and techniques of natural resource and environmental planning and management, and the biological, physical, social, economic and institutional implications of resource decisions. Students also become familiar with various quantitative methods of analysis and aids to decision making. In the field of natural resources, in particular, it is important that an academic program stress problem-solving as well as creative and critical thinking skills rather than focus primarily on subject matter such as fisheries, economics, or forestry. To this end, the methods of integrating and synthesizing specialist approaches are stressed in the School.

The School of Resource and Environmental Management is primarily staffed by faculty who have a full-time appointment, unlike similar programs at most other universities. The courses, therefore, are designed specifically for resource and environmental management students. This full-time faculty complement provides a strong focus and integration that significantly enhances the educational experience for graduate students.

Research by faculty and students is intended to evaluate the effectiveness of existing natural resource management policies and where appropriate to develop alternatives. Innovative strategies often emerge from research into the biological dynamics of natural resources, or the institutional, social, economic or public policy aspects of their management. The emphasis in course materials and in the research programs of the School is not simply to identify and describe resource and environmental problems, but to better understand their causes and design acceptable solutions. Researchers apply a range of approaches including cost-benefit analysis, simulation modelling, legal and institutional assessment frameworks, and social surveys to address critical and emerging natural resource management issues on local, national, and international scales. Considerable research is done in direct collaboration with resource management agencies to facilitate implementation of research results.

A strong demand exists for graduates from the School of Resource and Environmental Management and this is forecasted to increase with the growing national and international interest in resource and environmental issues. Many graduates pursue further academic goals in leading doctoral programs. Graduates have been very successful in obtaining responsible management and research positions in public and private sector agencies and in obtaining academic appointments.

2. Change: *Replace and move old description of Co-operative Education from p. 277 to just after the Overview section above.*

Rationale: *This section was out of sequence previously.*

Cooperative Education

REM's graduate Co-operative Education (Co-op) Program allows students to work in a governmental or private resource management organization to gain professional experience in applied problem solving. Resource Management Co-op students, because of their background, bring high-level skills to their positions. Participation in the Co-op program is optional but in many cases this type of professional employment can lead directly to a MRM 699 Research Project and to employment following graduation.

3. Change: *Add this section on Tourism under the new Cooperative Education section.*

Rationale: *This section was unintentionally omitted previously.*

Tourism Research

In keeping with its multidisciplinary character, the School of Resource and Environmental Management plays a leading role in the operation of Simon Fraser University's Centre for Tourism Policy and Research. As an arm of the University, the Centre undertakes research, professional development seminars and workshops, and conducts planning and marketing research projects for public and private sector tourism organizations.

4. Change: *On p. 276 the heading "Masters Program" should have added to it: "(MRM Degree)"*

Rationale: *This will distinguish the section from the one on the Joint MRM/MBA degree*

5. *Change the list of Required Courses for MRM Degree as follows:*

- (a) Change: Modify title of MRM 631-5 (See section #8 below)
 Old: Applied Geomorphology and Hydrology to
 New: River Basin Analysis, Planning, and Management

Rationale: The content of the course remains almost unchanged (see section #8 below) but the new title more accurately reflects the course's contents.

- (b) Change: Remove MRM 641-5, Law and Resources
Rationale: REM faculty decided that this course is no longer necessary for all REM students, but it will likely remain a popular elective.

- (c) Change: Add to the list of required courses for the MRM degree MRM 801-5, Principles of Research Methods and Design in Resource and Environmental Management

Rationale: All REM students will be required to take this course in research methods.

NOTE: THE MRM 801-5 COURSE WAS APPROVED BY SENATE IN SENATE DOCUMENT S.94-40

6. *Change to the list of Elective Courses as follows:*

In Regional Resource Planning section

Change: Insert MRM 641-5, Law and Resources

Rationale: Although this course will no longer be required, it must remain an elective.

Change: Delete MRM 645-5, Resource Development Communities

Rationale: This course has not been offered in several years.

Change: Delete MRM 615-3, Management of Aquaculture Resources

Rationale: This course is already listed under the Fisheries Management section of the electives and does not belong here under Regional Resource Planning.