

SIMON FRASER UNIVERSITY

S.73-6

MEMORANDUM

To

SENATE

*NOTE - RED approved by
SCUS before Senate
Added after Senate
editorial.*

From SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Subject

FACULTY OF ARTS - DEPARTMENT OF
GEOGRAPHY CHANGES IN COURSES AND
REQUIREMENTS

Date DECEMBER 13, 1972

MOTION: "That Senate approve the changes proposed in courses and requirements for the Department of Geography, as set forth in S.73-6, including the following:

1. New Courses

Discontinue eff.
August 31, 1973

Geog. 111-3 - Physical Geography	Geog. 211-3
Geog. 112-3 - Introductory Geology	-
Geog. 121-3 - Economic Geography	Geog. 221-3
Geog. 141-3 - Social Geography	Geog. 241-3
Geog. 201-3 - Development of Geographic Ideas	-
Geog. 212-3 - Geography of Natural Hazards	-
Geog. 222-3 - Issues in Economic Geography	-
Geog. 242-3 - Social Space	-
Geog. 251-3 - Methods in Spatial Analysis	-
Geog. 262-3 - Canada	Geog. 162-3
Geog. 263-3 - Selected Regions	Geog. 161-3
Geog. 349-3 - Human Microgeography	-
Geog. 431-5 - The Landscape in Science, <i>Art</i> Music	
and Literature	-

Note: If the above courses are approved, it is understood that the normal two semester time lag requirement is being waived in order that the courses may first be offered in the Fall semester 73-3.

2. Lower Level Course Requirements.
3. Lower Level Course Work Sequence.
4. Individual Program."

SIMON FRASER UNIVERSITY

S.73-6

MEMORANDUM

To Members of Senate

From I. Mugridge
Chairman
Senate Committee on Undergraduate Studies

Subject Department of Geography - Changes
in Courses and Requirements

Date December 18, 1972

The Senate Committee on Undergraduate Studies considered the submissions from the Department of Geography at its meetings of 9th and 14th November, 1972. On the recommendation of the Faculty of Arts, the Committee has approved the changes proposed in courses and requirements for the Department of Geography, including new course proposals as set forth in SCUS 72-31c and SCUS 72-37, and recommends approval to Senate.

If these courses are approved, the Committee further recommends that Senate waive the normal two semester time-lag requirement in order that the following courses may first be offered in the Fall semester 1973:

Geography 111-3; 112-3; 121-3; 141-3; 201-3; 212-3;
222-2; 242-3; 251-3; 262-3; 263-3; 349-3; and
431-5.

It should be noted that a number of current courses will be discontinued if new courses are approved as replacements. These are as follows:

Geography 111-3 replaces 211-3; 121-3 replaces 221-3;
141-3 replaces 241-3; 262-3 replaces 162-3; and
263-3 replaces 161-3.

The Committee also undertook extensive discussion on a number of questions, which are set out in the memorandum from the Chairman of the Committee to the Chairman of the Department of Geography, dated 16th November, 1972, and included with this submission. The response of the Chairman of the Geography Department, dated November 27th, 1972 and number SCUS 72-37, is also included.

In this connection, the Committee undertook some discussion on the nature and placement of Geography 431-5: The Landscape in Science, Music and Literature. It recommended that the course be offered once and reviewed thereafter; and that, if a department of Fine and Performing Arts is established, consideration should be given to locating it within that department.

The bulk of the Committee's discussion centred on the questions of course overlap, noted in section 3 of my memorandum to the Chairman of the Geography Department. In this connection, it should be noted that the final motion to approve the Geography Department's course proposals was by no means unanimous and that several members of the Committee, including some who voted with the majority, expressed themselves as not satisfied that

the question of course overlap had been resolved. For this reason, the Committee's motion of approval read as follows:

"that, without prejudice to the Committee's right to consider course allocations and overlap in the future, the Geography program be approved as presented."

It was clearly pointed out to the Committee that its terms of reference included responsibility for examining new course proposals both with respect to their individual academic merit and in relation to the other offerings in the department concerned, and in relation to the offerings of other departments. It was agreed that this involved an examination of questions of course overlap. In this context, the Committee agreed that it would be desirable to examine the whole question of course overlap and duplication of courses across departments in the University and that it would undertake such an examination, beginning in the Spring semester 1973. In view of this intention, the Committee felt that it would be inappropriate to reject the submission of the Geography Department, the academic merit of which had not been questioned, in the absence of a clearer set of criteria for dealing with such questions.



I. Mugridge

:ams

SIMON FRASER UNIVERSITY

SC 45 72-37

MEMORANDUM

To I. Mugridge, Chairman
Senate Committee on Undergraduate
Studies

From M.E. Eliot Hurst
Chairman, Geography Department

Subject Geography course proposals for
1973-4 calendar

Date November 27, 1972.

In response to our discussion and your memorandum, in which certain questions were raised about the Department of Geography's revised offerings to begin in the Fall of 1973, I have the following comments to make:

Preamble

Perhaps I should begin with some brief remarks about the character of our discipline.

Geography is concerned with the character of places and seeks to understand how this character develops. Explanation of the character of the human landscape involves the awareness of all the factors that create landscapes. Geographers, therefore, study the physical landscape, involving such matters as climate, geological structure, the landforms created on the crust of the earth, and soils and vegetation; these contribute the bulk of the content to what is known as physical geography. But the personality of places reflects more than just the work of nature; equally important is how people over many millennia of occupancy of the earth's surface have perceived the potential of the landscape and how they have used it. We are therefore in geography as much interested in what people do as in the raw materials upon which they have worked. But the subject matter of our discipline is the landscape or the personality of place; this concern is central to all aspects of geography and to all courses that the department of geography teaches or proposes to teach.

I begin with those remarks in order to underline the essential landscape focus of geography, and to stress the partial interdisciplinary nature inherent to the discipline.

