

MEMORANDUM

To..... Members of Senate.....

From... Office of the Dean of Graduate Studies

Subject.. Graduate Curriculum Changes ..
Department of Geography

Date..... December 6, 1985.....

Action undertaken by the Senate Graduate Studies Committee at its Meeting on December 2, 1985, gives rise to the following motion:

MOTION:

"That Senate approve and recommend approval to the Board of Governors as set forth in S.86-15, the proposed Graduate Curriculum changes in the Department of Geography:

- i) Reduction of M.A./M.Sc. course requirements for the thesis option
 - From: a minimum of 20 credits (including Geog 800)
 - To: a minimum of 12 credits and (a modified and renumbered) Geog 800
- ii) Modification of Geog 800 (Introduction to Graduate Studies)
 - From: a one-semester course
 - To: a two-semester course in which all faculty will participate and in which grading will be on a Satisfactory/Unsatisfactory basis according to attendance, participation and submission of written work
- iii) The quantitative requirement for Geog 407 be changed
 - From: Geog 407
 - To: Geog 704 (Human Geographers) or Geog 706 (Physical Geographers)
- iv) Deletion of the Geog 301 requirement
- v) The expectation that Master's students present a colloquium to the Department to discuss their thesis proposals is to be stated as a requirement. The colloquium is to be presented before the end of the third semester of residence.
- vi) Master's students will be required to circulate a written thesis proposal to their Supervisory Committees, and make a copy available to the Department, by the end of the third week of the semester following completion of Geog 700/1.

Graduate Curriculum Changes - Department of Geography Continued

Written proposals serve to convey information about research plans and allow for feedback from all members of the department. Normally, written proposals will be an update of work already done for Geog 700/1 and will be circulated prior to the colloquium.

vii) Delete the following courses:

Geog 802, 803, 805, 821, 822, 823, 824, 832, 833, 834, 852, 862, 871, 872, 892, 893, 807, 808, 809, 811, 813, 814, 815, 816, 841, 842, 844, 854, 881 and 882.

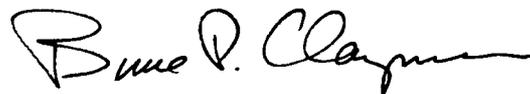
viii) Introduce the following new and retitled courses:

Geog 700-0 Introduction to Graduate Studies: Part I
Geog 701-0 Introduction to Graduate Studies: Part II
Geog 704-4 Analytical Techniques in Human Geography
Geog 706-4 Quantitative Techniques in Physical Geography
Geog 708-4 Ideas and Methodology in the History of Geography
Geog 710-4 Geography and Ideology
Geog 712-4 Observation and Inference
Geog 714-4 Computer Cartography
Geog 715-4 Geographic Information Systems
Geog 716-4 Aerial Reconnaissance for Remote Sensing
Geog 717-4 Digital Processing of Remote Sensing Data
Geog 720-4 Ecological Biogeography
Geog 721-4 Biogeography of Wetlands
Geog 723-4 Climatology
Geog 724-4 Measurement and Modelling of Heat and Mass Transfer
Geog 726-4 Fluvial Geomorphology
Geog 727-4 Field and Analytical Methods in Geomorphology
Geog 728-4 Quaternary Geology and Geomorphology
Geog 730-4 Fossil Landforms
Geog 734-4 Resources Management
Geog 736-4 Resources and Environmental Issues in the Growth of Food Production
Geog 738-4 Water Resources I
Geog 740-4 Geography and the Third World
Geog 742-4 Regional Development
Geog 745-4 Multinational and Regional Development
Geog 747-4 Transportation
Geog 749-4 Geography of Education
Geog 752-4 Cultural Geography
Geog 754-4 Landscape Aesthetics
Geog 756-4 Historical Geography
Geog 758-4 Heritage Resource Management
Geog 760-4 Morphogenesis and the Built Environment
Geog 761-4 Chronogeography
Geog 770-4 Latin America
Geog 780-4 Environmental Cognition
Geog 781-4 Tactual Mapping: Theory and Practice
Geog 791-4 Directed Readings
Geog 797 M.Sc. Thesis
Geog 798 M.A. Thesis
Geog 799 Ph.D. Thesis

Graduate Curriculum Changes - Department of Geography

- ix) The course requirements for the extended essay option be reduced
From: 30 course credits
To: 20 course credits
- x) All graduate courses be allotted four credits rather than three or five
- xi) The expectation that doctoral students present a seminar on a non-thesis related topic is to be replaced by a requirement that doctoral students present a seminar on their research interests (and prior to formally presenting their thesis proposal)
- xii) The Qualifying Examination will comprise a written set of four (4) examinations and a subsequent oral defence. Where the Supervisory Committee deems it desirable a field problem may be substituted for one of the examinations. The field problem option is to be dropped.
- xiii) Doctoral students will be required to undertake qualifying examinations by the end of their third semester of residence (and not by the end of the sixth semester as presently required)
- xiv) Thesis proposals by doctoral students should be presented no later than the end of the fifth semester"

Rationale for these changes is outlined in the attached papers.



Bruce P. Clayman
Dean of Graduate Studies.

mm/
attachs.

SIMON FRASER UNIVERSITY

MEMORANDUM

Dr. Glen Geen
 Dean of Science
 Subject Faculty GSC actions.

From..... Dr., A.R., Freedman, Chairman.....
 Faculty of Science
 Graduate Studies Committee.....
 Date..... November 21, 1985

SM

The Faculty of Science Graduate Studies Committee met on November 19th. Unfortunately, I was the only member to attend the meeting. Dr. Dill sent me a memo prior to the meeting approving of the items under consideration. His votes along with mine apparently will satisfy the quorum requirements of the committee. Prof. Hutchinson also attended the meeting.

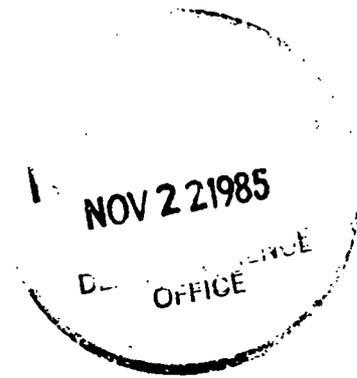
1. We have approved the calendary entry for the M.Sc. degree in Geography. (attached). (Prof. Hutchinson and I discussed some minor editorial matters and the entry will probably be slightly revised by the time it reaches senate.)
2. Also, a minor course description change for Math 821-4 was approved. (attached).

As you know Geography is eager to get their program into the calendar this year. It would be nice if you could expedite this matter and, at the same time, arrange for the innocuous change for mathematics to go through senate in time for next year's calendar.



A.R. Freedman, Chairman
 Faculty of Science
 Graduate Studies Committee

ARF/sh



SIMON FRASER UNIVERSITY

MEMORANDUM

To..... Marian McGinn Assistant Registrar Graduate Studies Faculty of Arts	From..... Dr. M. C. Roberts Chairman, Faculty of Arts Graduate Studies Committee
Subject..... Graduate Studies Committee	Date..... October 25, 1985

At its meeting of October 23, 1985, the Committee voted to accept the changes to the Department of Geography's M.A., M.Sc., and Ph.D. programs. I enclose a copy.

Would you please put this on the agenda of the next Executive Committee of the Senate Graduate Studies Committee.

M. C. Roberts

MCR/mc
Encl.

M. C. Roberts

SIMON FRASER UNIVERSITY

MEMORANDUM

To..... Professor M.C. Roberts Associate Dean of Arts	From..... R. Hayter, Chairman Department of Geography
Subject..... Geography Graduate Proposals	Date..... October 16, 1985

I have enclosed 1 'updated' copy of our proposed revisions to the geography graduate programme for examination by the Faculty of Arts Graduate Studies Curriculum Committee which you chair. If you have any questions please let me know. Note that our recommendations are to drop 18 courses and add 16.

RH/hc

Proposed Revisions to the Geography Graduate Programme

Contents

- A. Introduction
- B. Proposed Revisions
- C. Proposed Calendar Entry Statement of Degree Requirements (Faculty of Arts)
- D. Geography 700/1
- * E. New Course Proposals and Course Outlines of Retitled Courses
- F. Existing Calendar Entry Statement of Degree Requirements (Faculty of Arts)
- G. Summaries of Course Changes
- H. Memo from the Library

OFFICE OF THE DEAN

OCT 21 1961

FACULTY OF ARTS

* Readings lists are available for perusal upon request

PROPOSED REVISIONS TO THE GEOGRAPHY GRADUATE PROGRAMME

A. INTRODUCTION

The graduate programme in the department of geography was last reviewed internally in 1975/6. The subsequent recommendations effected few changes, however, so that the present structure of the programme largely reflects the ideas and interests prevalent in the late 1960's. Changes in the nature of the discipline, and in faculty research interests, as well as our experience in operating the programme, encouraged the department to review all aspects of its graduate programme. These proposals represent the conclusion of that review which (formally) began in the fall of 1984.

The geography department offers M.A., M.Sc., and Ph.D. degrees. The most substantial changes are proposed in the M.A. and M.Sc. degree requirements. Essentially, the main thrust of the proposals is to reduce and change course requirements in order to explicitly identify the M.A. and M.Sc. programmes with the "apprenticeship model" of graduate education which more accurately reflects the department's emphasis on research in these programmes. Fewer changes are suggested for the doctoral programme which the department wishes to (continue to) be strongly research-oriented and highly flexible in meeting the needs of individual students. We believe that the revisions described below streamline our programme in accordance with desired goals and with the research strengths and resources of the department.

Also note that it is proposed to renumber all graduate courses from an 8XX series base to a 7XX series base.

B. PROPOSED REVISIONS

(1) The reduction of M.A./M.Sc. course requirements for the thesis option from a minimum of 20 credits (including Geog. 800) to a minimum of 12 credits and (a modified and renumbered) Geog. 800 (see item 2).

RATIONALE

The reduction of the minimum number of courses required would more accurately reflect the department's emphasis on research at the M.A./M.Sc. level. In practice, students have used the reading course option extensively to complete course requirements while the contents of such courses are often closely related to thesis research. (Moreover, faculty typically do not receive teaching credit for reading courses.) The department believes that a reduction in course requirements would relieve an unnecessarily heavy burden on students (and faculty) and reduce the emphasis on reading course options. Given that the proposed changes require four courses (including a two-semester course - Geog. 700/701), a thesis proposal, a colloquium, thesis and thesis defense we believe our master's programme remains a demanding one. In addition, we believe a modified GEOG 800 and other course requirement changes will better equip students to undertake research-based theses.

The minimum course requirements have to be taken within the

Geography Department and we expect that no more than one course will be a reading course.

(2) Modification of GEOG 800 (Introduction to Graduate Studies) from a one-semester course to a two-semester course in which all faculty will participate and in which grading will be on a Satisfactory/Unsatisfactory (S/U) basis according to attendance, participation and submission of written work. The chairman and co-chairman of the graduate studies committee will be responsible for organizing the course which will be renumbered as GEOG 700/701.

RATIONALE

Geog. 700/1 is the only course required of all master's students. Briefly stated, its goals are to (a) introduce students to the research interests of the department and to the resources available for research in the department, university and community; (b) introduce the concept of research design and provide a critical context in which research ideas can be progressively developed; and (c) provide a socializing function. The department believes the stated goals are too ambitious for a one-semester course. The proposed changes are designed to provide Geog. 700/1 with a more realistic time-frame to address its goals and to involve all faculty members in its operation.

An outline of Geog. 700/1 has been attached. In summary, Geog. 700/1 will comprise (self-contained) presentations by all faculty members regarding their research interests, seminars on 'resources for research' by guest speakers (including faculty

members), and some overview sessions by the course coordinators. Students will be expected to participate in discussions and, with guidance from appropriate faculty members, to offer verbal and written presentations on matters relating to their research interests. By extending Geog. 700/1 over two semesters students will have more time to develop research ideas (in a classroom setting) and it will be possible to establish a clearer link between work done in Geog. 700/1 and the colloquium master's students are required to present in their third semester of residence.

(3) A change in the quantitative requirement from Geog. 407 to Geog. 704 (human geographers) or Geog. 706 (physical geographers).

RATIONALE

At present, Geog. 407 is taught infrequently and a tradition of teaching a quantitative course to both undergraduates and graduates has not developed. The department believes that training in quantitative methods and analytical techniques for graduate students can best be met at the graduate level and that physical and human geographers need courses suited to their particular needs. If such training is deemed inappropriate (by the student's advisor) graduate students can request that another course replace Geog. 704 or Geog. 706.

(4) The Geog. 301 requirement will be dropped.

RATIONALE

On entering the programme master's students normally have

strong undergraduate backgrounds in geographical methodology, and, in addition, are (now) required to take Geog. 800. The department feels that additional methodological needs can best be met by courses taken at the graduate level. (Note that Geog. 301 may be required for students on qualifying status.)

(5) The expectation that master's students present a colloquium to the department to discuss their thesis proposals is to be stated as a requirement. The colloquium is to be presented before the end of the third semester of residence.

RATIONALE

Our master's students have invariably presented a colloquium to the department and the department believes the colloquium should be maintained as a valuable mechanism for debate and information exchange. The present calendar description, however, "expects" rather than "requires" a colloquium. The suggested deadline is appropriate to a research-oriented (two-year) master's programme and is consistent with advice normally given to graduate students regarding timing of the colloquium.

(6) Master's students will be required to circulate a written thesis proposal to their supervisory committees, and make a copy available to the department, by the end of the third week of the semester following completion of Geog. 700/1.

Written proposals serve to convey information about research plans and allow for feedback from all members of the department. Normally, written proposals will be an update of work already done

for Geog. 700/1 and will be circulated prior to the colloquium.

(7) The deletion of the following courses from the graduate calendar:

Group A Geog 802 Recent Developments in Physical Geography
Geog 803 Recent Developments in Economic Geography
Geog 805 Recent Developments in Cultural Geography

Group B Geog 821 Area Studies
Geog 822 Area Studies
Geog 823 Canada
Geog 824 Canada
Geog 832 Transportation
Geog 833 Locational Problems -
Geog 834 Locational Problems
Geog 852 Resources Management
Geog 862 Regional Development
Geog 871 Fringe Settlement
Geog 872 Fringe Settlement

Group C Geog 892 Directed Readings
Geog 893 Directed Readings

Group D Geog 807 Quantitative Techniques
Geog 808 Quantitative Techniques
Geog 809 Theoretical and Quantitative Cartography
Geog 811 Climatology
Geog 813 Geomorphology
Geog 814 Geomorphology

Geog 815 Biogeography
Geog 816 Biogeography
Geog 841 Geography of Manufacturing
Geog 842 Geography of Manufacturing
Geog 844 Cultural Geography
Geog 854 Water Resources
Geog 881 Urban Development
Geog 882 Urban Development

RATIONALE

Geog. 802, 803 and 805 are regularly scheduled and are team taught. For some years, however, faculty and students have expressed dissatisfaction with these courses. The main concerns are that they are broad in coverage and that the size of the graduate student body does not justify their concurrent operation. Moreover, the expanded Geog. 700/1 would overlap strongly with these courses. The department does not believe four "introductory" survey-type courses are needed at the graduate level given the programme's strong research orientation.

The courses in Group B have rarely been taught. There is no interest in the department in the maintenance of these courses.

Geog. 892 and Geog. 893 can be dropped given that such courses are to be de-emphasized (and students should not do more than one reading course which can be Geog. 891).

The courses in group D have been regularly scheduled but their calendar titles are too vague. These courses will be replaced by courses which are titled to reflect more accurately

their contents.