1. Relationship of proposed 100 and 200 level courses

The department no longer considers it necessary to offer a required prerequisite in the general content of geography. We shall continue to teach Geography 101, General Geography, and recommend it to prospective majors whose background in modern geography may be deficient. But the department has found in recent years a substantial improvement in the quality

of geography teaching in the high school system of this province; in 1965, when our present programme was devised, geography teaching in the high schools was rather poor. Today the situation is somewhat different, particularly given a revised social science curriculum which puts considerable emphasis on geography, and many of our incoming students are now well informed as to geography's general area of interest. It is therefore possible and reasonable to allow them to move directly into the introductory systematic courses, formerly numbered 211, 221 and 241. These courses are therefore to be offered in the first year and without prerequisite. There is no change in the content or purpose of these courses in any way and they shall continue to be the required courses for most of our subsequent offerings.

Of the new 200 level courses, 212-3, the geography of natural hazards, is an extension of 111-3, physical geography; 222-3, issues in economic geography, is an extension of 121-3, economic geography, and 242-3, social space, is an extension of 141-3, social geography. In all cases the emphasis will be on man's use of the landscape and the character of the landscape itself. Our intent was two-fold here:

(a) to cope with the fact that in most universities (where they are not on a trimester system) introductions to the three systematic areas cover a full academic year. Under our present programme we either try to crush one year's work into one trimester, or simply do not deal with a range of topics. We have found in practice that we have omitted a range of topics, which we are now proposing to introduce at the 200 level. In this sense, 212 is essentially physical geography II; 222, economic geography II, and 242, social geography II.

(b) to follow the pattern already apparent in the relationship of the 300 to the 400 level course. Hence 300 level courses are advanced introductions to more narrowly defined specialisms (e.g. economic geography is disaggregated into primary activities, manufacturing, transportation, and retailing at the 300 level) and the 400 level continues those topics in a broader issues sense. Our intent was therefore also to make the 100 level introductory to the three main streams of geography, and the 200 level continue those three streams in a generic issues sense. Hence the total pattern would be:

100 level - introduction to geographic subdisciplinary streams.

200 level - first issues in those subdisciplinary streams.

300 level - advanced introduction to more narrowly defined subdisciplinary areas.

400 level - advanced issues in those streams, and a synthetic recompilation of the main areas within the discipline.

Points (a) and (b) are, of course, compatible.

Now a case could be made to have the 100 level courses prerequisite for these 200 level courses, but the department believes that these courses can usefully be offered to students who have completed a year of work in the university even when this work does not include our lower level courses; we believe they can be of interest to students in other disciplines and they can be taught at an advanced level without requiring prerequisites.

In addition to the proposed 212, 222 and 242 courses, a number of other 200 level courses are proposed. Geography 201-3, development of geographical ideas, is intended mainly for prospective majors in geography and represents a response to an expressed need by faculty and students; the department does not, however, believe that this course should be required for all geography majors, certainly not at this time.

Geography 251-3, methods in spatial analysis, is a somewhat specialised course in what has been known as the "new geography"; although the course itself is introductory, there are certain background requirements in mathematics that students may not have when they arrive and we do not consider the 100 level location appropriate. A course of this kind would not belong with 111-3, 121-3, or 141-3 as essential introductions to the advanced study of the subject; this type of analysis is very popular in modern geography and although this department does not consider it as essential as some other schools of geography appear to, we believe students should be given an opportunity systematically to study it. The 200 level appears most appropriate.

Geography 262-3, Canada, and 263-3, Another Region, replace our regional offerings at the first year. The logic of this is that the department considers it desirable that regional courses be offered at a slightly higher level than the first year; hopefully majors in other disciplines will have more experience upon which to base their study of a selected area and our own majors will have received a useful introduction to the systematic aspects of geographical study and this will allow us to adopt a more sophisticated approach to the study of regions. The question also of service courses arises; it is hoped that "another region" will be of value to various area study programmes in the university, the department having been asked to mount courses on Africa, the Middle East, Latin America and other parts of the world at a level below the 400 level.

2. Rationale for location of Geography 431-5

The initiative for this course came from within the geography department. This is not surprising since the core of its approach will be attitudes to "landscape", which you may recall from my preamble is in fact the subject matter of geography. The particular attitudes to be studied are those displayed in art and in contemporary scientific attitudes. Of the 4 strands in the proposed course, geomorphology and art are covered by Professor Cunningham (Geography), music (by a faculty member from the Communications Department) and literature (by a faculty member in English). Were a faculty member appointed who is an expert both in the 18-19th C. Landscape School of England and its ramifications with other aspects of the contemporaneous society, his or her participation in the course would be welcome.

431-5 is clearly interdisciplinary in intent, but the focus of the course, landscape, is more central to geography than to the other two departments involved, though the Music of Landscape and the Literature of Landscape are significant enough. Had the other two departments insisted that the course be not located in Geography then arbitration between the Dean of Arts and the Dean of General Studies would have been called for, but this has not happened, and indeed the three departments have readily cooperated. If the Fine and Performing Arts Department has a contribution to make, when it comes into existence, that contribution would be welcome. In addition we would be quite willing to see this course listed jointly in the Departments of English, Communications Studies, and Geography, but its central organization remains with the Geography Department.

Interdisciplinary courses should become progressively more frequent in the University, but there seems little justification for siphoning off all such desirable innovations into one division and leaving the Faculties of Arts, Science, and Education with the remainder.

3. Course overlap

This is a difficult question to deal with, since one never knows logically where overlap begins and ends. One understands that most of the courses in this university are taught in the English language. Does this mean that they belong properly in the Department of English? Certain courses in English, for example, deal with criticism of literature; one wonders how they can do this without being aware of psychological elements or sociological ideas; one has heard of a Marxist criticism, for example, that is taught or explored in the Department of English. Should this course not properly belong in what we used to call the P.S.A. Department? In literature to appreciate a novel it is surely necessary to

understand the social milieu in which the novel first saw the light of day; does this mean that courses on literature do not belong in the Department of English, but rather in History or in Sociology? The question of overlap is quite beside the point. The important matter is the subject of the course; in English this is likely to be literature, in Geography it is place.