(8) The introduction of the following new and retitled courses to the graduate curriculum:

- Geog 700 Introduction to Graduate Studies: Part I
- Geog 701 Introduction to Graduate Studies: Part II
- Geog 704 Analytical Techniques in Human Geography
- Geog 706 Quantitative Techniques in Physical Geography
- Geog 708 Ideas and Methodology in the History of Geography
- Geog 710 Geography and Ideology
- Geog 712 Observation and Inference
- Geog 714 Computer Cartography
- Geog 715 Geographic Information Systems
- Geog 716 Aerial Reconnaissance for Remote Sensing
- Geog 717 Digital Processing of Remote Sensing Data
- Geog 720 Ecological Biogeography
- Geog 721 Biogeography of Wetlands
- Geog 724 Measurement and Modelling of Heat and Mass Transfer
- Geog 726 Fluvial Geomorphology
- Geog 727 Field and Analytical Methods in Geomorphology
- Geog 728 Quaternary Geology and Geomorphology
- Geog 730 Fossil Landforms
- Geog 736 Resources and Environmental Issues in the Growth of
Food Production
- Geog 740 Geography and the Third World
- Geog 745 Multinationals and Regional Development

Geog 749 Geography of Education
Geog 754 Landscape Aesthetics
Geog 756 Historical Geography
Geog 758 Heritage Resource Management
Geog 760 Morphogenesis and the Built Environment
Geog 761 Chronogeography
Geog 770 Latin America
Geog 780 Environmental Cognition
Geog 781 Tactual Mapping: Theory and Practice

RATIONALE

The present calendar descriptions of individual graduate courses, in many cases, are too general while the graduate teaching interests of newer faculty members and changes in the research interests of established members are not reflected in the graduate calendar at all. The proposed calendar description of graduate courses offers a more precise statement of the department's options regarding graduate courses and therefore of its research priorities and interests.

(9) The course requirements of the extended essay option be reduced to 20 credits.

RATIONALE

Under the present extended essay option students are required to undertake 30 course credits and write two extended essays which must be original and not have been submitted for credit in any course. In addition, students have to present a

colloquium and defend their essays in the same fashion as students pursuing the thesis option. These requirements, the department believes, are excessive. Since the two extended essays involve original pieces of research and not simply revised term papers, 20 course credits constitute a more appropriate requirement. This proposal is both consistent with past practice and the research emphasis of the master's degree.

(10) All graduate courses be allotted four credits rather than three or five.

RATIONALE

The distinction between three and five-credit courses is frequently blurred in practice.

(11) The expectation that doctoral students present a seminar on a non-thesis related topic is to be replaced by a requirement that doctoral students present a seminar on their research interests (and prior to formally presenting their thesis proposal).

RATIONALE

In practice, it is difficult to define a "non-thesis" related topic and there does not seem to be any value in forcing students to attempt to do so. A seminar related to thesis research interests, however, and presented prior to the thesis proposal itself, is a potentially useful exercise for students and for the department.

(12) The Qualifying Examination will comprise a written set of

(4) examinations and a subsequent oral defence. Where the supervisory committee deems it desirable a field problem may be substituted for one of the examinations. The field problem option is to be dropped.

RATIONALE

The field option was originally introduced as a means of evaluating the field work capabilities of graduate students who had little or no field experience. Virtually all of our incoming doctoral students, however, have had field experience. The proposed change therefore eliminates an option which is unnecessary and serves to help standardize the nature of qualifying examinations.

(13) Doctoral students will be required to undertake qualifying examinations by the end of their third semester of residence (and not by the end of the sixth semester as presently required).

RATIONALE

Given that doctoral students would have no other prior requirements the department believes two-three semesters is a reasonable time period for students to prepare for qualifying examinations and for the department to determine whether or not a student should continue in the programme.

(14) Thesis proposals by doctoral students should be presented no later than the end of the fifth semester.

RATIONALE

At the present time doctoral students are not faced with any

deadline as regards thesis proposals. The department believes the recommendation to have doctoral students identify their thesis proposals prior to the completion of two years of residence to be a reasonable challenge and indeed essential if doctoral degrees are to be completed in 3-5 years.

C. PROPOSED CALENDAR ENTRY STATEMENT OF DEGREE REQUIREMENTS
(Faculty of Arts)

Location: Room 7123-Classroom Complex
Telephone: 291-3321

Chairman: R. Hayter, B.A. (N'cle U.K.), M.A. (Alta),
Ph.D. (Wash.)

Graduate Program
Chairperson: I. Hutchinson
Room 7140 - Classroom Complex

Co-Chairperson: J.T. Pierce
Room 7128 - Classroom Complex

Faculty and Areas of Research

W.G. Bailey	Climatology; Agricultural Meteorology; Hydrometeorology
R.C. Brown	Agricultural Geography; Resources Development
C.B. Crampton	Geology; Pedology; Ecology
J.C. Day	Resource and Environmental Management; Water Management
M.E. Eliot Hurst	Marxist and Socialist Approaches to Human Geography; Aesthetics; Culture and Ideology
L.J. Evenden	Urban Geography; Local Government
E.M. Gibson	Human Geography of Modern and Post-Modern Societies; Landscape Style; Canada
A.M. Gill	Social Geography; Tourism
W.G. Gill	Urban and Social Geography
T.I. Gunton	Urban and Regional Planning; Resources Management
R. Hayter	Regional Development; Manufacturing
E.J. Hickin	Geomorphology
R.B. Horsfall	Social Geography; Environmental Psychology
I. Hutchinson	Biogeography
P.M. Koroscil	Historical Geography; Canada
A. MacPherson	Cultural Geography; Western Europe

J.T. Pierce	Economic and Rural Geography; Research Methodology
T.K. Poiker	Economic; Quantitative; Computer Cartography
A.C.B. Roberts	Cultural; Historical; Palaeoenvironments; Remote Sensing; Photogrammetry
M.C. Roberts	Fluvial Geomorphology; Field Methods
R.B. Sagar	Climatology; Glaciology
P.L. Wagner	Cultural Geography
J.W. Wilson	Urban and Regional Planning
S.T. Wong	Resources Management; Quantitative Methods

Areas of Research

The Department takes a special interest in the development and evaluation of theoretical frameworks in the systematic aspects of Geography; emphasis is placed on the application of these to contemporary and historical geographical problems in western North America, with particular reference to British Columbia and the utilization of its resources.

M.A. PROGRAMME

Admission

For admission requirements refer to the General Regulations page 213.

Admission ordinarily will be in the fall semester although in certain circumstances admission in the spring semester may be considered. Applications for fall admission should be completed by March 15th of that year.

The M.A. candidate, on being admitted to the Department, will work under the guidance of a faculty advisor, pending the choice of a Supervisory Committee. The Supervisory Committee, which

consists of three faculty members, one of whom may be from outside the department, will be chosen by the second semester.

Degree Requirements

The M.A. programme allows two options; namely the Thesis Option and the Extended Essay Option. The former requires the submission of a high quality piece of research which will ordinarily involve the conceptualization of a problem and the collection, analysis and interpretation of empirical data. It is possible, however, for non-empirical research to be undertaken. In the extended essay option students are required to submit two essays which are original in the sense that they make some distinctive contribution to the research literature. Extended essays ordinarily involve a critical review or synthesis of literature, - concepts and/or techniques or the development of hypotheses, possibly to include pilot work. Neither the thesis nor the extended essays should be modification of a paper completed for course work.

For the M.A. degree the minimum course requirements are 12 credit hours (three one-semester courses) and Geog. 700 and 701 and for the extended essay option 20 credit hours and Geog. 700 and 701. Grading for Geog. 700 and 701 will be on a satisfactory/unsatisfactory basis and constitutes a (minimum) requirement in geographic methodology. Geog. 700 and 701 must be taken by students at the first available opportunity. As part of their 12/20 credit hours students are required to take either Geog. 704, Survey Methods and Analytical Techniques in Human Geography, or

706, Quantitative Methods in Physical Geography. In certain circumstances, on the advice of the student's advisor, the student can request this requirement be replaced by another course.

Students are expected to complete their minimum course requirements within the Geography Department and permission must be obtained from the graduate studies committee to complete a minimum course requirement outside of the Department. Any students with deficiencies may be asked to complete more courses, including at the undergraduate level and in other departments. Also, at the discretion of the Supervisory Committee, students may be directed to acquire knowledge of a language which would be relevant to their studies.

Students are required to submit a written thesis prospectus to their Supervisory Committee by the end of the third week of the semester following completion of Geog. 700 and 701. This prospectus must be approved by the Supervisory Committee prior to the start of substantive research. In addition, the candidate is required to present the research proposal to the Department at a colloquium prior to the end of the third semester of residence (or by the end of the semester following completion of Geog. 700 and 701).

MASTER OF SCIENCE IN GEOGRAPHY

The Department offers a programme leading to the M.Sc. degree in the Faculty of Science. For details, see the Geography entry in the Faculty of Science section of this calendar.

PH.D PROGRAMME

For admission requirements refer to the General Regulations. All applicants are expected to have completed the requirements of the M.A. or M.Sc. programme at Simon Fraser University or their equivalent. Students admitted to the Ph.D. programme without this background may be required to make up specified courses.

Supervisory Committee

The Ph.D. candidate, on being admitted to the Department, will work under the guidance of a faculty adviser, pending the choice of a Supervisory Committee. By the beginning of the second semester of residence students are required to choose a faculty member in the Geography Department as the Senior Supervisor of their Supervisory Committee and two or more additional committee members, one of whom may be drawn from outside the Department.

Degree Requirements

The adviser, and subsequently the Supervisory Committee, and the student shall determine a programme of study designed to suit the background and research objectives of each candidate. No formal course work is required of students. After consultation with the Supervisory Committee, however, students can elect to take courses in order to acquire knowledge and skills, including language skills, relevant to their research.

Ph.D. Comprehensive Examination

Written and oral qualifying examinations designed to establish the student's competence to proceed with doctoral thesis research will normally be undertaken at the end of the second semester of residence and no later than the end of the third semester of residence. Students who fail the written or oral examination may retake each, once, after a one semester lapse.

Both parts of the Qualifying Examination must be successfully completed by the end of the fourth semester of residence.

The Qualifying Examination Committee will consist of at least four faculty members from the Department, (including the Senior Supervisor who will be the Committee Chairman), plus one faculty member to be from outside the Department.

The written examinations will comprise four papers jointly agreed upon by the members of the Qualifying Examination Committee. If the Supervisory Committee deems it appropriate a field problem may be chosen which substitutes for one of the four written papers.

The oral will be held by the Qualifying Examination Committee within three weeks following completion of all written examinations. The student will be examined primarily in the areas of the topics covered by the written examinations, but questions may range over the entire discipline.

Ph.D. Thesis

Candidates successfully completing qualifying examinations will be required to present a seminar to the department regarding

their research interests. The seminar will be presented before interested faculty and students prior to the presentation of a thesis proposal.

The candidate shall prepare a thesis proposal which shall be circulated to faculty and resident graduate students. The candidate will present this proposal at a Departmental colloquium no later than the end of the fifth semester of residence. In addition, and prior to completion of the thesis, the candidate shall be expected to present before interested faculty and students a report on the progress of his/her research. The timing of this report shall be selected in consultation with the candidate's Supervisory Committee.

The completed thesis shall be judged by the candidate's Examining Committee at an oral defence. If the thesis defence is failed, the candidate is ineligible for further candidacy in the degree programme.

For further information and regulations, refer to the General Regulations page 203.

GEOGRAPHY GRADUATE COURSES (GEOG)

GEOG 700-0 Introduction to Graduate Studies: Part I

A required course designed to acquaint new graduate students with the research strengths of the Department, research facilities in the University and its vicinity and with the methodologies of the main fields of geography. In addition, problems of both a

philosophical and practical nature involved in the design and implementation of geographic research will be examined.

GEOG 701-0 Introduction to Graduate Studies: Part II

Completion of GEOG 700-0. Grading of GEOG 700 and 701 will be on a Satisfactory/Unsatisfactory, (S/U), basis.

GEOG 704-4 Analytical Techniques for Human Geographers

An examination of qualitative and quantitative techniques and associated software relevant to the compilation of information for human geographic research.

GEOG 706-4 Quantitative Techniques in Physical Geography

An introduction to quantitative methods, statistical and physical modelling, sensitivity and error analysis, research design and data collection, editing and analysis in physical geography.

GEOG 700-0, 704-4 and 706-4 are regularly scheduled in the Fall semester and GEOG 701-0 is regularly scheduled in the Spring semester. Courses 708-4 to 781-4 are scheduled more intermittently dependent, in part, on demand.

GEOG 708-4 Ideas and Methodology in the History of Geography

This is an advanced course that critically examines the contemporary and historical modes of analysis in geography.

GEOG 710-4 Geography and Ideology

An attempt to define the concept 'ideology', to recognize its

operation in geography and to demonstrate its relevance in historical geography, political geography, and in the study of the symbolic structuring of cultural landscapes.

GEOG 712-4 Observation and Inference

A critical and pragmatic study of the process of observation in relation to inference. Some theoretical discussion, presentation of concrete exemplary cases; practical exercises in the field will enlist specialists in various geographical subdisciplines (e.g., in urban morphology, vegetation ethnic settlement, stream dynamics).

GEOG 714-4 Computer Cartography

Theoretical, algorithmic and practical components in the application of the computer to mapping.

GEOG 715-4 Geographic Information Systems

Data bases, systems concepts, quantitative techniques, modelling and display in geography, on the basis of computer systems.

GEOG 716-4 Aerial Reconnaissance for Remote Sensing

Theoretical and practical training in the acquisition of airborne multispectral remote sensing data.

GEOG 717-4 Digital Processing of Remote Sensing Data

Theory and applications of analytical processing procedures used with multispectral remote sensing data.

GEOG 720-4 Ecological Biogeography

Population, community and ecosystem ecology from a biogeographic perspective; island biogeography theory.

GEOG 721-4 Biogeography of Wetlands

Population biology, community organization, and environmental characteristics of wetland ecosystems with particular reference to Canadian examples.

GEOG 723-4 Climatology

Recent theoretical developments in climatology.

GEOG 724-4 Measurement and Modelling of Heat and Mass Transfer

An introduction to field measurement methods and mathematical modelling approaches used in heat and mass transfer research.

GEOG 726-4 Fluvial Geomorphology

Advanced theory and field measurement in open-channel fluid mechanics and fluvial geomorphology.

GEOG 727-4 Field and Analytical Techniques in Geomorphology

Theory and practice of selected field techniques.

GEOG 728-4 Quaternary Geology and Geomorphology

Stratigraphy of the Quaternary period; models of glacial sedimentation. Field study of glacial deposits.

GEOG 730-4 Fossil Landforms

Interpretation of fossil landforms in terms of their Periglacial origin.

GEOG 734-4 Resources Management

A study of the historical, cultural, economic, social and behavioral aspects of conservation and resource management from an interdisciplinary point of view.

GEOG 736-4 Resources and Environmental Issues in the Growth of
Food Production

Concerned with identifying and analysing constraints to expanding food production within a geographical context.

GEOG 738-4 Water Resources I

An examination of various models and methods of water resources development based on case studies from both developed and developing countries.

GEOG 740-4 Geography and the Third World

An examination of the objective geographical conditions in the Third World today and a review of the wide range of theories and suggested solutions of a geographical nature.

GEOG 742-4 Regional Development

Regional development in theory and practice with particular reference to resource based hinterland regions.

GEOG 745-4 Multinational Corporations and Regional Development
An examination of the influence of the policies and structures of multinational corporations on regional economic change.

GEOG 747-4 Transportation

A critical review and analysis of current research.

GEOG 749-4 Geography of Education

Education as a cultural, social and economic phenomenon within a spatial context. Regional educational planning.

GEOG 752-4 Cultural Geography

Seminar discussion of selected topics in recent cultural geography, with emphasis on relationships with social theory, current philosophy and research findings in related fields.

GEOG 754-4 Landscape Aesthetics

An advanced course on the cultural landscape that critically examines both theories influencing the style of Western landscapes and the uses of landscape imagery in western arts.

GEOG 756-4 Historical Geography

An examination of the role historical geography plays within the discipline of geography. The course will evaluate the evolution and practical-applied aspects of the subject.

GEOG 758-4 Heritage Resource Management

Survey of historical and prehistorical resource management with emphasis upon Canadian resources.

GEOG 760-4 Morphogenesis and the Built Environment

This course examines the evolution of built environments in urban contexts. It relates the impetus for morphological change to broad societal processes. Problems of evidence and method are discussed.

GEOG 761-4 Chronogeography

This course examines two approaches to the problem of space-time in human geography. In one the emphasis is on activity systems in time and space, in the conduct of "practical life", while in the other the emphasis is placed on geographical expressions of the life cycle.

GEOG 770-4 Latin America

Consideration of physical, biotic, cultural and social aspects of selected areas. (Economic and urban problems will not be treated!) Reading knowledge of Spanish or Portuguese may be demanded and competence in other languages will be an advantage. Oral and written reports will be required.