Geography 262-3, Canada, is a course in the Geography of Canada. One wonders which departments are already offering courses basically on the Geography of this country. These, if such there be, would be the departments with overlap courses. We are already teaching a course, 162-3, Canada and the United States, and 161-3, Europe, as well as a number of 400 level courses in regional geography. This seems strictly and patently geographical.

Geography 222-3, Issues in Economic Geography, and 242-3, Social Space, are clearly geographical in that they deal with places or landscapes and place is the focus. One knows of no other courses in the university that have this emphasis or this content. They both pursue areas of concern to the discipline of geography that date back to the nineteenth and early twentieth centuries associated with such distinguished geographers as Max Sorre, Paul Vidal de la Blache and many others.

Concerning 349-3, Human Microgeography, one is aware of no course in any other department that deals with this aspect of geography. To say that much of its content may be psychological does not prove overlap with courses in psychology. As a matter of course the outline was referred to Bruce Alexander of the Department of Psychology's Curriculum Committee. He assured us that (1) no overlap exists; (2) it would supplement their offerings in an area untouched by SFU's Psychology Department.

The Human Microgeography course proposes, among other things, to take into account psychological factors in man's perception and use of space and the resultant character of places. Place is the focus and landscape is the content. The same argument applies in the case of Geography 121-3 and Geography 141-3; these courses are already offered under different numbers and in over seven years there has been no suggestion that they belong in other departments.



Ms. G. Quantinet

SIMON FRASER UNIVERSITY

MEMORANDUM

Dr. M. Eliot Hurst

Chairman, Department of Geography

Subject: Geography Course Proposals

From: I. Mugridge

Chairman,

Senate Committee on Undergraduate Studies

Date: November 16, 1972

During discussions in the Senate Committee on Undergraduate Studies, the following questions concerning the course proposals from the Geography Department were raised. The Committee has directed me to seek clarification of these questions before it makes a final recommendation to Senate.

1. Concern was expressed about the relationship of the proposed 100 and 200 level courses to the overall degree program in Geography. The major elements in this concern were:

- a. the specific rationale for the renumbering of some courses from the 200 level to the 100 level.
- b. the relationship between the new 100 and 200 level courses.
- c. the effect of the new courses on degree requirements, particularly the question of preparation for upper levels work in view of the lack of clearly specified course requirements.

2. The Committee would like to receive a rationale for the location of Geography 431-5 in the department rather than in the Division of General Studies or within the proposed department of Fine and Performing Arts.

3. Concern was also expressed about the apparent overlap between some of the courses proposed and the offerings of other departments. In particular, this consideration applied to:

Geography	222-3: Issues in Economic Geography
"	242-3: Social Space
"	262-3: Canada
"	349-3: Human Microgeography

To a lesser extent, similar questions were raised about two of the introductory courses. Geography 121-3: Economic Geography, and Geography 141-3: Social Geography.

In this context, I should add that the Committee did not question the academic integrity of the courses the department is proposing. Questions were confined to apparent overlap with the work of other departments and the desirability of offering such courses within single departments rather than on a co-operative basis.

:ams

c.c. H.M. Evans, ✓
Secretary, SCUS

fr. M. Evans.
fr. M. Evans

GEOGRAPHY

The proposal involves dropping certain courses at the lower levels and introducing new ones, and also renumbering of three lower level courses (see F.72-11). Students in the major program will be required to complete 15 hours of prerequisites in their lower levels, while students in the honors program will be required to complete 18 hours. Also proposed is a new 'Individual Programme' which is intended to allow a greater degree of freedom and flexibility to able students who have a strong wish to work along a particular line or to develop unusual combinations of courses, and who also know their own minds. It differs from the standard programme only in that the "Divisions" requirements have been removed.

A Minor Program is also introduced (Ref. paper F.72-7).

FACULTY OF ARTS

NEW COURSE PROPOSAL

1. CALENDAR INFORMATION

Department: Geography Course Number: 111-3 Title: Physical Geog.
 Sub-title or Description: An introduction to landforms, climates, soils and vegetation; their origins, distributions, interrelationships and roles in the ecosystem. Laboratory work and field trips are included.

Credit Hours: 3 Vector Description: (2-0-1) 2-1-1

Pre-requisite(s): None

Students who have credit for Geog. 211-3, may not take this course for further credit.

2. ENROLMENT AND SCHEDULING

Estimated Enrolment: 90 per semester.

Semester Offered (e.g. yearly, every Spring; twice yearly, Fall and Spring):
 Every semester

When will course first be offered?

Fall semester, 1973

3. JUSTIFICATION

A. What is the detailed description of the course including differentiation from lower level courses, from similar courses in the same department, and from courses in other departments in the University?

This is the course currently numbered Geography 211-3.

B. What is the range of topics that may be dealt with in the course?

Some selectivity of topics will be necessary if the course is to avoid a 'catalogue' nature; a thematic approach, around the concept of 'water substance in nature' is envisioned. After an introductory appraisal of the approach to the natural world by Geographers, world climates through consideration of global energy regimes and general circulation patterns, landforms related to the concept of dynamic equilibrium, soils types and associated developmental processes; vegetation essentially from an elementary morphology and distributional pattern would be treated, not necessarily in the order given but at all times with the essential interconnectedness with humans stressed.

See attached course outline for Geography 211-3.

C. How does this course fit the goals of the department?

Part of present programme (211-3)

D. How does this course affect degree requirements?

Required for all Majors and Honours students (as replaced 211-3)

E. What are the calendar changes necessary to reflect the addition of this course?

(See revised programme)

F. What course, if any, is being dropped from the calendar if this course is approved?

211-3

G. What is the nature of student demand for this course?

Average 90 Fall, Spring, 40 Summer

H. Other reasons for introducing the course.

(See philosophy of revised programme)

4. BUDGETARY AND SPACE FACTORS

A. Which faculty will be available to teach this course?

E. J. Mickin, M. C. Kallman, R. B. Sagar, F.F. Cunningham,
AND (new appointment?)

B. What are the special space and/or equipment requirements for this course?

None in addition to those for Geography 211-3.