GEOG 780-4 Environmental Cognition

Examination of current issues in the study of human understanding and relationships within the (mostly built) environments.

GEOG 781-4 Tactual Mapping: Theory and Practise

An exploration of design principles, production methods, and user training procedures appropriate to thematic and mobility maps for the visually handicapped.

GEOG 791-4 Directed Readings

GEOG 797 M.Sc. Thesis

GEOG 798 M.A. Thesis

GEOG 799 Ph.D. Thesis

D.

Geography 700/1

Introduction to Graduate Studies

A required course designed to acquaint new graduate students with the research strengths of the Department, research facilities in the University and its vicinity and with the methodologies of the main fields of geography. In addition, problems of both a philosophical and practical nature involved in the design and operationalization of geographic research will be examined.

Tentative Schedule

1. Orientation seminars for new students (e.g the nature of local library and archival resources, bibliography and reference systems; university computer systems; geographic information systems etc.)
2. Faculty presentations and discussions.
3. Student presentations and discussions.

Evaluation

The satisfactory/unsatisfactory evaluation of the students will be based on class attendance, participation and submission of a paper. For these papers, students will work with appropriate faculty members who will provide critical comments in the preparation of the paper and after completion of the final draft.

Readings

1. Texts: R.J. Johnston's GEOGRAPHY and GEOGRAPHERS and PHILOSOPHY and HUMAN GEOGRAPHY, 1983.
2. A general reading list will be attached.
3. Each faculty member will identify 2 or 3 readings to help prepare students for their session.

E. NEW COURSE PROPOSALS
ESTABLISHED

CALENDAR INFORMATION:

Department: Geography Course Number: 700

Title: Introduction to Graduate Studies: Part I

Description: A required course designed to acquaint new graduate students with the research strengths of the Department, research facilities in the University and with the methodologies of the main fields of geography.

Credit Hours: 0 Vector: _____ Prerequisite(s) if any: _____

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: 5-10 When will the course first be offered: _____

How often will the course be offered: Once a year

CLASSIFICATION:

Course required to prepare students for graduate level research in our department.

RESOURCES:

Will a faculty member will normally teach the course: All faculty will participate/Chairman of GSC will organize

What are the budgetary implications of conducting the course: None

Are there sufficient library resources to read details: yes

- Appendix: a. outline of the course
b. qualifications of the instructor of the course
c. library resources

Approved: Departmental Graduate Studies Committee: Roger Plante 85-10-24
Faculty Graduate Studies Committee: Michael Roberts 85-10-24
Faculty: RC Brown 85-10-24

Senate Graduate Studies Committee: _____ Date: _____

Senate: _____ Date: _____

(a) Course Outline

Geography 700 - Introduction to Graduate Studies: Part I

A required course designed to acquaint new graduate students with the research strengths of the Department, research facilities in the University and its vicinity and with the methodologies of the main fields of geography. In addition, problems of both a philosophical and practical nature involved in the design and operationalization of geographic research will be examined.

Tentative Schedule

1. Orientation seminars for new students (e.g. the nature of local library and archival resources, bibliography and reference systems; university computer systems; geographic information systems etc.)
2. Faculty presentations and discussions.
3. Student presentations and discussions.

Evaluation

The satisfactory/unsatisfactory evaluation of the students will be based on class attendance, participation and submission of a paper. For these papers, students will work with appropriate faculty members who will provide critical comments in the preparation of the paper and after completion of the final draft.

Readings

1. Texts: R.J. Johnston's GEOGRAPHY AND GEOGRAPHERS and PHILOSOPHY and HUMAN GEOGRAPHY, 1983.
2. A general reading list will be attached.
3. Each faculty member will identify 2 or 3 readings to help prepare students for their session.

(b) Faculty competence

The course is based on the research strengths of individual faculty members.

(c) Library resource

Library resources are sufficient.

CALENDAR INFORMATION:

Department: Geography Course Number: 701

Title: Introduction to Graduate Studies: Part II

Description: A required course designed to acquaint new graduate students with the research strengths of the Department, research facilities in the University and with the methodologies of the main fields of geography.

Credit Hours: 0 Vector: _____ Prerequisite(s) if any: _____

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: 5-10 When will the course first be offered: _____

How often will the course be offered: Once a year

JUSTIFICATION:

Course required to prepare students for graduate level research in our department.

RESOURCES:

Which faculty member will normally teach the course: All faculty will participate/Chairman of GSC will organize

What are the budgetary implications of offering the course: None

Are there sufficient library resources to support details: yes

- A. outline of the course
- B. syllabus and a list of the major texts to be used
- C. list of resources

Approved: Departmental Graduate Studies Committee: Roger Hauke 85-10-24
 Faculty Graduate Studies Committee: Michael C. Roberts 85-10-24
 Faculty: RC Brown 85-10-24

Senate Graduate Studies Committee: _____ Date: _____
 Senate: _____

(a) Course Outline

Geography 701 - Introduction to Graduate Studies: Part II

See course outline Geog. 700.

(b) Faculty competence

See Geog. 700.

(c) Library Resources

See Geog. 700.

PARENTAL INFORMATION:

Department: Geography Course Number: 704

Title: Analytical Techniques for Human Geographers

Description: An examination of qualitative and quantitative techniques and associated software relevant to the compilation analysis, and management of information for human geographic research.

Credit Hours: 4 Vector: _____ Prerequisite(s) if any: Spatial Statistics

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: 5-10 When will the course first be offered: 86-3

How often will the course be offered: As demanded

JUSTIFICATION:

It is necessary that students across the scope of human geographic inquiry be critically aware of the strengths, weaknesses, and appropriateness of the various techniques available for assembling and analysing data relevant to different types of research.

RESOURCES:

Which Faculty member will normally teach the course: W.G. Gill, R. Hayter, J.T. Pierce, S.T. Wong, T.K. Poiker
Require the presence of the following Faculty member to teach the course: _____

No new resources needed

Are there sufficient library resources (append details): Yes

- a. Outline of the Course
- b. Indication of the presence of the Faculty member to give the course.
- c. Library resources

Departmental Graduate Studies Committee: Roger Hayter Date: Oct 23/85

Faculty Graduate Studies Committee: Michelle Roberts Date: 85-10-23

Signature: RCB Date: 85-10-24

Chair Graduate Studies Committee: _____ Date: _____

Secretary: _____ Date: _____

Course Outline

ANALYTICAL TECHNIQUES FOR HUMAN GEOGRAPHERS

The purpose of this course is to assist students in human geography to develop the skills necessary to identify and analyse information relevant to geographic problems. A principal concern of the course will be with the quality and usefulness of existing and self-collected data sets in terms of the research problem at hand. Qualitative and quantitative techniques for constructing and analysing information for research projects across the scope of human geographic inquiry will be critically discussed. Participants will gain experience with the application of software packages for data management, statistical calculations and the communication of results. The course will focus on the development of a usable understanding of the strengths, weaknesses and appropriateness of various techniques; not on the mathematical derivations of them. The specific topics to be covered will vary depending on the background and interests of the participants.

Prerequisites

It is anticipated that all students will have completed an introductory spatial statistics or equivalent course at the undergraduate level.

Organization and Evaluation

The course will be conducted as a weekly three hour workshop. For each topic area participants will be expected to evaluate a research example from the geographic literature. Each student will choose one topic for fuller investigation and presentation through discussion and a term paper. In addition, students will undertake one or two analyses of small data sets.

Textbooks

There will be no required texts. It is recommended that students have access to at least one of the following books on reserve in the library. An extensive reading and resource list will be made available at the first session.

Unwin, D. (1981) *Introductory Spatial Analysis*. New York: Methuen.

Wrigley, N. (ed.) (1980) *Statistical Applications for the Spatial Sciences*. New York: Methuen.

Golledge, R.A. and S.H. Rayner (eds.) (1982) *Proximity and Preference: Problems in the Multidimensional Analysis of Large Data Sets*. Minneapolis: University of Minnesota Press.

Illustrative Course Topics

Introduction: geographic problems and the search for appropriate information; issues concerning models, data, numeric and non-numeric, linear and non-linear information; review of descriptive and simple inferential statistics

Data Bases: the sources of data; when is sampling appropriate; how to construct a sample; survey research methods; managing large and small data bases

Human Scale Field Methods: interview techniques; observation and analysis of human behavior; research in special settings; recording artifactual observations

Analysing Simple Data Sets: cross-classification; testing for differences and association; displaying results spatially and in tabular form; when to use statistical tests; when statistical significance doesn't mean anything useful; multiple regression

More Complex Problems and Techniques: the question of prediction; reliability and validity revisited; discussion of some multivariate techniques, eg. factor analysis, analysis of variance, discriminant analysis, cluster analysis and grouping; spatial interaction models; multidimensional scaling; analysing attitudes and values; displaying and communicating complex results

SIMON FRASER UNIVERSITY

New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: Geography Course Number: 706

Title: Quantitative Techniques in Physical Geography

Description: An introduction to quantitative methods, statistical and physical modelling, sensitivity and error analysis, research design and data collection, editing, and analysis in physical geography.

Credit Hours: _____ Factor: _____ Prerequisite(s) if any: _____

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: 5 - 10 When will the course first be offered: 1986-3

How often will the course be offered: as demanded

JUSTIFICATION:

Course required to prepare physical geography students for current quantitative techniques used in research.

RESOURCES:

Which Faculty member will normally teach the course: W.G. Bailey and I. Hutchinson

What are the budgetary implications of mounting the course: No new resources needed.

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: R. Hayter Date: Aug 27/85

Faculty Graduate Studies Committee: Michael Roberts Date: 85-10-23

Faculty: Rebman Date: 85-10-24

Senate Graduate Studies Committee: _____ Date: _____

Senate: _____ Date: _____

Quantitative Techniques in Physical Geography

Outline: This seminar course will focus on the review and discussion of selected quantitative techniques. Topics of consideration will include: introduction to quantitative methods, statistical and physical modelling, editing and analysis.

Literature Sources: 1. Textbook -

Sumner, G.N., 1978: Mathematics for Physical Geographers. Edward Arnold, London, 236 pp.

2. References -

Readings, handouts and articles from other sources will be assigned to go with specific seminar topics.

Evaluation Scheme: Evaluation will be made on the following:

- | | |
|---------------------|-----|
| a) term paper | 40% |
| b) five assignments | 60% |

Organization: One 2-hour seminar per week.

Computing: Extensive use will be made of the SFU computer system. Students unfamiliar with MTS, Tellagraf, package programming and a programming language (Basic, Pascal or Fortran) should take the appropriate "short" courses offered by the Computing Centre or audit courses in Computing Science.

SIMON FRASER UNIVERSITY
New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: Geography Course Number: 708
Title: Ideas and Methodology in the History of Geography
Description: This is an advanced course that critically examines the contemporary and historical modes of analysis in geography.
Credit Hours: 4 Vector: _____ Prerequisite(s) if any: Geog. 301

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: 10 When will the course first be offered: 86-3
How often will the course be offered: as demanded

JUSTIFICATION:

There is a need for a graduate course which explores the philosophical base of geographic methods and their social-political context. The geographic literature is very active in this area.

RESOURCES:

Which Faculty member will normally teach the course: M.E. Eliot Hurst, A. MacPherson, E.M. Gibson
What are the budgetary implications of mounting the course: none

Are there sufficient Library resources (append details): Yes

Appended: a) Outline of the Course
b) A indication of the competence of the Faculty member to give the course.
c) Library resources

Approved: Departmental Graduate Studies Committee: R. Hughes Date: Aug 27/85
Faculty Graduate Studies Committee: Michael Roberts Date: 85-10-23
Faculty: RE Bunn Date: 85-10-24
Senate Graduate Studies Committee: [Signature] Date: 12 Dec/85
Senate: _____ Date: _____

COURSE OUTLINE: IDEAS AND METHODOLOGY IN THE HISTORY OF GEOGRAPHY

INTRODUCTION

This is an advanced course that critically examines contemporary and historical modes of analysis in geography in light of their social-political contexts. Its purpose is to present a general overview of geographical literature and a critical analysis of current methodologies. Key concepts are natural science, monism, positivism, epistemology, historical method, scientific method, hermeneutics, realism, idealism, empiricism, rationalism, medieval, enlightenment, modern, value, objective paradigm, environmentalism, humanism, critical analysis, structuralism, Marxism, existentialism, model and research design.

The course is divided into 12 seminars including:

- (1) Introduction to critical and philosophical analysis of geography
- (2) Naturalistic Modes of Analysis
- (3) Idealistic Modes of Analysis
- (4) Positivistic Modes of Analysis
- (5) Realistic Modes of Analysis
- (6) Current Paradigms in Econ. Geography
- (7) Current Paradigms in Phys. Geography
- (8) Current Paradigms in Human Geography
- (9) The Roots of Geographic Thought in Antiquity
- (10) Tracing Geographic Thought in the Medieval Period
- (11) Tracing Geographic Thought in the Enlightenment Period
- (12) Tracing Geographic Thought in the Romantic Period (Workshop)

Course Bibliography

See attached two pages

Course Grade

Graduate students will be graded as follows:

- (1) Seminar presentation 50%
- (2) Term Paper 50%

Competence of the Faculty member(s)

The designated faculty member(s) have several decades of research and teaching experience in the field.

New Graduate Course Proposal FormCALENDAR INFORMATION:Department: Geography Course Number: 710Title: Geography and IdeologyDescription: An attempt to define the concept 'ideology', to recognize its operation in geography and to demonstrate its relevance in historical geography, political geography, and in the study of the symbolic structuring of cultural landscapes.Credit Hours: 4 Vector: _____ Prerequisite(s) if any: _____ENROLLMENT AND SCHEDULING:Estimated Enrollment: 5-10 When will the course first be offered: 87-2 or 87-3How often will the course be offered: as demandedJUSTIFICATION:Ideology is involved in all social science. Geographers have only recently begun to recognize its importance in not only part geographical accounts, but its operation in day-to-day research, writing, and teaching.RESOURCES:Which Faculty member will normally teach the course: M.E. Eliot HurstWhat are the budgetary implications of mounting the course: No new resources neededAre 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: R. Hayte Date: Aug 27/85Faculty Graduate Studies Committee: Michael Roberts Date: 85-10-23Faculty: R. Brown Date: 85-10-24

Senate Graduate Studies Committee: _____ Date: _____

Senate: _____ Date: _____

Geography and Ideology

Ideology is widely operative in not only daily practice but in the more specialized labour of research, writing, and teaching. This seminar course first attempts to define 'ideology', examines the treatment it has received in social science literature in the last 100 years, and then attempts to recognize its operation in Geography per se. In particular historical, political and cultural geographic practices will be analyzed.

- Literature: D. Gregory, Ideology, science and human geography, Hutchinson, London, 1978.
- M.E. Eliot Hurst, "Geography, social science and society: towards a de-definition" Austr. Geogr. Studies 18, 1980, 3-21.
- J. Larrain, The concept of ideology, Hutchinson, London, 1979.

New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: Geography Course Number: 712

Title: Observation and Inference

Description: A critical and pragmatic study of the process of observation in relation to inference. Some theoretical discussion, presentation of concrete exemplary cases; and practical exercises in the field will enlist specialists in various geographical subdisciplines (e.g., in urban morphology, vegetation ethnic settlement, stream dynamics.)
Credit Hours: 4 Vector: _____ Prerequisite(s) if any: _____

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: _____ When will the course first be offered: _____

How often will the course be offered: as demanded

JUSTIFICATION:

RESOURCES:

Which Faculty member will normally teach the course: P.L. Wagner

What are the budgetary implications of mounting the course: None

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: R. Huxley Date: Aug 27/85
 Faculty Graduate Studies Committee: Michael Roberts Date: 85-10-23
 Faculty: R. Brown Date: 85-10-24
 Senate Graduate Studies Committee: BP Clayman Date: 12 Dec 85
 Senate: _____ Date: _____

Course Outline

Observation and Inference

Field introduction to and critical discussion of first hand observational techniques in geography.

Topics will probably include:

1. Structural analysis of vegetation and inference regarding primary and secondary successions.
2. Agricultural technology and farm management.
3. Correlation of aerial photographs and ground control data.
4. Hydrological measurements.
5. Residential census.
6. Archival investigation.
7. Research in urban ethnic patterns.
8. Preliminary soil assessment in this field.
9. Retail services survey.

Various faculty will participate and any reading required will be announced in advance.

New Graduate Course Proposal FormCALENDAR INFORMATION:Department: Geography Course Number: 714Title: Computer CartographyDescription: Theoretical, algorithmic and practical components in the application of the computer for mapping.Credit Hours: 4 Vector: _____ Prerequisite(s) if any: _____ENROLLMENT AND SCHEDULING:

Estimated Enrollment: _____ When will the course first be offered: _____

How often will the course be offered: as demandedJUSTIFICATION:A necessary course for students in computer cartography; Simon Fraser is one of the few universities in North America that offer such a programme.RESOURCES:Which Faculty member will normally teach the course: T.K. PoikerWhat are the budgetary implications of mounting the course: NoneAre there sufficient Library resources (append details): YesAppended: 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: ~~Robert R. Hays~~ Date: Aug 27/85
 Faculty Graduate Studies Committee: Mitchell Chobers Date: 85-10-23
 Faculty: R. Brown Date: 85-10-24
 Senate Graduate Studies Committee: BP Clayton Date: 12 Dec/85
 Senate: _____ Date: _____

Computer Cartography

1. Data Structures.

- (a) Spatial data structures
 - (i) Raster vs. Vector
 - (ii) Geometry - Topology
 - (iii) Spatial Search (Quadtree, Bxcell, etc)
- (b) Data Base Management Systems
 - (i) Hierarchical DBs.
 - (ii) Relational DBs.
 - (iii) Application to GIS.
- (c) Data structure interfaces and conversions.
 - (i) Graphic to digital conversion concepts.
 - (ii) Vector-raster-vector conversions.

2. Algorithms

- (a) Mathematics.
Transformations, map projections.
- (b) Points
 - (i) Input.
 - (ii) Triangulation.
 - (iii) Interpolation (assumptions, different approaches, comparison).
- (c) Lines
 - (i) Input.
 - (ii) Symbolism.
 - (iii) Generalization.
 - (iv) Smoothing.
 - (v) Fractals.
- (d) Polygons
 - (i) Structures.
 - (ii) Input.
 - (iii) Point-in-polygon.
 - (iv) Overlay.
- (e) Surfaces

-
-
- (i) Structures.
 - (ii) Input.
 - (iii) Contouring.
 - (iv) Other representations (3-D, shading, inclined contours, shaded contours, colour, etc).
 - (v) Slope analysis, visibility, etc.
 - (vi) Surface Modelling.

Reading.

Monmonier, M.

Peucker, T.K.

Other readings will be provided during the course.

Competence of Faculty Member

Professor Poiker has 16 years research and teaching experience in the field and is an internationally renowned expert.

Library resources are adequate.

New Graduate Course Proposal FormCALENDAR INFORMATION:

Department: Geography Course Number: 715
 Title: Geographic Information Systems
 Description: Data bases, systems concepts, quantitative techniques, modelling and display in geography, on the basis of computer systems.
 Credit Hours: _____ Vector: _____ Prerequisite(s) if any: _____

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: _____ When will the course first be offered: _____
 How often will the course be offered: as demanded

JUSTIFICATION:

A necessary course for student in computer cartography; Simon Fraser is one of the few universities in North America that offer such a programme.

RESOURCES:

Which Faculty member will normally teach the course: T.K. Poiker
 What are the budgetary implications of mounting the course: None

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: R. Harte Date: Aug 27/85
 Faculty Graduate Studies Committee: Michael Chokers Date: 85-10-23
 Faculty: Reburn Date: 85-10-24
 Senate Graduate Studies Committee: BP Clayman Date: 12 Dec/85
 Senate: _____ Date: _____

Geographic Information Systems.

1. Introduction to Geographic Information Systems.
 - (a) Components of a geographic information system.
 - (b) System functions.
 - (c) Strengths and weaknesses.
2. Introduction to System Management.
 - (a) Functional Requirements Study Design.
 - (b) Benchmark Test Concepts.
 - (c) Systems Integration and Data Transfer.
 - (d) System Planning and Implementation.
3. Types of Geographic Information Systems.
 - (a) Cadastral
 - (b) Topographic
 - (c) Digital Elevation Models
 - (d) Resources systems
 - (e) Thematic mapping
4. Introduction to Applications.
 - (a) Categories and size of proplems; efficient access.
 - (b) DBMS; Data structures.
 - (c) Analysis programs, lack of integrated analysis programs.
 - (d) Integration of functions.
 - (e) Remote Sensing/GIS interfaces.
 - (i) General considerations: Raster vs. vector, resolution; coordinate adjustment; absolute vs probabilistic data; multi-variable mapping.
 - (ii) Criticism in the literature.
 - (iii) Existing interfaces.
 - (f) Applications.
5. Systems Modelling.
 - (a) Location-allocation modelling.
 - (b) Spatial interaction modelling.
 - (c) Spatial generalization, statistics of spatial data.
 - (d) Surface modelling.

6. Social and political questions.

- (a) The sociology of Information Systems.
- (b) The political impact.

Readings.

Tomlinson, Roger(1984): Investigation of Digital Cartographic Status and Developments in Canada. 5 vols. Ottawa.

Other readings will be provided during the course.

Competence of Faculty Member

Professor Poiker has 16 years research and teaching in the field and is an internationally renowned expert.

Library resources are adequate.

SIMON FRASER UNIVERSITY
New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: Geography Course Number: 716
Title: Aerial Reconnaissance for Remote Sensing
Description: Theoretical & Practical Training in the Acquisition of Airborne
Multispectral Remote Sensing Data
Credit Hours: 4 Vector: _____ Prerequisite(s) if any: Geog 453

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: 8 When will the course first be offered: _____
How often will the course be offered: as demanded

JUSTIFICATION:

Only one institution (I.T.C. - UNESCO, Netherlands) presently offers
training in aerial reconnaissance. The S.F.U. remote sensing facility
in Geography has the equipment and expertise to offer this training.

RESOURCES:

Which Faculty member will normally teach the course: A. Roberts
What are the budgetary implications of mounting the course: Some funding will be
necessary for field operations and data processing.

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: R. Kuyfe Date: Aug 27/85
Faculty Graduate Studies Committee: Michael Roberts Date: 85-10-23
Faculty: Reisman Date: 85-10-24
Senate Graduate Studies Committee: B.P. Clayton Date: 12 Dec/85
Senate: _____ Date: _____

Course Outline

Aerial Reconnaissance for Remote Sensing

The course will provide theoretical and practical training for the acquisition of airborne multispectral remote sensing data. Systems will include mapping (metric) and reconnaissance (non-metric) aerial cameras for photography and LLTV multispectral video systems.

Lecture Topics

1. Introduction to Aerial Reconnaissance: history and systems.
2. Aerial Reconnaissance Applications: Domestic and Third World.
3. Flight Planning for Aerial Photography.
4. Flight Planning for multispectral imaging systems.
5. Flight Planning for Thermal imagery.
6. Platform considerations: Aircraft drones and balloons.
7. Handling and Processing of Photographic Films.
8. Handling and Processing of Multispectral Data: magnetic tape, disk storage and video tape.
9. In-flight procedures: equipment operation, radio procedures, energy procedures.
10. Regulations: Department of Transport and Canadian Transport Commission.
11. Equipment installations: procedures and requirements.
12. Navigation and Annotation Systems.
13. Economic Considerations: Government and Private Sector.

Text: American Society of Photogrammetry, Manual of Photogrammetry, 1980.

SIMON FRASER UNIVERSITY

New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: GEOGRAPHY Course Number: 717
Title: Digital Processing of Remote Sensing Data
Description: Theory and applications of analytical processing procedures used with multispectral remote sensing data.
Credit Hours: 4 Vector: _____ Prerequisite(s) if any: GEOG. 453

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: 8 When will the course first be offered: _____
How often will the course be offered: as demanded

JUSTIFICATION:

There is a high level of demand for remote sensing training in Geography; however no graduate course dealing with the required analytical skills for advanced research is offered.

RESOURCES:

Which Faculty member will normally teach the course: A. Roberts
What are the budgetary implications of mounting the course: none

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: R. Harte Date: Aug 27/85
Faculty Graduate Studies Committee: Michael Roberts Date: 85-10-23
Faculty: R. C. Burns Date: 85-10-24
Senate Graduate Studies Committee: B.P. Clay Date: 12 Dec/85
Senate: _____ Date: _____

COURSE OUTLINE

Digital Processing of Remote Sensing Data

The course will provide training in the theory and applications for digital processing of multispectral remote sensing data. The systems studied will include: multispectral aerial photography; densitometry, multispectral video imagery; multispectral scanner imagery, and; computer processing of multispectral imagery.

Lecture Topics

1. Introduction to Multispectral Remote Sensing: sensors and systems
2. Photographic Systems
3. Densitometry and Ratioing Procedures
4. Multispectral Scanners
5. Multispectral Video Systems
6. Image Management Procedures
7. Image Transformations: Spectral and Spatial
8. Image Classification Procedures
9. Vegetation Applications
10. Geological Applications
11. Water Resources Applications
12. Land Use Applications
13. Applications for Developing Countries.

Text: American Society of Photogrammetry, Manual of Remote Sensing, 1982.

SIMON FRASER UNIVERSITY
New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: GEOGRAPHY Course Number: 720
Title: Ecological Biogeography
Description: Population, community and ecosystem ecology from a biogeographic perspective; island biogeography theory.
Credit Hours: 4 Vector: _____ Prerequisite(s) if any: _____

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: 5 When will the course first be offered: _____
How often will the course be offered: as demanded

JUSTIFICATION:

Examines an active area of biogeographic research, provides physical geography students with an ecological and evolutionary perspective; integrates biogeography, environmental reconstruction and resource management themes.

RESOURCES:

Which Faculty member will normally teach the course: I. Hutchinson
What are the budgetary implications of mounting the course: None

Are there sufficient Library resources (append details): Yes; with the addition of Holarctic Ecology journal.

- 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: R. Huxley Date: Aug 27/85
Faculty Graduate Studies Committee: Michael Coburn Date: 85-10-23
Faculty: M. Coburn Date: 85-10-24
Senate Graduate Studies Committee: B.P. Clary Date: 12 Dec/85
Senate: _____ Date: _____

Course Outline

Ecological Biogeography

This course examines the scope and methods of biogeography at the present time. Weekly reading assignments will focus on the development of some of the major themes in biogeography and will examine the status of hypotheses attempting to explain variations in plant and animal distribution and abundance.

Format: Weekly 2-hour seminar.

Topics to be covered include:

- The scope of biogeography: evolutionary and geographic contexts of the development of the discipline
- Areography: the spatial dimension in Biogeography
- Dispersal and drift: the temporal dimension in biogeography
- Populations and communities: the species and beyond
- Community structure and organization: Competition, predation and diversity
- Succession theory
- Island biogeography theory
- The ecosystem concept: from Tansley to IBP
- Landscape ecology: biogeography and resources management
- Biogeography and conservation
- Remote sensing and vegetation classification

A reading list will be available in the first week of classes.

Course grades: Grading will be based on seminar participation (25%) and written work. Students in Geog. 815-3 will be expected to produce two papers (review paper: 50% course grade; research proposal: 25%).

Enquiries to Ian Hutchinson 7140 CC.

SIMON FRASER UNIVERSITY

New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: GEOGRAPHY Course Number: 721

Title: Biogeography of Wetlands

Description: Population biology community organization and environmental characteristics of wetlands ecosystems with particular reference to Canadian examples.

Credit Hours: 4 Vector: _____ Prerequisite(s) if any: _____

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: 4 When will the course first be offered: _____

How often will the course be offered: as demanded

JUSTIFICATION:

Examines an area of research (both faculty and graduate) in the department.

RESOURCES:

Which Faculty member will normally teach the course: I. Hutchinson

What are the budgetary implications of mounting the course: None

Are there sufficient Library resources (append details): Yes; with the addition of Wetlands journal.

- 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: Arthur R. Hays Date: Aug 27/85

Faculty Graduate Studies Committee: Michael Choban Date: 85-10-23

Faculty: De Bunn Date: 85-10-24

Senate Graduate Studies Committee: B.P. Clayton Date: 12 Dec/85

Senate: _____ Date: _____

Course Outline

Biogeography of Wetlands

This course reviews the development and status of studies in wetlands ecology and biogeography. The primary emphasis will be on coastal and estuarine wetlands, but the ecological characteristics of bogs, fens, and riparian wetlands will also be discussed.

Format: One-hour lecture followed by one-hour seminar.

Topics to be covered include:

- The history of wetlands studies
- The physical template: geological and geomorphological preconditions for wetland development
- Wetland soils
- Bioclimates of wetlands
- Global survey of the wetlands flora
- Plant populations and community organization in wetlands
- Successional models and their critics
- The role of wetlands in estuarine productivity
- Wetland herbivores and detritivores
- Mangrove ecosystems
- Bog ecosystems
- Riparian wetlands

A reading list will be available in the first week of classes.

Course grades: Grading will be based on seminar participation (25%) and written work. Students will be expected to produce two papers (review paper: 50% course grade; research proposal 25%).

Field trip: The course will feature a one-day fieldtrip to investigate selected examples of local wetlands.

- b) Faculty member actively involved in research in this field since 1978; publications and funding in this area.
- c) Adequate, with the exception noted above.

SIMON FRASER UNIVERSITY
New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: Geography Course Number: 724
Title: Measurement and Modelling of Heat and Mass Transfer
Description: An introduction to field measurement methods and mathematical modelling approaches used in heat and mass transfer research.
Credit Hours: _____ Vector: _____ Prerequisite(s) if any: _____

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: ? When will the course first be offered: ?
How often will the course be offered: as demanded

JUSTIFICATION:

It is needed by graduate students in climatology

RESOURCES:

Which Faculty member will normally teach the course: W.G. Bailey
What are the budgetary implications of mounting the course: No new resources required

Are there sufficient Library resources (append details): Yes

Appended: a) Outline of the Course
X b) An indication of the competence of the Faculty member to give the course.
c) Library resources

Approved: Departmental Graduate Studies Committee: R. Hayler Date: Aug 27/85
Faculty Graduate Studies Committee: Michael Roberts Date: 85-10-23
Faculty: Reburn Date: 85-10-24
Senate Graduate Studies Committee: B.R. Clay Date: 12 Dec/85
Senate: _____ Date: _____

Measurement And Modelling Of Heat And Mass Transfer

This course will introduce current field measurement methods and mathematical modelling approaches that are employed in heat and mass transfer research. Emphasis will be given to the provision of both theoretical and practical experience.

Field applications will focus on the interests of the individuals enrolled in the course.

The course will have one-two hour lecture per week together with a three hour laboratory session.

Reading list:

- Fritschen, L.J. and L.W. Gay. 1979. Environmental Instrumentation. Springer-Verlag, N.Y., 261 pp.
- Monteith, J.L. 1973. Principles of Environmental Physics. Edward Arnold, London, 241 pp.
- Monteith, J.L. (ed.). 1975. Vegetation and the Atmosphere. Volume 1 Principles. Academic Press, London, 278 pp.
- Monteith, J.L. (ed.). 1976. Vegetation and the Atmosphere. Volume 2 case studies. Academic Press, London, 439 pp.
- Schwerdtfeger, P. 1976. Physical Principles of Micrometeorological Measurements. Elsevier Scientific Public., Amsterdam, 113 pp.
- Tanner, C.B. 1963. Basic Instrumentation and Measurements for Plant Environment and Micro meteorology. University of Wisconsin.

SIMON FRASER UNIVERSITY

New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: Geography Course Number: 726
Title: Fluvial Geomorphology
Description: Advanced Theory and Field Measurement in Open-Channel
Fluid Mechanics and Fluvial Geomorphology
Credit Hours: 4 Vector: 2:0:3 Prerequisite(s) if any: _____

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: 5-10 When will the course first be offered: 87-3
How often will the course be offered: as demanded

JUSTIFICATION:

A course in one of the Department's research strengths and
for which there is an established demand.