C. Any other budgetary implications of mounting this course:

None

Approval:

Curriculum Committee:

Dean of Faculty:

Senate:

Oct. 9/72
Oct. 26/72

COURSE OUTLINE

Physical Geography

Introduction:

The course will deal with major topics in the areas of geomorphology, biogeography and climatology. Each topic merits, and will be given, an introductory systematic treatment; the emphasis will be on the interrelated nature of the physical environment with its often profound significance to human life, and will involve regional and local examples.

Course organization:

A two-hour block, in room , to be used for a lecture (normally, one hour), film, slide and so on displays; a two-hour tutorial which will include presentation and group discussion of assigned topics, laboratory work and brief outdoor field excursions. In addition, there will be a full-day field trip, tentatively scheduled for the 4th and/or 5th Sundays of the semester.

Grades:

Based on an objective-type mid-semester examination (30%), a final examination or prepared term-paper (40%) and tutorial work (30%).

Required texts: At least 2 of the 3 paperback texts given below.

Bloom, Arthur L., 1969, The Surface of the Earth, Prentice-Hall (Foundations of Earth Science Series).

Bridges, E. M., 1970, World Soils, Cambridge Univ. Press.

de Laufenbels, David J., 1970, A Geography of Plants and Animals, Wm. C. Brown (Foundation of Geography Series).

Gates, David M., 1972, Climate, Harper & Row (Man and his Environment Series).

Additional information: on the lecture schedule, the 'major topics,' and film titles, library reserve books, a list of other useful hard- and soft-cover texts and a brief note on lab. work etc. during tutorials follows.

Lecture Topic Schedule: with suggested textbook sections, some appropriate reserve books for selective reading, and films ordered for screening.

Appropriate dates given. Lecture

Week 1 Course Details: Nature of Physical Geography: an earth science or study of geosystems and life? Introduction to the Geosphere and some processes. (T) Intro. to each of Bloom, de Laufenbels, Gates
See also Strahler - Intro.
Film Continental Drift: Volcanoes in Action

Week 2 Air, energy and budgets (atmosphere, solar radiation and some balanced views)
Gates Chapter 2 (25-42). See also p. 116-126; 140-146.
See also Flohn Chapter 1, Strahler Chapter 3, Trewartha Chapter 1
Film Solar Radiation I and II

Week 3 Water and wind (the hydrologic cycle and patterns of atms. circ.)
Gates p. 47-51 (112-119, 80-82, 144-145) index refs. on Wind, High Pressure systems, etc.
See also 'Canada, Dept. of Transport', Flohn Chapters 2, 3; Strahler Chapters 4, 5
Film Earth & Sky: Stability & Weather

Week 4 Wear, creep & crash--continuing processes of the earth's surface (weathering & mass-wastage)
Bloom Chapters 2 & 3
See also Strahler, Chapters 17, 18; Dury, Thornbury
Film Rocks originating underground; at surface

Week 5 Build or destroy; more on erosion & deposition at the surface by fluvial and aeolian process
Bloom Chapter 4
See also, selective from Strahler Chapters 19, 20; Davis, Dury, Nelson et al (a), Miller
Film River flow; Time changes the Land

Week 6 Ice on the land; effects and distribution, glacial landforms, past & present
Bloom 128-145 (Also 8, 15, 82, 86)
See also Strahler Chapter 29, Thornbury selective Chapters 14-16;
Flint selective espec. Chapters 1-6
Film Glaciation; Evidence for Ice Ages

Week 7 Test

Week 8 And so to the next Ice-age; more on earth-atmosphere interaction
Refs. as for Week 6, focus on 'causal factors' eg:- (R) Flint Chapter 27
Film Rise & Fall Great Lakes; Face of High Arctic

Week 9 The living skin of the Earth: aspects of global soils
Bloom p. 30-39
See also (select from) Bridges, Bunting, Byro, Holey, Nelson et al. (c).
Film or integrated slide sequence.

Week 10 Flora where possible: intro. to terrestrial veg. patterns
(T) de Laufenbels (all relevant!) Chapter 6 & selective.
See also Riley & Young: Strahler Chapters 14, 15; Nelson et al (b)
Chapters 1, 5

Film Life in a Pond: Spruce Bog

Week 11 I. Atmosphere, soil & vegetation get together: specific associations
de Laufenbels Chapter 5

See also Nelson et al (c) Chapters 3, 6: Money

Film Climates of N. America; Ecology: Deciduous Forest

Week 12 II. Man in control? More on specific associations & homo sapiens
Gates 147-159, 160-163

See also Nelson et al (b) Chapter 3 & others eg. Chapter 25

Film Canada Landform Regions. Face of the Earth.

Week 13 Synthesis: Landscape mosaics, regions and the global scene
Film Unchained Goddess.

Reserve Books:

ARMSTRONG, J.

" "

BARKY & CHORLEY

BATTAN, L.

" "

BUNTING, B.J.

Canada, Dept. of
Transport

DAVIS, W.

DURY, G.

EYRE, S.R.

FAY, G.

FLINT, R.P.

FLOIN, H.

HARE, P.K.

MILLER, A.

MONEY, D.C.

NELSON, CHAMBERS &
CHAMBERS (eds.)

Surficial Geology of the Sumas Map-Area

Surficial Geology of the New Westminster Area

Atmosphere, Weather and Climate

The Nature of Violent Storms

The Unclean Sky

Geography of Soils

Weather Ways

Geographical Essays

The Face of the Earth

Vegetation and Soils

Physical Geography

Glacial and Pleistocene Geology

Climate & Weather

The Restless Atmosphere

The Skin of the Earth

Climate, Soils, and Vegetation

Readings on Process and Method in Canadian Geography

a) Geomorphology

b) Vegetation, Soils & Wildlife

c) Weather & Climate

Principles of Geomorphology

An Introduction to Climate. 2nd Edition

Man's Physical World. New Edition

Human Geography

World Soils: Introduction to Physical Geography

THORNBURY, W.D.