RESOURCES:

Which Faculty member will normally teach the course: Prof. E.J. Hickin & M.C. Roberts
What are the budgetary implications of mounting the course: None

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: A. Hays Date: Aug 27/85
Faculty Graduate Studies Committee: Michael Roberts Date: 85-10-23
Faculty: Rebman Date: 85-10-24
Senate Graduate Studies Committee: B.R. Coe Date: 12 Dec/85
Senate: _____ Date: _____

Fluvial Geomorphology
Course Outline

1. Basic Concepts of Fluid Flow
 - (a) Introduction
 - (b) Definitions
 - (c) Continuity
 - (d) Equations of Motion - General
 - (e) Equations of Motion - Fluid Flow
 - (f) Use of the Energy and Momentum Concepts
 - (g) Dimensional Analysis and Similarity
 - (h) Flow Resistance
 - (i) Velocity Coefficients
2. The Energy Principle in Open Channel Flow
 - (a) The Basic Equation
 - (b) The Transition Problem
 - (c) Critical Flow
 - (d) Subcritical and Supercritical Flow
 - (e) The Occurrence of Critical Flow; Controls
 - (f) Applications in Rectangular Channels
 - (g) Nonrectangular Channel Sections
3. The Momentum Principle in Open Channel Flow
 - (a) The Hydraulic Jump
 - (b) The Momentum Function - Rectangular Channels
 - (c) The M-y relationship
 - (d) Nonrectangular Channel Sections
 - (e) Unsteady Flow: Surges and Bores
4. Flow Resistance
 - (a) Introduction
 - (b) The Resistance Equation
 - (c) Uniform Flow: Its Computation and Applications
 - (d) Nonuniform Flow
 - (e) Longitudinal Profiles
 - (f) Interaction of Local Features and Longitudinal Profiles
5. Flow Resistance - Nonuniform Flow Computations
 - A. Uniform Channels
 - (a) Step Method - Distance Calculated from Depth
 - (b) Direct Integration Methods
 - (c) Step Method - Depth Calculated from Distance

5. Flow Resistance - Nonuniform Flow Computations (con't)
 - B. Irregular Channels
 - (a) Step Method - Single Channels
 - (b) Step Method - Divided Channels
 - (c) The Ezra Method
 - (d) Grimm's Method
 - (e) The Escoffier Method
 - (f) The Discharge Problem
 - (g) The High-Speed Computer
6. Channel Transitions
 - (a) Introduction
 - (b) Expansions and Contractions
 - (c) Changes of Direction
 - (d) Culverts
 - (e) Bridge Piers
 - (f) Lateral Inflow and Outflow
7. Unsteady Flow
 - (a) The Equations of Motion
 - (b) The Method of Characteristics
 - (c) Positive and Negative Waves; Surge Formation
 - (d) The Dam-Break Problem
 - (e) Some Practical Problems
 - (f) Oscillatory Waves
8. Sediment Transport
 - (a) Introduction
 - (b) Modes of Sediment Motion and Bed Formation
 - (c) The Threshold of Movement
 - (d) The Suspended Load
 - (e) Bed-Load Formulas and Entrainment at the Bed
 - (f) The Stable Channel
 - (g) The Natural River
9. Similitude and Models
 - (a) Introduction
 - (b) Basic Principles
 - (c) Fixed-Bed River and Structural Models
 - (d) Movable-Bed Models
 - (e) Unsteady-Flow and Wave Models

Text: Henderson, F., 1966, Open Channel Flow, Macmillan, New York, pp 522.

SIMON FRASER UNIVERSITY
New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: Geography Course Number: 727
Title: Field and Analytical Techniques in Geomorphology
Description: Theory and practice of selected field techniques.
Credit Hours: 4 Vector: 1:0:3 Prerequisite(s) if any: _____

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: 5-10 When will the course first be offered: 87-3
How often will the course be offered: as demanded

JUSTIFICATION:

A course in the theory and operation of field and laboratory sensors and instrumentation.

RESOURCES:

Which Faculty member will normally teach the course: Prof. E.J. Hickin and M.C. Roberts
What are the budgetary implications of mounting the course: None

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: R. Harte Date: Aug 27/85
Faculty Graduate Studies Committee: Michael Roberts Date: 85-10-23
Faculty: Rebrow Date: 85-10-24
Senate Graduate Studies Committee: B.D. Clay Date: 12 Dec/85
Senate: _____ Date: _____

Field and Analytical Techniques in Geomorphology

Course Outline (an example; precise topics will be tailored to meet particular needs).

1. (a) Theory of the portable signal enhancing seismograph (S.E.S.)
(b) Field use of S.E.S.
2. (a) Introduction to standard procedures in field measurements of open-channel flows.
(b) Field use of flow meters (several configurations) theodolite, and Raytheon depth sounder.
3. (a) Problems of measuring bedload and suspended load transport in rivers.
(b) Field operation of suspended sediment and bedload samplers.
4. (a) Introduction to data logging systems.
(b) Field use of portable data logging systems.
5. (a) Introduction to sediment and coring equipment.
(i) Concore drill
(ii) Vibracorer
(b) Field use of drilling and coring equipment.
6. (a) Mechanical analysis of sediment: theory of natural sediment size distribution, normalising transformations, and fall velocity/grain diameter relations.
(b) Laboratory on grain size analysis using sieving and visual accumulation tube, and x-ray scanning sedigraph.
(c) Statistical analysis of particle size.
7. Standard field and laboratory procedures in water quality assessment.

SIMON FRASER UNIVERSITY
New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: GEOGRAPHY Course Number: 728
Title: Quaternary Geology and Geomorphology
Description: Stratigraphy of the Quaternary Period; models of glacial
sedimentation. Field study of glacial deposits
Credit Hours: 4 Vector: _____ Prerequisite(s) if any: _____

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: 5-8 When will the course first be offered: 86-1
How often will the course be offered: As demanded.

JUSTIFICATION:

It is a course covering material in one of the active fields of research
in the department and in the Institute for Quaternary Research.

RESOURCES:

Which Faculty member will normally teach the course: M.C. Roberts
What are the budgetary implications of mounting the course: None

Are there sufficient Library resources (append details): Yes, except for one additional
journal - Boreas.

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: Royd Hauke Date: Oct 23/85
Faculty Graduate Studies Committee: Michael Roberts Date: 85-10-23
Faculty: AC Brown Date: 85-10-24
Senate Graduate Studies Committee: BP Clayman Date: 12 Dec /85
Senate: _____ Date: _____

Simon Fraser University
Department of Geography

Geography 812
Dr. M.C. Roberts

QUATERNARY GEOLOGY AND GEOMORPHOLOGY

Course Outline

This course has two components: firstly, it provides a review of the stratigraphy, geomorphology and glacial depositional models associated with the Quaternary Period; secondly, it will examine the recent literature with emphasis on depositional models, Western Canada and the Pacific Northwest of the U.S.

Course Organization: It will be a combination of lectures, seminars and field work; the latter will involve both visiting described sites and actual field mapping.

Grades: these will be determined as follows:

Field reports	50%
Class presentations	10%
Short reports	10%
Final examination	30%

New Graduate Course Proposal FormCALENDAR INFORMATION:

Department: Geography Course Number: 730
 Title: Fossil Land Forms
 Description: Interpretation of fossil landforms in terms of their
Periglacial origin
 Credit Hours: 4 Vector: _____ Prerequisite(s) if any: _____

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: _____ When will the course first be offered: Has already been offered.
 How often will the course be offered: as demanded

JUSTIFICATION:

Some temperate zone landforms can only be understood by examining
today's periglacial regions

RESOURCES:

Which Faculty member will normally teach the course: C.B. Crampton
 What are the budgetary implications of mounting the course: None

Are there sufficient Library resources (append details): with my resources, 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: R. Hunte Date: Aug 27/85
 Faculty Graduate Studies Committee: Michael Crobers Date: 85-10-23
 Faculty: Rebman Date: 85-10-24
 Senate Graduate Studies Committee: B.P. Crampton Date: 12 Dec/85
 Senate: _____ Date: _____

Some temperate zone landforms can only be understood by examining today's periglacial regions. Examples of these landforms are those with compacted subsoils, which affects the regional drainage, polygonal ground patterning, solifluction terraces, hummocky surfaces and pingos. The periglacial climate that gave rise to these landforms has changed to a temperate climate as the current interglacial climate has evolved, but the landforms have persisted locally as fossil forms.

The subject matter is taught largely on the basis of my personal experiences in periglacial and temperate regions, during about 20 years, in several countries which include not only Canada, but U.S.A., Soviet Union and Europe. There is no textbook that adequately covers this subject matter since it is cross-discipline, which is one reason for teaching it as a graduate student course.

New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department Geography Course Number: 736
 Title: Resources and Environmental Issues in the Growth of Food Production
 Description: Concerned with identifying and analysing constraints to expanding food production within a geographical context.
 Credit Hours: 4 Vector: _____ Prerequisite(s) if any: _____

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: 5 When will the course first be offered: 86-1
 How often will the course be offered: As demanded

JUSTIFICATION:

An important area of research in which the department has expertise.

RESOURCES:

Which Faculty member will normally teach the course: J.T. Pierce

What are the budgetary implications of mounting the course: None

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: ~~Michael~~ R. Hulse Date: Aug 27/85
 Faculty Graduate Studies Committee: Michael Roberts Date: 85-10-23
 Faculty: Robson Date: 85-10-24
 Senate Graduate Studies Committee: _____ Date: _____
 Senate: _____ Date: _____

Resource and Environmental Issues in the Growth
of Food Production Systems

A. Introduction

The early 1970's represented a watershed in the way many viewed the world's ability to sustain the high post-war growth in agricultural production and in turn to meet man's nutritional requirements. Decline in North American grain reserves through crop failures, the rise in the real price of food and subsequent expansion in the cropland base were unexpected and unfamiliar turns of events. But perhaps more significant and less tied to vagaries of climate were indications of a decline in the growth in productivity for major cereals. The unquestioning allegiance to energy intensive input substitutes as a means of increasing production was slowly giving way to the realization that land resources particularly in developing countries would have to play an increasingly important role in affecting productive capacity. Even though lesser developed countries possess greater potential for expanding their existing productivities they, like their developed counterparts, face a variety of ecological, resource and manmade constraints which threaten to diminish the importance of land and weaken the long term productive capacity of the global food system. In the words of the recently published Global 2000 Report (1980:97) "arable area in many regions will likely begin to contract before 2000 as demand for land for non-agricultural uses increases and as the economic and environmental costs of maintaining cultivated areas near physical maxima becomes prohibitive".

Certainly in North America the competition for agricultural land from non-agricultural sources such as urban, built-up uses, strip mining, reservoirs; the increasing cost of factor inputs; restrictions on the availability of water; declines in the marginal productivity of energy intensive inputs; and climatic factors have combined differentially to undermine our previous flexibility in sustaining growth in the agricultural sector. Compounding these problems has been a decline in the natural fertility of soils and in the ecological base through soil erosion, declines in humus content, soil compaction, salinization and sundry forms of pollution. Match these conditions with the scarcity of capital for development and improvements in farming systems in lesser developed countries and a variety of institutional barriers to change and the prospect is that the economic and environmental costs of producing food in the future will be very unlike those of the past.

The purpose of this course is threefold: first, to analyse and evaluate the impact of resource and environmental factors upon the productive capacity of food production systems with particular emphasis on croplands in both developed and lesser developed countries; second, to discuss the implications of these findings for global food producing potential; and third to examine policies and programs designed to maintain old capacity and expand capacity while balancing economic and environmental costs.

B. Contents

1) Nature of the Problem

- population and income growth;
- constraints to expanding production: institutional, resource, environmental;
- quality and quantity of resource base;
- economic/environmental costs.

2) Historical Perspective

- growing importance of North America as a food producer;
- inequities in resource endowment and food production;
- demographic transition and problems of self-sufficiency;
- international actors;
- growth of marginal lands;
- the Green Revolution;
- some important resource and environmental issues.

3) Case Studies

- a selective look at developed/developing countries' according to:
 - . levels of production and self-sufficiency
 - . constraints to production
 - . costs of growth
 - . remedial policies and programmes.

4) Implications for Resource Management

- resource optimists vs. resource pessimists;
- increasing productivity in developing countries;
- carrying capacity of the land;
- costs/benefits of alternative strategies;
- social/political obstacles to change;
- optimal paths to growth under uncertainty.

C. Instruction and Assignments

One two-hour seminar will be held every week. Students will be expected to be an active part in discussions and presentations in these seminars. The course consists of two assignments: one devoted to a presentation of material on resource/environmental problems in food production in a selected country; the other a term paper on the theme of expanding food production as a special problem of resource management.

D. Reference Material

No text is required for the course. Students will rely on the reserve services of the Library and readings provided by the Instructor.

New Graduate Course Proposal FormCALENDAR INFORMATION:Department: Geography Course Number: 740Title: Geography and the Third WorldDescription: An examination of the objective geographical conditions in the Third World today and a review of the wide range of theories and suggested solutions of a geographical nature.Credit Hours: 4 Vector: _____ Prerequisite(s) if any: _____ENROLLMENT AND SCHEDULING:Estimated Enrollment: 5-10 When will the course first be offered: 87-1How often will the course be offered: as demandedJUSTIFICATION:

More and more attention is being paid by geographers to the Third World, and even those graduate students whose own research is in North America, need some exposure to the approaches, methods, and techniques used by geographers in this context.

RESOURCES:Which Faculty member will normally teach the course: M.E. Eliot HurstWhat are the budgetary implications of mounting the course: No new resources neededAre 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: R. Kaye Date: Aug 27/85Faculty Graduate Studies Committee: Mitchell Kober Date: 85-10-23Faculty: Re Brown Date: 85-10-24Senate Graduate Studies Committee: B.P. Clapp Date: 12 Dec/85

Senate: _____ Date: _____

Simon Fraser University
Department of Geography

Geography 8XX
M.E. Eliot Hurst

Geography and the Third World

This seminar course focusses on the objective geographical conditions of the Third World, particularly those with either/or trade links and development aid links to Canada. In addition there must be a review of the wide range of theories and solutions that have been suggested this century.

Literature sources:

- (i) Ben Crow and Alan Thomas, Third World Atlas, Open University, 1984.
- (ii) J.P. Dickenson, C.J. Clarke, W.T.S. Gould, et al, A Geography of the Third World, Methuen, 1983.
- (iii) Michael Todaro, Economic Development in the Third World, Longmans, third edition, 1985.

A detailed reading and resource list will be circulated in the first seminar.

<u>Evaluation:</u>	seminar discussion	40%
	extended essay	60%

Organization: two, two-hour seminars per week

SIMON FRASER UNIVERSITY
New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: Geography Course Number: 745
Title: Multinational Corporations and Regional Development
Description: An examination of the influence of the policies and structures of multi-national corporations on regional economic change.
Credit Hours: 4 Vector: _____ Prerequisite(s) if any: _____

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: _____ When will the course first be offered: _____
How often will the course be offered: According to demand.

JUSTIFICATION:

Examines an active and expanding area of research in economic geography which is particularly relevant to the Canadian context and in which the department has strong research interests.

RESOURCES:

Which Faculty member will normally teach the course: Roger Hayter
What are the budgetary implications of mounting the course: None

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: R. Kuyfe Date: Aug 27/85
Faculty Graduate Studies Committee: Michael Galletta Date: 85-10-23
Faculty: Rebman Date: 85-10-24
Senate Graduate Studies Committee: B.R. Clay Date: 12 Dec 85
Senate: _____ Date: _____

* See attached.

COURSE OUTLINE

Multinationals and Regional Development

An examination of the influence of the policies and structures of multinational corporations on regional economic change. Particular attention is given to how MNC, grow, the nature of their locational decision-making, their employment and investment geography, the impacts of branch plants on host and donor economies, and policies towards foreign investment.

Topics

1. Theories of the multinational corporation (MNC).
2. MNC's and locational decision-making.
3. Locational incentive schemes: response by MNC's.
4. MNC's and regional economic structures.
5. Measuring the economic impacts of branch plants on host economies.
6. Measuring the economic impact of foreign direct investment on donor economies.
7. Employment change and MNC's.
8. Global restructuring: the role of MNC's.
9. Open and closed door policies towards foreign investment.

Format: Weekly 3-hour seminar.

Evaluation: Grading will be based on seminar participation and written work.

Recommended Texts

Britton, J.M.H. and Gilmour, J.M. (1978), The Weakest Link - A Technological Perspective on Canadian Industrial Development, Background Study 43, Ottawa: Science Council of Canada, 1978.

Taylor, M. and Thrift, N. (eds.) (1982), The Geography of Multinationals, New York: St. Martins.

Watts, H.D. (1981), The Branch Economy: A Study of External Control. Longman, London.

New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: GEOGRAPHY Course Number: 749

Title: Geography of Education

Description: Education as a cultural, social and economic phenomena within a spatial context. Regional educational planning.

Credit Hours: _____ Vector: _____ Prerequisite(s) if any: _____

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: _____ When will the course first be offered: _____

How often will the course be offered: as demanded

JUSTIFICATION:

Examines an area of research in the department.

RESOURCES:

Which Faculty member will normally teach the course: T.K. Poiker

What are the budgetary implications of mounting the course: None

Are there sufficient Library resources (append details): Yes, with T.K. Poiker's personal library.

- 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: R. Hufpe Date: Aug 27/85

Faculty Graduate Studies Committee: Michael Roberts Date: 85-10-23

Faculty: RC brown Date: 85-10-24

Senate Graduate Studies Committee: B.A. Clayman Date: 12 Dec/85

Senate: _____ Date: _____

Course Outline

Geography of Education

Concepts:

General Systems Theory - Knowledge vs matter
Production factors - Human capital
Research and technical progress
A geography of human capital and technical progress

The Spatial Demand for Education:

Distance decay and educational elites
Agricultural zones and enrollment ratios
Socio-economic factors on different regional levels

Education and Scale:

Micro-geography - The journey to school
Enrollment ratio and regional school attendance
Distance education
The hinterland of Universities
Regional and National Educational Planning

Readings:

There are no texts and/or summary articles on the subject in English. A detailed list of publications will be provided.

New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: GEOGRAPHY Course Number: 754

Title: Landscape Aesthetics

Description: An advanced course on the cultural landscape that critically examines both theories influencing the style of Western landscapes and the uses of landscape imagery in western arts.

Credit Hours: 4 Vector: _____ Prerequisite(s) if any: Geography 301 and one of 344-3, 346-3, 431-5 or the equivalent.

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: 10 When will the course first be offered: Fall 1986

How often will the course be offered: as demanded

JUSTIFICATION:

Course reflects current undergraduate interest in art and geography, it will displace graduate reading courses now taught on the subjects; and, it reflects a growing literature produced on the subjects.

RESOURCES:

Which Faculty member will normally teach the course: E.M. Gibson, A. MacPherson

What are the budgetary implications of mounting the course: n/a

Are there sufficient library resources (append details): _____

- 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: R. Hupe Date: May 27/85

Faculty Graduate Studies Committee: Michael Roberts Date: 85-10-23

Faculty: R. C. Brown Date: 85-10-24

Senate Graduate Studies Committee: _____ Date: _____

Senate: _____ Date: _____

COURSE OUTLINE: LANDSCAPE AESTHETICS

INTRODUCTION

This is an advanced course on landscape aesthetics or landscape as art. On one level it will critically examine both historical and contemporary theories that lie behind human actions that transform the landscape. On another level it will critically examine the ideas of natural and cultural landscape that lie behind some imagery in Western literature, photography, landscape painting and sculpture. Key concepts are geomorphology, ideology, style, naturalism, realism, idealism, intentionality, period, iconology, social-political content, intentionality, garden architecture, civic plan, landscape evaluation, sense of place and scenery.

ORGANIZATION

The course is organized in 12 seminars in which literature reviews and field work reports will be presented under the following titles;

- (1) The aesthetic dimension of geographic literature (Library)
- (2) Parallel traditions in art history, cultural anthropology and art criticism (library)
- (3) Techniques and sources of landscape style classification and periodization (library)
- (4) Analysis of intentionality and metaphor in landscape (library)
- (5) Analysis of Vernacular Style (local field work)
- (6) Analysis of Renaissance Landscape design and meaning (library)
- (7) Analysis of Romantic Landscape design and meaning (library and field work)
- (8) Analysis of Modern Landscape design and meaning (field work)
- (9) Analysis of Post-Modern Landscape design and meaning
- (10) Analysis of "landscape" in North American photography and painting
- (11) Analysis of "landscape" in North American sculpture
- (12) Analysis of the "sense of place" in North American and British literature

COURSE GRADING

The course will be graded according to the following:

- | | |
|--------------------------|-----|
| a. Seminar Participation | 20% |
| b. Field Report | 20% |
| c. Term Paper | 60% |

COURSE BIBLIOGRAPHY: (see attached)

New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: Geography Course Number: 756

Title: Historical Geography

Description: The role of Historical Geography within Geography. The course will evaluate both the intellectual and practical-applied aspects of the subject.

Credit Hours: _____ Vector: _____ Prerequisite(s) if any: _____

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: _____ When will the course first be offered: _____

How often will the course be offered: as demanded

JUSTIFICATION:

A necessary course for those students contemplating research in historical geography.

RESOURCES:

Which Faculty member will normally teach the course: P.M. Koroscil

What are the budgetary implications of mounting the course: None

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: P. Hayler Date: Aug 27/85

Faculty Graduate Studies Committee: Michael Roberts Date: 85-10-23

Faculty: Rebman Date: 85-10-24

Senate Graduate Studies Committee: B.P. Clayton Date: 12 Dec 85

Seneca: _____ Date: _____

Historical Geography: Theory and Application

An examination of the role historical geography plays within the discipline of geography. The course will evaluate both the intellectual and practical-applied aspects of the subject.

Topics Covered

1. Philosophical Foundation and Human Geography

R.J. Johnston, Philosophy and Human Geography, Copp Clark Pitman Ltd., Toronto, 1983.

Philosophical and methodological issues since 1945. Three philosophies - positivism, humanism, structuralism - dominate contemporary human geography. Their basic characteristics and contributions to human geography.

2. Historical Geography and Human Geography

The tradition of historical geography and its application within human geography. The place of historical geography and the contemporary philosophies.

R.G. Cant, "The dilemma of historical geography" in W.B. Johnston (ed.), Human Geography: Concepts and Case Studies, U. of Canterbury Press, Christchurch, 1969, pp. 40-60.

P.M. Koroscil, "Historical geography: a resurrection" Journal of Geography, 1971, 70, pp. 415-420.

L. Guelke, "Problems of scientific exploration in geography" The Canadian Geographer, 1971, 15, pp. 38-53.

L. Guelke, "An idealist alternative in human geography" Annals Assoc. American Geographers, 1974, 64, pp. 193-202.

D. Gregory, "The discourse of the past: phenomenology, structuralism and historical geography" Journal of Historical Geography, 1978, 4, pp. 161-173.

A.R.H. Baker, "Historical geography: a new beginning" Progress in Human Geography, 1979, 4, pp. 560-570.

3. Theory and Fact in Historical Geography

Debates on interlinking Theory and Fact in historical geography and the relationships with the contemporary philosophies.

K.J. Edwards and P. Jones, "The methodology of historical geography" Journal of Interdisciplinary History, 1976, 8, pp. 187-189.

A.G. Wilson, "Theory in human geography: a review essay" in E.H. Brown (ed.) Geography: Yesterday and Tomorrow, Oxford U. Press, 1980, pp. 201-215.

D.W. Moodie and J.C. Lehr, "Fact and theory in historical geography" Professional Geographer, 1976, 28, pp. 132-135.

R.C. Harris, "Theory and synthesis in historical geography" Canadian Geographer, 1971, 19, pp. 157-172.

4. Historical Geography and Approaches Used by Practitioners

The viewpoints of historical geography and the approaches used by practitioners.

H.C. Darby, "Historical geography" in H.P.R. Finberg (ed.), Approaches to History, U. of Toronto Press, 1962, pp. 127-156.

C.O. Sauer, "Foreword to historical geography" Annals Assoc. American Geographers, 1941, 31, pp. 1-24.

D.W. Meinig, "Prologue: Andrew Hill Clark, Historical Geographer" in J.R. Gibson (ed.); European Settlement and Development in North America: Essays on Geographical Change in Honour and Memory of Andrew Hill Clark, U. of Toronto Press, 1978, pp. 3-26.

J.K. Wright, Human Nature in Geography, Harvard U. Press, 1966.

D. Lowenthal and M.J. Bowden (eds.) Geographies of the Mind: Essays in Historical Geography in Honor of John Kirkland Wright, Oxford U. Press, 1976.

5. "Hard" and "Soft" Data Used by Historical Geographers

Use of field and archival sources.

A.R.H. Baker, J.D. Hamshere, J. Langton, Geographical Interpretations of Historical Sources, David and Charles, Newton Abbot, 1970.

6. Techniques, Training and Historical Geography

"Hard" (Mathematical-Mechanical) and "Soft" (Descriptive-Literary) Techniques. Training in, for example, other specialized areas of geography (aerial photography, remote sensing, computer cartography) and history.

William Norton, Historical Analysis in Geography, Longman, 1984.

H.C. Darby, "The Problem of Geographical Description" Trans. of the Institute of British Geographers, 1962, 30, pp. 1-14.

C. Berger, The Writing of Canadian History, Oxford U. Press, 1976.

7. Historical Geography Practised in Other Countries

For example, historical geography in Britain, Scandinavia, France, Latin America, etc.

A.R.H. Baker, Progress in Historical Geography, David and Charles, Newton Abbot, 1972.

8. Historical Geography and Canadian Research

An examination of a selected group of historical geographers and their published research on Canadian topics. E. Ross, J. Warkentin, J.D. Wood, R.L. Gentilcore, C.G. Head, B. Osborne, A.H. Clark, D.W. Moodie, J.J. Mannion, A. Ray, J. Clarke, P.M. Koroscil, C. Harris.

9. The Historical Geographer and the Marketplace

A discussion of the value and application of a historical-geographic training, whether you are a "hard" or "soft" historical geographer, for employment, apart from Educational institutions, at the federal, provincial, local government levels and private industry.

10. Select List of Standard Course References

L.T. Guelke, Historical Understanding in Geograpy: An Idealist Approach, U. of Cambridge Press, 1983.

A.R.H. Baker and Mark Billinge, Period and Place: Research Methods in Historical Geography, U. of Cambridge Press, 1982.

W. Norton, Historical Analysis in Geography, Longman, 1984.

R.E. Ehrenberg (ed.), Pattern and Process, Research in Historical Geography, Harvard University Press, 1975.

A.R.H. Baker (ed.), Progress in Historical Geography, David and Charles, 1972.

A.R.H. Baker, J. Hamshere, J. Langton, Geographical Interpretation of Historical Sources, Readings in Historical Geography, David and Charles, 1970.

B. Osborne (ed.), The Settlement of Canada: Origins and Transfer, Queens University, 1976.

Articles by Historical Geographers in D. Akenson (ed.) Canadian Papers in Rural History, Volumes 1 to 5, 1978 to 1986, Langdale Press.

J. Petre (ed.), Transformations Historiques Du Parcellaire et De L'Habitat Rural, U. of Nancy, France, 1985.

New Graduate Course Proposal FormCALENDAR INFORMATION:

Department: Geography Course Number: 758
 Title: Heritage Resource Management
 Description: Survey of historical and prehistorical resource management with emphasis upon Canadian resources
 Credit Hours: 4 Vector: _____ Prerequisite(s) if any: _____

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: 14 When will the course first be offered: _____
 How often will the course be offered: as demanded

JUSTIFICATION: Federal and provincial legislation, mostly within the past decade requires that cultural resources be included in environmental impact studies and that important heritage resources be studied and/or preserved prior to development. Few resource managers are aware of this and fewer understand the nature of heritage resources. This course will inform resource management students of the nature of Canada's historical resources and Canadian heritage legislation from both a national and international perspective.

RESOURCES:

Which Faculty member will normally teach the course: Dr. E. Gibson, Dr. A. Roberts,
 What are the budgetary implications of mounting the course: Visiting faculty
Guest speakers (3)
New Journals (3)

Are there sufficient Library resources (append details): See attached

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] R. Kaye Date: Aug 27/85
 Faculty Graduate Studies Committee: Michael Roberts Date: 85-10-23
 Faculty: [Signature] Date: 85-10-24
 Senate Graduate Studies Committee: [Signature] Date: 12 Dec/85
 Senate: _____ Date: _____

a) Course outline

Course covers Canadian and international heritage resources, legislation and field practice. A brief introduction to Canadian historical and prehistorical resources will provide the background for a discussion of the legal, economic and applied aspects of heritage resource management including preservation, restoration salvage and interpretation.

Texts: Kain; Planning for Conservation, Nansell, London, 1981.
Gold; Valued Environments, George Allen and Unwin, London, 1982.

Lecture Topics

1. Philosophy and history of cultural preservation.
Comparison of natural and cultural resources.
2. Canadian heritage resources I: the prehistoric period.
3. Canadian heritage resources II: the historic period.
4. Legislative and financial frameworks for heritage resource management.
5. Heritage inventory and evaluation I: paleo environmental perception and prehistoric resources.
6. Heritage inventory and evaluation II: environmental perception, scenery evaluation, historic resources.
7. Contract research.
8. Preservation planning.
9. Restoration and reconstruction I: prehistorical resources.
10. Restoration and reconstruction II: historical resources.
11. Preservation planning: finances, parks and the private sector.
12. Heritage resource management interpretative programmes.
13. Research and resource management: two case studies.

c) Library resources: Generally satisfactory but require three new journals:

Icomos Bulletin
87 Industrial Archaeology
North American Archaeologist

New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: GEOGRAPHY Course Number: 760

Title: Morphogenesis and the Built Environment

Description: This course examines the evolution of built environments in urban contexts. It relates the impetus for morphological change to broad societal processes. Problems of evidence and method are discussed.

Credit Hours: 4 Vector: 4 Prerequisite(s) if any: _____

Admission to graduate program. Course equivalent to Geog. 361-3 (SFU), & 362-3 or one of the 340 series

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: _____ When will the course first be offered: _____

How often will the course be offered: as demanded

JUSTIFICATION:

This course would provide the focus necessary to set out themes in built environment development, in which themes students consistently choose to write theses.

RESOURCES:

Which Faculty member will normally teach the course: L.J. Evenden

What are the budgetary implications of mounting the course: None

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: R. Kaufe Date: Aug 27/85

Faculty Graduate Studies Committee: Michael Roberts Date: 85-10-23

Faculty: Rebman Date: 85-10-24

Senate Graduate Studies Committee: _____ Date: _____

Senate: _____ Date: _____

Course Outline

Morphogenesis And The Built Environment

- Description: This course examines the evolution of built environments in urban contexts. It relates the impetus for morphological change to broad societal processes. Problems of evidence and method are discussed.
- Background: The study of urban morphology from a geographical, as distinct from an architectural point of view, focuses on the broad patterns of urban spatial development. This has been a traditional point of enquiry in European geography, and is now receiving increased attention in North America. The intention in this course is to review the background of approaches followed in the literature and to link these to current research, including that by scholars working in the Vancouver area which provides an accessible 'laboratory' for demonstration.
- Texts: These texts represent the principal 'state of the art' statements.
- Whitehand, J.W.R., The Urban Landscape: Historical Development and Management, Institute of British Geographers, 1982.
- Vance, J.E., This Scene of Man: The role and structure of the city in the geography of western civilization. New York, Harper & Row, 1977.
- Rapoport, A., The Meaning of the Built Environment, Beverley Hills and London, Sage Publications, 1982.

New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: GEOGRAPHY Course Number: 761

Title: Chronogeography

Description: This course examines two approaches to the problem of space-time in human geography. In one the emphasis is on activity systems in time and and space, in the conduct of "practical life", while in the other the emphasis is placed on geographical expressions of the life cycle.

Credit Hours: 4 Vector: 4 Prerequisite(s) if any: _____

Admission to graduate program.

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: _____ When will the course first be offered: _____

How often will the course be offered: as demanded

JUSTIFICATION:

This is a new sub-field which now has a substantial literature, and needs expression in our curriculum. Both Faculty listed have research on-going and related to this, as have several graduate students.