TREWARTH, G.

VAN RIPER

RILEY & YOUNG

STRAHLER, A.N.

Some relevant books available in bookstore and/or library (see also reserve list).

- Bryson & Kutzbach Air Pollution, A.A.G. Commission on College Geography, Res. paper no. 2.
- Dyson, J.L. The World of Ice, Knopf, 1962.
- Easterbrook, D.J. Principles of Geomorphology, McGraw-Hill, 1969
- Moore, W.G. Dictionary of Geography. (G 103 M65)
- Patton, C.P.
Alexander, C.S.,
Kramer, F.L. Physical Geography, Wadsworth, 1970)
- Sharp, R.P. Glaciers, Condon Lectures: Oregon University, 1965.

Some other books (paperbacks) of value to a physical geographer

- Bascom Waves and Beaches, Doubleday Anchor, Science Study Series
- Battam Cloud Physics and Cloud Seeding, Doubleday Anchor, Science Study Series
- " Radar Observes the Weather, Doubleday Anchor, Science Study Series
- Dury Perspectives on Geomorphic Processes, A.A.G. Commission on College Geography, Res. Paper No. 3
- Morisawa Streams, McGraw-Hill, 1968.
- Sloan How You Can Forecast the Weather?
- Sutton Understanding Weather, Pelican
- Thomas, W.L. (ed.) Man's Role in Changing the Face of the Earth, vols. I & II
- Tuttle Landforms and Landscapes, 1970, In W.C. Brown Co. Foundations of Earth Science Series

Laboratory Exercises

Geography 111-3
A.N.O.

In addition to reports by individuals or groups on topics selected by the Tutorial leader, the two-hour tutorial block will involve exercises in data handling and presentation, and in map interpretation from among:

1. Total radiation balance and air temperature regimes (local data)
2. Climate and weather patterns of Canada and the U.S.A
3. Stability, instability and associated atmospheric lapse rates
4. Catastrophic mass-wasting; volume and structural aspects (B.C. examples)
5. Quantitative aspects of river channel and valley form
6. Elementary statistical analysis of plant formations

and

Recognition and location of:

- a. Landforms associated with Alpine glaciation (L. Louise top. sheets)
- b. Landforms associated with Continental glaciation (Peterborough Ont. top. sheet)
- c. Landforms associated with fluvial erosion (Harrisburg, top. sheet and plastic model)
- d. Landforms associated with fluvial deposition (Several Mississippi R. sheets)
- e. Landforms associated with volcanic activity (Crater Lake, Oregon and Mt. Rainier plastic model)
- f. Landforms associated with coastal processes (Cape Cod, Ma. top. sheets)

Air photographs, singly and in matched stereo-pairs will be used in connection with exercises a. through f.

Outdoor field excursions on Burnaby Mt. are weather-dependent!
Such brief trips will include examination of weather station set-up, soil profiles through freshly dug pits and including temperature, moisture and pH measurements, vegetation communities and soil type associations and micro-landform development on various natural and man-made exposures of unconsolidated material.

FACULTY OF ARTS
NEW COURSE PROPOSAL

1. CALENDAR INFORMATION

Department: Geography Course Number: 112-3 Title: Introductory
Sub-title or Description: Geology

Basic geology for geographers--an introduction to mineralogy, petrology, weathering, structural geology, methods of dating geological information, and the geological column. Laboratory work and field trips are included.

Credit Hours: 3 Vector Description: 1-0-2 2-0-3

Pre-requisite(s): ~~None~~

2. ENROLMENT AND SCHEDULING

Estimated Enrolment: 30

Semester Offered (e.g. yearly, every Spring; twice yearly, Fall and Spring):

Once in every two semesters.

When will course first be offered?

Fall semester, 1973

3. JUSTIFICATION

- A. What is the detailed description of the course including differentiation from lower level courses, from similar courses in the same department, and from courses in other departments in the University?

Course provides background in geology for geography students interested in physical geog., esp. geomorphology and biogeography. There is no basic geology course offered at any level in Geography or in any other department.

- B. What is the range of topics that may be dealt with in the course?

Origin and character of common rock-forming minerals; origin and character of common sedimentary, igneous and metamorphic rocks; weathering of minerals and rocks; nature of crustal deformation and of resulting micro and regional structures; use of fossil flora and fauna and of radiometric methods in establishing geological chronologies; relation of geology to geomorphology, biogeography and geography.

2.

C. How does this course fit the goals of the department?
Strengthens physical geography offerings.

D. How does this course affect degree requirements?

Nil

E. What are the calendar changes necessary to reflect the addition of this course?

Part of new programme.

F. What course, if any, is being dropped from the calendar if this course is approved?

None

G. What is the nature of student demand for this course?

Demand from within department and also from Archeology and from students within Science, esp. Biology

H. Other reasons for introducing the course.

Introductory Geology is very necessary to the development of a sound programme in physical geography.

3.

4. BUDGETARY AND SPACE FACTORS

A. Which faculty will be available to teach this course?

E. J. Hickin
F. Cunningham

B. What are the special space and/or equipment requirements for this course?

Expansion of rock and mineral collection.

C. Any other budgetary implications of mounting this course:

None

Approval:

Curriculum Committee:

Dean of Faculty:

Senate:

OK 5/72
2/2/72

COURSE OUTLINE

Introductory Geology

Text: Read, H.H. and Watson, J., 1963, Introduction to Geology.