RESOURCES:

Which Faculty member will normally teach the course: L.J. Evenden

What are the budgetary implications of mounting the course: _____

Are there sufficient Library resources (append details): Yes - but the Lund Series should be reinstated (it was cancelled by the Library) as it is one of the principal journals

- Appended: a) Outline of the Course in this area of concern.
- b) An indication of the competence of the Faculty member to give the course.
- c) Library resources

Approved: Departmental Graduate Studies Committee: R. Hufte Date: Aug 27/85

Faculty Graduate Studies Committee: Michael Robes Date: 85-10-23

Faculty: Rebman Date: 85-10-24

Senate Graduate Studies Committee: _____ Date: _____

Senate: _____ Date: _____

Course Outline

Chronogeography

- Description: This course examines two approaches to the problem of time-space in human geography. One emphasizes activity systems in the conduct of 'practical life' while the other emphasizes geographical expressions of the life cycle.
- Background: Such traditional problems as the journey-to-work and the spatial diffusion of innovations have given rise to an interest in the study of the dynamics of spatial settlement. This in itself is not new but there has been dissatisfaction with the conceptualizations of the processes involved. This course is intended to discuss the approach of time-geography, an approach which is gathering momentum in the field. It is sub-divided here into two parts. Activities which are of short duration, but which recur on a persistent and frequent basis, are the subject of the first part. In the second, changing environments in the urban setting, as they express the forces and determinants of the life cycles, are the principal focus. This course will permit graduate students to take part in the new experiments to describe changing environments in terms of what is coming to be called 'time geography' or chronogeography.
- Texts: Reliance will be placed upon the series of studies published at the University of Lund, especially those by Carlstein and Hagerstrand. In addition, the work by Parkes and Thrift represents the most comprehensive review of the material.
- Carlstein, T., Time Resources, Society and Ecology: On the capacity for human interaction in space and time, 2 vols. London: George Allen and Unwin, 1982.
- Parkes, D., and N. Thrift, Times, Spaces, and Places: A chronogeographic perspective. New York: John Wiley, 1980.

New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: Geography Course Number: 770

Title: Latin America

Description: Consideration of physical, biotic, cultural and social aspects of selected areas. (Economic and urban problems will not be treated!) Reading knowledge of Spanish or Portuguese may be demanded and competence in other languages will be an advantage. Oral and written reports will be required.
Credit Hours: 4 Vector: _____ Prerequisite(s) if any: _____

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: ? When will the course first be offered: _____

How often will the course be offered: as demanded

JUSTIFICATION:

RESOURCES:

Which Faculty member will normally teach the course: P.L. Wagner

What are the budgetary implications of mounting the course: None

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: R. Haufe Date: Aug 27/85

Faculty Graduate Studies Committee: Michael Chobers Date: 85-10-23

Faculty: R. Brown Date: 85-10-24

Senate Graduate Studies Committee: _____ Date: _____

Senate: _____ Date: _____

Course Outline

Latin America

Topics for background reading and seminar discussion:

1. Tectonic and geomorphic divisions.
2. Climatic and biogeographic zones.
3. Aboriginal population and cultures and culture history.
4. The high civilization.
5. European conquest and settlement.
6. Colonial development and stagnation.
7. Dependent economies.
8. Urbanization and population growth.
9. Cultural and political expressions.

Reading knowledge of Spanish, Portuguese and/or French or German highly desirable.

Students will prepare bibliographic material according to topics assigned.

SIMON FRASER UNIVERSITY
New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: Geography Course Number: 780
Title: Environmental Cognition
Description: Examination of current issues in the study of human understand-
ing of and relationship with the (mostly built) environments.
Credit Hours: 4 Vector: _____ Prerequisite(s) if any: --

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: 3 When will the course first be offered: after 87-1
How often will the course be offered: as demanded

JUSTIFICATION:

Ongoing demand among Geography and Environmental Education students, one
appropriate dimension of the graduate experience for the human geographer.

RESOURCES:

Which Faculty member will normally teach the course: R.B. Horsfall, W.G. Gill
What are the budgetary implications of mounting the course: None

Are there sufficient Library resources (append details): yes, s/t normal (ongoing) acquisitions in
this area.

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: R. Harper Date: Aug 27/85
Faculty Graduate Studies Committee: Michael Chober Date: 85-10-23
Faculty: Rebman Date: 85-10-24
Senate Graduate Studies Committee: B.D. Clayton Date: 12 Dec/85
Senate: _____ Date: _____

Environmental Cognition

Topics

1. Introduction: the many faces of environmental cognition.
2. Degrees of precision and degrees of utility: Kelly citation and Altman practice. (2 wks)
3. Other formal models of environmental cognition. (3 wks)
4. The architect and folk process: Alexander's Notes on the Synthesis of Form. (2 wks)
5. Building as a cottage industry: Turner's Housing by people.
6. The urban slum; one place, many views.
7. Functionally and aesthetically based cognition; views from in- and outside.

References

- Alexander, Christopher Notes on the Synthesis of Form Cambridge, Harvard University Press, 1964.
- Altman, Irwin, The Environment and Social Behavior Monterey, Calif., Brooks/Cole, 1975.
- Geoffman, Erving, The Presentation of Self in Everyday Life Garden City, N.Y., Doubleday Anchor, 1959.
- Proshansky, H.M., Ittelson, W.H. and L.G. Rivlin eds., Environmental Psychology New York: Holt, Rinehart and Winston, 1970.
- Rapoport, Amos, House Form and Culture Englewood Cliffs, N.J., Prentice-Hall, 1969.
- Saarinen, Thomas F., Environmental Planning: Perception and Behavior Boston, Houghton Mifflin, 1976.
- Turner, John F.C., Housing by People: Towards Autonomy in Building Environments London, Marion Boyars, 1976.

SIMON FRASER UNIVERSITY
New Graduate Course Proposal Form

CALENDAR INFORMATION:

Department: GEOGRAPHY Course Number: 781
Title: Tactual Mapping: Theory & Practice
Description: An exploration of design principles, production methods, and user training procedures appropriate to thematic and mobility maps for the visually handicapped.
Credit Hours: 4 Vector: _____ Prerequisite(s) if any: None

ENROLLMENT AND SCHEDULING:

Estimated Enrollment: 5 When will the course first be offered: 87-1 or later
How often will the course be offered: as demanded

JUSTIFICATION:

As this Department becomes known for its central and innovative work in tactual maps, we find students applying specifically to work in this area and others requesting such a course as a way to broaden their activities.

RESOURCES:

Which Faculty member will normally teach the course: R.B. Horsfall
What are the budgetary implications of mounting the course: minimal

Are there sufficient Library resources (append details): No; will use prof's materials & photocopy

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: R. Hayfe Date: Aug 27/85
Faculty Graduate Studies Committee: Michael Roberts Date: 85-10-23
Faculty: Rebman Date: 85-10-24
Senate Graduate Studies Committee: _____ Date: _____
Senate: _____ Date: _____

Tactual Mapping: Theory and Practice

Topics

1. Introduction: why tactual maps?
2. The many faces of 'visual impairment' - the lack of a 'standard' blind person.
3. Tactile perception: some theoretical considerations (2 wks.).
4. Tactual design considerations; congenitally and adventitiously blind views of space as they differ from sighted perception and from one another. (2 wks.).
5. Introduction to Grade II braille conventions; on efficient labelling and text.
6. Introduction to the several current production methodologies: formed plastic from photopolymer masters, from metal masters, from built-up masters (Nottingham kit), ink-bonded texturing, composite technology. (4 wks.).
7. Training for map use: the blind student as a special case.

F. EXISTING CALENDAR ENTRY STATEMENT OF DEGREE REQUIREMENTS (FACULTY OF ARTS)

supervision, demands no course credits as such, and involves completion of a thoroughly researched doctoral thesis. When the student has been accepted, the Department's Graduate Program Committee assigns a temporary faculty advisor to assist in relating the student's academic interests to the resources of the University. Within one month of the student's first registration in the program, the same Committee assigns a Senior Supervisor. Together the Senior Supervisor and the student will begin the course of studies designed to prepare the student in the chosen areas for the examinations detailed below, and for the definition of a thesis topic. Before the end of the second semester, the Department's Graduate Program Committee assigns a Supervisory Committee consisting of at least two of the Department's faculty members in addition to the Senior Supervisor. The student's progress is appraised at the end of each semester.

At least one of the student's four areas should include the study of a substantial number of works written before 1800. Any of the traditional specializations (such as Medieval Literature, the Renaissance, and the Novel) and less traditional studies, including various interdisciplinary combinations, are generally acceptable if within the University's current competence. If writings in French or a foreign language are a necessary part of any of the designated areas of study, the student must achieve competence in that language to the satisfaction of the Supervisory Committee. Otherwise, the program has no requirements for a second language.

The student will normally receive instruction individually but may voluntarily take regular courses and may sometimes be required by the Supervisory Committee, subject to the approval of the Department's Graduate Program Committee, to take one or more courses scheduled by the Department of English or by other departments. The student must take individual instruction from at least three faculty members in addition to the Senior Supervisor.

Interdisciplinary Studies

The Ph.D. program in English is designed not simply to tolerate, but also to foster studies in areas outside traditionally designated fields. Normally, such studies may be carried on within the Departments when availability of staff and resources permit. When this is not possible, or when the applicant specifically seeks an interdisciplinary degree that includes study in more than one department, such a course of study may be worked out through special arrangements with the Dean of Graduate Studies. (See *General Regulations*.)

Examinations

Before the end of the sixth semester the student must take four written examinations, at least one of these by the end of the third semester. The major and at least one minor area must be examined formally. One of the three minor field examinations must be written as an essay on a topic chosen in consultation with the examiners and the Senior Supervisor; a second minor field may be examined with an essay, by agreement of the examiners and the Supervisor. Works of literature and scholarship on which the examination is centered must be specified by the Senior Supervisor six months in advance of any examination, unless the student waives this requirement. Within two weeks from the date on which each formal or essay examination is passed, the student is examined orally in the area covered by the examination. In cases where the mark has been deferred until the oral examination, the latter will be chaired by the Graduate Program Chairman or his/her deputy. Should the student fail any part of either the written or the oral examination, the Graduate Program Committee may give permission for re-examination on that part no later than one semester after the failure.

Ph.D. Thesis

Before the end of the semester following that in which the oral examination has been passed, the student presents a prospectus for the thesis, defining the proposed investigation and demonstrating the relationship between it and existing scholarship. The presentation is attended by the Supervisory Committee, by a member of the Department's Graduate Program Committee, and, if practicable, by the External Examiner.

The completed thesis will be defended in oral examination. Judgment will be made by an Examining Committee.

For the composition of the Examining Committee and other details governing the program as a whole, see the *General Regulations* section 1.9.4 and *passim*

ENGLISH GRADUATE COURSES (ENGL)

ENGL 801-5	Studies in Old English
ENGL 802-5	Studies in Middle English
ENGL 803-5	Studies in Tudor Literature
ENGL 804-5	Studies in Shakespeare
ENGL 805-5	Studies in Seventeenth Century Literature
ENGL 806-5	Studies in Eighteenth Century Literature
ENGL 807-5	Studies in Nineteenth Century Literature
ENGL 808-5	Studies in Twentieth Century Literature
ENGL 809-5	Studies in Canadian Literature
ENGL 810-5	Studies in The Literature of the United States
ENGL 811-5	Studies in Language
ENGL 812-5	Bibliography
ENGL 813-5	Special Studies
ENGL 814-5	Studies in Literary Theory
ENGL 815-5	Studies in Rhetoric, Composition, and Literacy
ENGL 841-5	Directed Readings A
ENGL 842-5	Directed Readings B
ENGL 843-5	Directed Readings C
ENGL 898	M.A. Thesis
ENGL 899	Ph.D. Thesis

DEPARTMENT OF GEOGRAPHY

Location:	Room 7123 — Classroom Complex
Telephone:	291-3321
Chairman:	R. Hayter, B.A. (N'cle, U.K.), M.A. (Alta.), Ph.D. (Wash.)
Graduate Program Chairperson:	R. Hayter Room 7226 — Classroom Complex
Co-Chairperson:	I. Hutchinson Room 7126 — Classroom Complex
<i>Faculty and Areas of Research</i>	
For full listing of faculty, see page 66.	

W.G. Bailey	Climatology; Agricultural Meteorology; Hydrometeorology
R.C. Brown	Agricultural Geography; Resources Development
C.B. Crampton	Geology; Pedology; Ecology
J.C. Day	Resource and Environmental Management; Water Management
M.E. Eliot Hurst	Marxist and Socialist Approaches to Human Geography; Aesthetics; Culture and Ideology
L.J. Evenden	Urban Geography; Local Government
E.M. Gibson	Human Geography of Modern and Post-Modern Societies; Landscape Style; Canada
A.M. Gill	Resources Management; Tourism Planning
W.G. Gill	Urban and Social Geography
T.I. Gunton	Urban and Regional Planning; Resources Management
R. Hayter	Regional Development; Manufacturing
E.J. Hickin	Geomorphology
R.B. Horsfall	Social Geography; Environmental Psychology
I. Hutchinson	Biogeography
P.M. Koroscil	Historical Geography; Canada
A. MacPherson	Cultural Geography; Western Europe
J.T. Pierce	Economic and Rural Geography; Research Methodology
T.K. Poiker	Economic; Quantitative; Computer Cartography
G.A. Rheumer	Historical; British Columbia
A.C.B. Roberts	Cultural; Historical; Palaeoenvironments; Remote Sensing; Photogrammetry
M.C. Roberts	Fluvial Geomorphology; Field Methods
R.B. Sagar	Climatology; Glaciology
P.L. Wagner	Cultural Geography
J.W. Wilson	Urban and Regional Planning
S.T. Wong	Resources Management; Quantitative Methods

Areas of Research

The Department takes a special interest in the development of theoretical and conceptual frameworks in the systematic aspects of Geography; emphasis is placed on the application of these to contemporary and historical geographical problems in western North America, with particular reference to British Columbia and the utilization of its resources.

A number of areas of research may be pursued in co-operation with other departments. Suitably qualified candidates will be encouraged to undertake graduate studies in physical, biological and behavioral sciences, history, and economics, when these are related to their geographical interest.

M.A. PROGRAM

Admission

For admission requirements, refer to the *General Regulations* page 213.

Students should hold a Bachelor's degree in an Honors program with at least a good second class standing (3.0 GPA) in Geography or a related discipline; where the candidate's first degree is not in Geography, he/she should have at least 12 semester hours or the equivalent in upper division Geography courses.

Students with a General degree must have 30 semester hours or the equivalent in upper division Geography courses.

M.A. Committee

The M.A. candidate, on being admitted to the Department, will work under the guidance of a faculty adviser, pending the choice of a Supervisory Committee. The Supervisory Committee, normally composed of three faculty members, one of whom may be from outside the Department, will be chosen by the third semester.

Degree Requirements

All graduate students must show competence in methodology and in quantitative techniques, preferably by fulfilling the following requirements before admission:

a) Methodology

This requirement will be satisfied by a student having taken GEOG 406 (Geographical Methodology) or GEOG 301 (Geographic Ideas and Methodology), or the equivalent at another institution. Any student lacking this prerequisite will be expected to take GEOG 301, which will not form part of the course credits for the M.A. degree. Faculty members who normally teach this course will be responsible for assessing the student's familiarity with the subject matter.

b) Quantitative Techniques

This requirement will be satisfied by a student taking GEOG 407 (Quantitative Methods in Geography) or its equivalent at another institution. Any student lacking this prerequisite will be expected to take the GEOG 407 seminar, which will not form part of the course credits for the M.A. degree. Faculty members who normally teach this course will be responsible for assessing the criteria for satisfactory performance.

At the discretion of the Supervisory Committee students may be directed to acquire an adequate knowledge of a language which would be relevant to their studies.

The M.A. program consists of two alternative sets of degree requirements.

a) Extended Essay Program

Students will be expected to complete 30 credit hours of graduate course-work. Under normal circumstances, each candidate will be expected to take the following courses:

GEOG 800-3	Introduction to Graduate Studies
two of	
GEOG 802-3	Theories and Recent Developments in Physical Geography
803-3	Theories and Recent Developments in Economic Geography

805-3 Theories and Recent Developments in Cultural Geography

A student may be encouraged to take graduate courses outside the Geography Department as part of the remaining 21 hours of elective credit.