OR Longwell, Flint & Sanders 1968, Introduction to Physical Geology

Course Topics

1. Geophysics
 - (a) seismology
 - (b) structure of the earth
 - (c) isostasy
 - (d) applied geophysics
2. Geochemistry
3. Mineralogy
 - (a) atomic structure and crystallography
 - (b) physical properties of common rock forming minerals
4. The rock cycle
5. Volcanicity and the volcanic association
 - (a) magma and its products
 - (b) general character and origin of igneous rocks
 - (c) physical character of common intrusive and extrusive igneous rocks (acid & basic)
6. Surface processes
 - (a) weathering and common weathering products
 - (b) transportation and deposition of weathered material
7. Sedimentary rocks
 - (a) sedimentary differentiation, texture and structure of sedimentary rocks, lithification and diagenesis.
 - (b) origin and character of pelites, psammites, palites; carbonates, siliceous, ferruginous, aluminous, phosphatic, saline and carbonaceous (or hydrocarbon) rocks.
8. The metamorphic rocks
 - (a) the plutonic series
 - (b) metamorphism and its controls
 - (c) general character of metamorphic rocks - textures, structures, and mineral assemblages
 - (d) contact metamorphism
 - (e) diagenetic metamorphism
 - (f) regional metamorphism
9. Geological structures
 - (a) main structural types
 - (b) folds and faulting
 - (c) minor structures associated with folds
 - (d) thrusts, logs and slides
 - (e) faults
 - (f) joints

10. Dating the earth

- (a) sedimentary rocks in time: succession and its interpretation
- (b) fossils and their uses
- (c) radiometric dating
- (d) the stratigraphic column

11. A pattern of earth history

- (a) the stable areas
- (b) fracture zones of limited mobility
- (c) the mobile belts
- (d) orogenesis
- (e) continental drift and geology
- (f) the crustal drama

12. The relation of geology to geomorphology.

FACULTY OF ARTS
NEW COURSE PROPOSAL

1. CALENDAR INFORMATION

Department: Geography

Course Number: 121

Title: Economic Geography

Sub-title or Description: This course introduces the basic concepts of economic geography, involving consideration of the spatial organisation of economic systems. Factors for consideration include a study of rural, urban, regional, national, and world economic systems of transportation, agriculture, mining, energy, manufacturing, retailing and recreational activities.

Credit Hours: 3

Vector Description: 2-1-0

Pre-requisite(s): ~~None~~

Students who have credit for Geog. 221-3 may not take this course for further credit.

2. ENROLMENT AND SCHEDULING

Estimated Enrolment: 75-150

Semester Offered (e.g. yearly, every Spring, twice yearly, Fall and Spring):

Every semester

When will course first be offered?

Fall semester, 1973

3. JUSTIFICATION

A. What is the detailed description of the course including differentiation from lower level courses, from similar courses in the same department, and from courses in other departments in the University?

Renumbering of currently offered and approved course (Geography 221-3)

B. What is the range of topics that may be dealt with in the course?

See attached sample outline.

- C. How does this course fit the goals of the department?

Part of the revamping of the lower level offerings in Geography.

- D. How does this course affect degree requirements?

One of three required lower level courses.

- E. What are the calendar changes necessary to reflect the addition of this course?

Insertion of new entry and changed regulations.

- F. What course, if any, is being dropped from the calendar if this course is approved?

Deletion of Geography 221-3

- G. What is the nature of student demand for this course?

Has always been one of the most popular offerings in Geography, and in recent years has outstripped the other 200 level registrations.

- H. Other reasons for introducing the course.

3.

4. BUDGETARY AND SPACE FACTORS

A. Which faculty will be available to teach this course?

R.C. Brown
T.K. Paucker
G.P.F. Steed
M.E. Elliot Hurst

B. What are the special space and/or equipment requirements for this course?

None

C. Any other budgetary implications of mounting this course:

None

Approval:

Curriculum Committee:

Dean of Faculty:

Senate:

25.5/10
26/52

Sample Outline

Simon Fraser University
Department of Geography

Geography 121-3

Economic Geography

This course introduces some basic concepts and theories in economic geography. It evaluates problems of resource conflict and management and the nature of the spatial organization of rural and urban, regional and world economic systems, focussing frequently on issues of current planning concern. Included are studies of transportation, agriculture, mining and energy, manufacturing and retailing activities.

Required Text:

Morrill, R.L., The spatial organization of society, Wadsworth, 1970 (paperback).

Also Recommended:

Chisholm, M., Rural settlement and land use, Hutchinson, 1962.

Manners, G., The geography of energy, Hutchinson.

Lecture Topics:

1. An introduction to economic geography.
2. Resource evaluation.
3. Economic organisation of agriculture.
4. Location of Agricultural activities and their spatial organisation.
5. Energy and water resources.
6. Elements of the manufacturing system.
7. Location and spatial organisation of manufacturing plants.
8. Elements of the tertiary system.
9. Location and spatial organisation of the retailing and recreational sub-systems.
10. Transportation.
11. Urban and regional planning.
12. Economic geography in retrospect.

Readings on Reserve (excluding texts)Books:

Burton, Ian, Readings in resource management.

Cooloy, R.A., Alaska, a challenge in conservation.

Lewis, J.P., Quiet crisis in India.

Smith, R.H., Readings in economic geography.

Thoman, Conkling & Yeates, Geography of economic activity.

Xeroxes:

Aschmann, H., "The natural history of a mine," Economic Geography 46(2), pp. 172-189.

Berry, B.J.L., "Geography of market centers and retail distribution," Ch. 5.

Chang, "Agricultural potential of the humid tropics."

Christy, F. Jr., "New dimensions for transitional marine resources," American Economic Review LX, May 1970, pp. 109-113.

Clawson, M., "Factors and forces affecting the optimum future rural settlement pattern in the United States."

Cohen, S., "Evaluating store sites and determining store rents."

_____, "Form and function in the geography of retailing."

Gaitskell, "Resources development among African countries."

Ginsburg, N., "Natural resources and economic development."

Hart, J.F., "A map of the agricultural implosion," Proceedings of the A.A.G., Vol. 2, 1970, pp. 68-71.

Hunter, H., "Innovation, competition and locational changes in the pulp and paper industry, 1880-1950," Land Economics XXVI (4), Nov. 1955, pp. 314-327.

Janelle, D., "Control place development in a time space framework."

Micklin, "Soviet plans to reverse the flow of rivers."