In addition, students will be expected to write two extended essays on the basis of their graduate work and will be required to give an oral defence of each; these extended essays shall be original, in that they should not already have been submitted for credit in any course.

b) Thesis Program

This program requires a thesis and at least 20 hours of graduate course-work which must include GEOG 800-3. Graduate course-work in departments outside of Geography may be encouraged.

Colloquium

Each M.A. candidate will be expected to present a paper to the Department at a colloquium. The paper should be a research proposal, prepared and presented to the satisfaction of the candidate's Supervisory Committee prior to the start of substantive research.

MASTER OF SCIENCE IN GEOGRAPHY

The Department offers a program leading to the M.Sc. degree in the Faculty of Science. For details, see the **Geography** entry in the **Faculty of Science** section of this Calendar.

PH.D. PROGRAM

For admission requirements, refer to the *General Regulations* page 213.

Degree Requirements

The Ph.D. candidate, on being admitted to the Department, will work under the guidance of a faculty adviser, pending the choice of a Supervisory Committee. The Supervisory Committee, normally composed of three faculty members, one of whom may be drawn from outside the Department, will be chosen by the third semester.

The Ph.D. candidate will be expected to show competence in methodology and in quantitative techniques to the level specified by the M.A. requirements.

At the discretion of the Supervisory Committee, students may be directed to acquire an adequate knowledge of a language which would be relevant to their studies.

The program of formal course-work and research is designed to suit the background and research objectives of each candidate and may differ widely from candidate to candidate.

Prior to undertaking qualifying examinations, candidates will be expected to present one seminar on a topic not directly related to the thesis research. The topic will be selected by the candidate in consultation with his/her Supervisory Committee, and must be of a standard acceptable to that Committee. The seminar will be presented before interested faculty and students (normally in the period between the first and third semesters before the qualifying examinations).

Qualifying Examinations

Written and oral qualifying examinations designed to establish the student's competence to proceed with doctoral thesis research will normally be undertaken at the end of the first year of residence and no later than the end of the fourth semester of residence. Students who fail the written or the oral examination may retake each, once, after a one semester lapse. Both parts of the Qualifying Examination must be successfully completed by the end of the sixth semester of residence.

The Qualifying Examination Committee will consist of at least four faculty members from the Department, (including the Senior Supervisor who will be the Committee Chairman), plus one faculty member to be from outside the Department.

a) Written

The candidate will select one of the following two options:

i) Field Problems

The Qualifying Examination Committee will select a field problem related to the candidate's research interests. The examina-

tion will be designed to establish the ability of a student to perform competently in a field situation. This option will normally be selected by students whose intended research will involve extensive field work.

The student will normally be given two weeks to prepare and present a written report to the Qualifying Examination Committee and his/her performance will be judged on the basis of the clarity of thought and presentation, appropriate reference to relevant literature, satisfactory collection and presentation of field data and depth of understanding displayed. Attention will be paid to the appropriateness of the methodology and the consistency of the conclusions.

ii) Written Examinations

There will be four examinations:

Part One:

One examination paper will be devoted to the candidate's field of specialization and will be designed to permit the student to explore extensively a chosen area of research.

Part Two:

The other three examinations will be based upon three topics chosen by the candidate in consultation with the Qualifying Examination Committee.

The students may select all four topics from within one of the recognized three sub-branches. Where applicable, one paper may be written in a field outside of Geography.

b) Oral

The oral will be held by the Qualifying Examination Committee at the successful conclusion of all written examinations. The student will be examined primarily in the areas of the topics covered by the written examinations, but questions may range over the entire discipline.

Thesis

The candidate shall prepare a thesis proposal which shall be circulated to faculty and resident graduate students and will present this proposal at a Departmental colloquium. In addition, and prior to completion of the thesis, the candidate shall be expected to present before interested faculty and students, a report on the progress of his/her research. The timing of this report shall be selected in consultation with the candidate's Supervisory Committee.

The completed thesis shall be judged by the candidate's Examining Committee at an oral defence. If the thesis defence is failed, the candidate is ineligible for further candidacy in the degree program.

For further information and regulations, refer to the *General Regulations* page 213.

GEOGRAPHY GRADUATE COURSES (GEOG)

GEOG 800-3 Introduction to Graduate Studies

A required course designed to acquaint new graduate students with the research strengths of the Department, research facilities in the University and its vicinity and with the methodologies of the main fields of geography. In addition, problems of both a philosophical and practical nature involved in the design and operationalization of geographic research will be examined.

GEOG 802-3 Theories and Recent Developments in Physical Geography

A review of current research trends with emphasis on departmental activities in the atmospheric sciences, glaciology, biogeography, soils geography, geomorphology, and hydrology.

GEOG 803-3 Theories and Recent Developments in Economic Geography

A seminar course which emphasizes the rationale and methods of alternative perspectives underpinning contemporary economic geographic research.

GEOG 805-3 Theories and Recent Developments in Cultural Geography

Students' reports and discussions of current journal articles on cultural geography, as well as critical investigation of the work of selected major scholars in the field.

Courses 807-3 to 882-5 are occasionally formally scheduled, but may be taken at any time with the agreement of the appropriate member of faculty.

GEOG 807-3	Quantitative Techniques
GEOG 808-5	Quantitative Techniques
GEOG 809-5	Theoretical and Quantitative Cartography
GEOG 811-3	Climatology
GEOG 812-5	Climatology
GEOG 813-3	Geomorphology
GEOG 814-5	Geomorphology
GEOG 815-3	Biogeography
GEOG 816-5	Biogeography
GEOG 821-3	Area Studies
GEOG 822-5	Area Studies
GEOG 823-3	Themes in the Geography of Canada
GEOG 824-5	Themes in the Geography of Canada
GEOG 831-3	Transportation
GEOG 832-5	Transportation
GEOG 833-3	Locational Problems
GEOG 834-5	Locational Problems
GEOG 841-3	Geography of Manufacturing
GEOG 842-5	Geography of Manufacturing
GEOG 843-3	Cultural Geography
GEOG 844-5	Cultural Geography
GEOG 851-3	Resources Management
GEOG 852-5	Resources Management
GEOG 853-3	Water Resources
GEOG 854-5	Water Resources
GEOG 861-3	Regional Development
GEOG 862-5	Regional Development
GEOG 871-3	Fringe Settlement
GEOG 872-5	Fringe Settlement
GEOG 881-3	Urban Development
GEOG 882-5	Urban Development
GEOG 891-2	Directed Readings
GEOG 892-3	Directed Readings
GEOG 893-5	Directed Readings
GEOG 897	M.Sc. Thesis
GEOG 898	M.A. Thesis
GEOG 899	Ph.D. Thesis

DEPARTMENT OF HISTORY

Location:	Room 6026 — Academic Quadrangle
Telephone:	291-3521
Chairman:	H.J.M. Johnston, B.A. (Tor.), M.A. (W. Ont.), Ph.D. (Lond.)

Faculty and Areas of Research

For a full list of faculty see page 66.

A.D. Aberbach	United States
R.E. Boyer	Latin America
W.L. Cleveland	Middle East
D.L. Cole	Canada
A.B. Cunningham	Middle East/Great Britain
C.R. Day	Social/France
R.K. Debo	Russia
Paul E. Dutton	Ancient and Medieval
Michael D. Fellman	United States
R. Fisher	Canada/British Columbia
C.L. Hamilton	Great Britain
J.F. Hutchinson	Social/Russia
E.R. Ingram Ellis	Diplomatic/British India
H.J.M. Johnston	Canada
D.S. Kirschner	United States

G.

GEOGRAPHY GRADUATE PROGRAM

The following list of courses are being retained by the Department with a change of credit hours only, and a change of number to accomodate sequencing.

FROM:

GEOG 811-5	Climatology
GEOG 831-3	Transportation
GEOG 843-3	Cultural Geography
GEOG 851-3	Resources Management
GEOG 854-3	Water Resources I
GEOG 861-3	Regional Development
GEOG 891-2	Directed Readings

TO:

GEOG 723-4	Climatology
GEOG 734-4	Resources Management
GEOG 738-4	Water Resources
GEOG 742-4	Regional Development
GEOG 747-4	Transportation
GEOG 752-4	Cultural Geography
GEOG 791-4	Directed Readings

Geography Graduate Programme

The following list of courses are being retained by the Department with a change of credit hours, a change of number to accommodate sequencing and a change in title to indicate more precisely the nature of the course.

FROM		TO	
GEOG 812-5	Climatology	724-4	Measurement and Modelling of Heat and Mass Transfer
GEOG 813-3	Geomorphology	726-4	Fluvial Geomorphology
GEOG 814-5	Geomorphology	727-4	Field and Analytical Techniques in Geomorphology
GEOG 815-3	Biogeography	720-4	Ecological Biogeography
GEOG 816-5	Biogeography	721-4	Biogeography of Wetlands
GEOG 821-3	Area Studies	770-4	Latin America
GEOG 841-3	Geography of Manufacturing	745-4	Multinational Corporations and Regional Development
GEOG 852-5	Resources Management	736-4	Resources and Environmental Issues in the Growth of Food Production
GEOG 881-3	Urban Development	760-4	Morphogenesis and the Built Environment

Please note course proposal forms have been provided for all retitled courses.

Current Courses No. & Credit Hrs	Title	Action Taken	New Course Proposals	Title	New Curriculum
Geog 800-3	Introduction to Graduate Studies	Renumbered as Geog 700 and Geog 701. Changed from credit to S/U grading and from 1 to 2 semesters. IP in first semester.			Geog 700-0 and Geog 701-0
Geog 802-3	Theories and Recent Developments in Physical Geography	Dropped			
Geog 803-3	Theories and Recent Developments in Economic Geography	Dropped			
Geog 805-3	Theories and Recent Developments in Cultural Geography	Dropped			
Geog 807-3	Quantitative Techniques	Split into two courses and renumbered as Geog 704-4 and Geog 706-4		Analytical Techniques for Human Geographers Quantitative Techniques in Physical Geography	Geog 704-4 Geog 706-4
			Geog 708-4	Ideas and Methodology in the History of Geography	Geog 708-4
			Geog 710-4	Geography and Ideology	Geog 710-4
Geog 808-5	Quantitative Techniques	Dropped			
Geog 809-5	Theoretical and Quantitative Cartography	Split into two courses and renumbered as Geog 714-4 and Geog 715-4		Computer Cartography Geographic Information Systems	Geog 714-4 Geog 715-4
Geog 811-3	Climatology	Renumbered as Geog 723-4			Geog 723-4
Geog 812-5	Climatology	Retitled and renumbered as Geog 724-4		Measurement and Modelling of Heat and Mass Transfer	Geog 724-4

Current Courses No. & Credit Hrs	Title	Action Taken	New Course Proposals	Title	New Curriculum
			Geog 712-4	Observation and Inference	Geog 712-4
			Geog 716-4	Aerial Reconnaissance for Remote Sensing	Geog 716-4
			Geog 717-4	Digital Processing of Remote Sensing Data	Geog 717-4
Geog 813-3	Geomorphology	Retitled and renumbered as Geog 726-4		Fluvial Geomorphology	Geog 726-4
Geog 814-5	Geomorphology	Retitled and renumbered as Geog 727-4		Field and Analytical Techniques in Geomorphology	Geog 727-4
Geog 815-3	Biogeography	Retitled and renumbered as Geog 720-4		Ecological Biogeography	Geog 720-4
Geog 816-5	Biogeography	Retitled and renumbered as Geog 721-4		Biogeography of Wetlands	Geog 721-4
			Geog 728-4	Quaternary Geology and Geomorphology	Geog 728-4
			Geog 730-4	Fossil Landforms	Geog 730-4
Geog 821-3	Area Studies	Retitled and renumbered as Geog 770-4		Latin America	Geog 770-4
Geog 822-5	Area Studies	Dropped			
Geog 823-3	Themes in the Geography of Canada	Dropped			
Geog 824-5	Themes in the Geography of Canada	Dropped			
Geog 831-3	Transportation	Renumbered as Geog 747-4			Geog 747-4
Geog 832-5	Transportation	Dropped			

Current Courses No. & Credit Hrs	Title	Action Taken	New Course Proposals	Title	New Curriculum
Geog 833-3	Locational Problems	Dropped			
Geog 834-5	Locational Problems	Dropped			
Geog 841-3	Geography of Manufacturing	Retitled and renumbered as Geog 745-4		Multinational Corporations and Regional Development	Geog 745-4
Geog 842-5	Geography of Manufacturing	Dropped			
Geog 843-3	Cultural Geography	Renumbered as Geog 752-4			Geog 752-4
Geog 844-5	Cultural Geography	Dropped			
Geog 851-3	Resources Management	Renumbered as 734-4			Geog 734-4
Geog 852-5	Resources Management	Retitled and renumbered as Geog 736-4		Resources and Environmental Issues in the Growth of Food Production	Geog 736-4
Geog 853-3	Water Resources I	Renumbered as Geog 738-4 (and the 'I' dropped)		Water Resources	Geog 738-4
			Geog 740-4	Geography & the Third World	Geog 740-4
			Geog 758-4	Heritage Resource Management	Geog 758-4
Geog 861-3	Regional Development	Renumbered as Geog 742-4			Geog 742-4
Geog 862-5	Regional Development	Dropped			
Geog 871-3	Fringe Settlement	Dropped			
Geog 872-5	Fringe Settlement	Dropped			
			Geog 749-4	Geography of Education	Geog 749-4
			Geog 754-4	Landscape Aesthetics	Geog 754-4
			Geog 756-4	Historical Geography	Geog 756-4

Current Courses No. & Credit Hrs	Title	Action Taken	New Course Proposals	Title	New Curriculum
Geog 881-3	Urban Development	Retitled and renumbered as Geog 760-4		Morphogenesis and the Built Environment.	Geog 760-4
Geog 882-5	Urban Development	Dropped			
			Geog 761-4	Chronogeography	Geog 761-4
			Geog 780-4	Environmental Cognition	Geog 780-4
			Geog 781-4	Tactical Mapping	Geog 781-4
Geog 891-2	Directed Readings	Renumbered as Geog 791-4			Geog 791-4
Geog 892-3	Directed Readings	Dropped			
Geog 893-5	Directed Readings	Dropped			
Geog 897	M.Sc. Thesis	Renumbered as Geog 797-4			Geog 797-4
Geog 898	M.A. Thesis	Renumbered as Geog 798-4			Geog 798-4
Geog 899	Ph.D. Thesis	Renumbered as Geog 799-4			Geog 799-4

NOTE: We have changed the credit hours of all courses to four (except for Geog 700/701 which have no credit assigned)

SIMON FRASER UNIVERSITY

MEMORANDUM

M.C. Roberts,
Associate Dean of Arts

Subject... GEOGRAPHY GRADUATE PROGRAMME:
PROPOSED REVISIONS

From... Sharon Thomas,
Head, Collections Management
Office

Date... October 21, 1985

I have examined the proposed revisions to the Geography Graduate Programme and discussed their impact on the Library with Roger Hayter, Chairman of the Geography Department.

OFFICE OF THE DEAN

While these changes appear to be extensive they do not, in fact, commit the Library to any significant new areas of collection development. The new courses, as described in the submitted outline constitute a re-emphasis of subject areas which are already collected by the Library. For example, Geog. 708-4, Ideas and Methodology in the History of Geography, has not previously existed as a separate course but the history of geography is already a component of our collection profile for geography and we have received new books on our approval plans for several years.

An examination of the titles cited in the course proposals and the existing collections profiles indicates that current monograph holdings are adequate and should be maintained more or less automatically under existing approval plans. Seven new journals were identified in the course proposals and described by Roger Hayter as desirable but not essential. Two of these are already in the Library and subscriptions to the rest could be added for an additional annual cost of approximately \$200.00.

It will not, I'm sure, surprise you to learn that the Library has no funds for additional journal subscriptions or increased allocations for geography monographs. However, I do not believe departments should be inhibited from revising their programmes by inflexible Library policies and I have suggested to Roger Hayter that a joint library-departmental assessment of existing collections profiles be undertaken to ensure that we are meeting the needs of the new curriculum as closely as possible with no net increase in expenditure.

With departmental agreement on this point I see no reason why we can't accommodate the proposed revisions within the confines of the present budget.

ST:IS

cc: Roger Hayter, Chairman - Dept. of Geography

Sharon Thomas