Mullins, D.K., "Changes in location and structure in the forest industry of North Central," M.A. Thesis (Geography), U.B.C., 1967.

Pearce, D.W., "The Roskill Commission and the location of the third London Airport," Three Banks Review 87, September, 1970, pp. 22-34.

Peet, R., "The spatial expansion of commercial agriculture in the nineteenth century: a Von Thunen interpretation."

Schramm, "Low cost hydro-power and industrial location."

Secretariat of UNECA, "Industrialization, economic cooperation."

Sewell, D., "Recent innovations in resource development policy."

Spencer, J.E. & Horvath, R.J., "How does an agricultural region originate?" Annals of the A.A.G., Vol. 33, 1963, pp. 74-92.

Tatham, "Environmentalism and possibilisms."

Vance, J.E., "Emerging patterns of commercial structure in American cities."

FACULTY OF ARTS
NEW COURSE PROPOSAL

1. CALENDAR INFORMATION

Department: Geography Course Number: 141-3 Title: Social Geography
Sub-title or Description: Systematic consideration of the spatial and environmental bases of societies, in historical and cultural perspective.

Credit Hours: 3 Vector Description: 1 hr. lecture
2 hrs. tutorial

Pre-requisite(s):

Students who have credit for geog. 241-3 may not take this course for further credit.

2. ENROLMENT AND SCHEDULING

Estimated Enrolment: 200 - 300

Semester Offered (e.g. yearly, every Spring; twice yearly, Fall and Spring): Every Semester

When will course first be offered?

Fall semester, 1973 (supplanting Geography 241-3)

3. JUSTIFICATION

A. What is the detailed description of the course including differentiation from lower level courses, from similar courses in the same department, and from courses in other departments in the University? This is an introduction to social geography proper, and consequently also to such more specialized subjects as cultural, historical and urban geography as well as to the various regional divisions. The course resembles no other within or outside the department. It is designed to supply necessary fundamentals for a variety of further studies.

B. What is the range of topics that may be dealt with in the course? Spatial patterns and their relationships to factors such as livelihood organisation, group rank and status, historical evolution, beliefs and ideologies; environmental interactions as expressions of technologies, economics and physical controls; the spread and differentiation of ideas and techniques in geographical context; roles of image and intention in guiding spatial and environmental change.

C. How does this course fit the goals of the department?
The introduction to basic social geography is necessitated and presupposed by the courses that ensure upon it.

D. How does this course affect degree requirements?
As an essential basis for subsequent study, this course is required of major and honours students.

E. What are the calendar changes necessary to reflect the addition of this course?

Change of course number from 241-3 to 141-3 and slight rewriting of course description.

F. What course, if any, is being dropped from the calendar if this course is approved?

Geography 241-3.

G. What is the nature of student demand for this course?

It will be needed by all major and honours students in the department and will also satisfy certain portions of the Faculty of Arts and other "breadth" requirements.

H. Other reasons for introducing the course.

The presentation of basic concepts in social geography at an early stage of studies will permit more time to the student for advanced work.

4. BUDGETARY AND SPACE FACTORS

A. Which faculty will be available to teach this course?

E.M.W. Gibson, R.B. Horsfall, L.J. Evenden, A. MacPherson,

P.M. Koroscil, P.L. Wagner

B. What are the special space and/or equipment requirements for this course?

None

C. Any other budgetary implications of mounting this course:

None

Approval:

Curriculum Committee:

Dean of Faculty:

Senate:

Oct 5/72
Oct 26/72

Introduction

Social Geography 241-3 is a survey of the basic cultural, sociological, political, demographic and aesthetic concepts that contribute to an understanding of the spatial existence of man and of his involvement with the natural environment. Details on the content scheduling organisation and grading for the course are given in this outline.

Course Content

The readings required and the lectures in the course present the landscape history of five contrasting peoples. The questions geographers have asked and the approaches to answers they have taken will be reviewed and criticised. There is much overlap and duplication in the approaches to social geography but the following themes and theories will be the basis for discussion:

- | | |
|---|-------------------------------|
| 1. Cultural history | 9. Territoriality |
| 2. Cultural areas | 10. House form |
| 3. Cultural ecology | 11. Settlement form |
| 4. Social ecology | 12. Environmental perception |
| 5. Land tenure | 13. Population resource model |
| 6. Domestication of plants
and animals | 14. Landscape aesthetics |
| 7. Landscape symbolism | 15. Diffusion |
| 8. Boundary theory | |

Organisation

The course is organised into 12 weeks of work. The first week being an Introduction and the last a review. Two weeks will be spent on each of the five landscape histories, the first week being the presentation of the record of changes, the second week, a comment and criticism on the studies. During the second week of comment and criticism the lectures will be the platform for isolating the questions and approaches and for the Instructors criticism. The tutorials will be the basis for student criticism and practise in geographic inquiry.

Timetable

<u>Week</u>	<u>Topic</u>
1	Introduction
2	Studies in New Zealand landscapes
3	Criticism of studies
4	Studies in the Irish landscape
5	Criticism of studies
6	Studies in Soviet landscapes
7	Criticism of studies
8	Studies in the Chinese landscape
9	Criticism of studies
10	Studies in Canadian landscape
11	Criticism of studies
12	Review

Grading

The course grade will consist of two components, tutorial participation - 50% and final exam 50%. The tutorial will encourage students to demonstrate their ability to present oral and written geographic arguments. These arguments will be the basis for assigning tutorial grades. The final examination will be based on essay answers to questions that are chosen from a list of questions given to students during the 12th week of the course. The answers must be written in an exam room during a two hour period which will be scheduled by the Registrar's Office during the exam week.

Text books required:

- | | |
|--|--|
| CUMBERLAND, Kenneth B. &
WHITELAW, James S. | The World's Landscapes, NEW ZEALAND, edited by J.M. Houston, pub. Aldine Pub. Co. |
| PARKER, W.H. | The World's Landscapes, THE SOVIET UNION, edited by J.M. Houston, pub. Aldine Pub. Co. |
| ORME, A.R. | The World's Landscapes, IRELAND, edited by J. M. Houston, pub. Aldine Pub. Co. |
| TUAN, Yi-Fu | The World's Landscapes, CHINA, edited by J.M. Houston pub. Aldine Pub. Co. |

The price of each text is approximately \$2.50 - \$3.00 (Bookstore quote).

FACULTY OF ARTS

NEW COURSE PROPOSAL

1. CALENDAR INFORMATION

Department: Geography Course Number: 201-3 Title: Development of Geographical Ideas
Sub-title or Description:

An introductory survey of important geographical ideas in historical perspective.

Credit Hours: 3 Vector Description: 1 lecture
2 tutorial

Pre-requisite(s): 30 semester hours credit

~~(30 semester hours)~~

(1-2-0)

2. ENROLMENT AND SCHEDULING

Estimated Enrolment: 20 - 40

Semester Offered (e.g. yearly, every Spring; twice yearly, Fall and Spring):

Once in every two semesters.

When will course first be offered?

Fall semester, 1973

3. JUSTIFICATION

A. What is the detailed description of the course including differentiation from lower level courses, from similar courses in the same department, and from courses in other departments in the University? This course introduces students to some basic geographical ideas and approaches, theory and practice, in relation to the development of Western civilization. Consequently systematic subjects such as, physical, cultural and economic geography will be analysed in relation to Western intellectual and scientific thought from ancient to modern times. No other course in geography or any other department presently gives students this background. The course is designed to develop student interests in the origins of modern approaches to environmental and spatial problems, etc.

B. What is the range of topics that may be dealt with in the course? The origins, diffusion and differentiation of such approaches as mapping, location theory, man-nature relations, the "designed" earth, and earth unity may be dealt with in the course. The course will be divided into four parts including: The Ancient World, The Middle Ages, Early Modern Times, and Modern Times.

- C. How does this course fit the goals of the department?

The introductory survey of geographical ideas in a historical perspective is a background to the systematic courses in the major program and ensuant from the department's goal of encouraging prospective geographers to select outside subjects during the first four levels this course encourages students to undertake courses in History, English and Philosophy.

- D. How does this course affect degree requirements?

Part of review of department programme.

- E. What are the calendar changes necessary to reflect the addition of this course?

New course number added to the electives for the Lower Level.

- F. What course, if any, is being dropped from the calendar if this course is approved?

None.

- G. What is the nature of student demand for this course?

There is an expressed need and desire for a systematic presentation of this kind.

- H. Other reasons for introducing the course.

3.

4. BUDGETARY AND SPACE FACTORS

A. Which faculty will be available to teach this course?

E.M. Gibson,
M.E. Eliot Hurst
A. MacPherson
G.P.F. Steed
P.L. Wagner

B. What are the special space and/or equipment requirements for this course?

None

C. Any other budgetary implications of mounting this course:

None

Approval:

Curriculum Committee:

Oct 5/72

Dean of Faculty:

Oct 26/72

Senate:

FACULTY OF ARTS

NEW COURSE PROPOSAL

1. CALENDAR INFORMATION

Department: Geography

Course Number: 212-3

Title: Geog. of Natural Hazards

Sub-title or Description:

A detailed examination of the occurrence and reasons for several major natural hazards and catastrophes with appropriate attention to their importance to societies. Lab work and field trips will be included.

Credit Hours: 3

Vector Description: ~~(2-0-1)~~ (2-1-0)

Pre-requisite(s):

(Changed after Senate)

30 semester hours credit.

2. ENROLMENT AND SCHEDULING

Estimated Enrolment: 45

Semester Offered (e.g. yearly, every Spring; twice yearly, Fall and Spring):

One yearly Fall or Spring semester

When will course first be offered?

Spring 1974

3. JUSTIFICATION

A. What is the detailed description of the course including differentiation from lower level courses, from similar courses in the same department, and from courses in other departments in the University? The course will permit a close examination of several modes of earth change that have real effects on human life; additional to the analytical framework that will emphasise process and the geographical 'distributional' approach, the treatment will involve evaluation in the deterministic hypothesis concerning natural hazards and humans. Differentiated from Geog. 111-3 by the depth of analysis and by a comprehensive approach to specific natural hazards. No other University department has a similar course.

B. What is the range of topics that may be dealt with in the course?

Particular topics, each considered over a 2 or 3 lecture block, selected from eg. severe storms, drought, climatic change, air quality, earthquakes, massive mass-wasting, vulcanism, floods, accelerated erosion, natural fire, plant (and animal) extinctions.)

C. How does this course fit the goals of the department?
Expansion of Geography 111-3 (formerly 211-3) to focus on specific problems of use of the natural landscape.

D. How does this course affect degree requirements?
Optional lower level offering.

E. What are the calendar changes necessary to reflect the addition of this course?
(See revised programme).

F. What course, if any, is being dropped from the calendar if this course is approved?

----- Addition

G. What is the nature of student demand for this course?

Estimated 45 per year.

H. Other reasons for introducing the course.

See rationale for revised programme.

3.

4. BUDGETARY AND SPACE FACTORS

A. Which faculty will be available to teach this course?

E.J. Hickin
R.B. Sagar
M.C. Kellman
F.F. Cunningham
New appointment?

B. What are the special space and/or equipment requirements for this course?

None.

C. Any other budgetary implications of mounting this course:

None.

Approval:

Curriculum Committee:

Dean of Faculty:

Senate:

Oct. 5/72

Oct. 26/72

Course Outline

Geography of Natural Hazards

Pre-requisites: 30 hours of course work completed

Introduction: The course involves a detailed examination of the occurrence and reasons for several major natural hazards and catastrophes and pays appropriate attention to their influence in societies. Laboratory work and field trips are included.

Course organisation: A two-hour block (time, day of week) in room _____, to be used for lectures, film and slide displays; a two-hour tutorial variously used for the presentation and discussion of assigned topics and relevant exercises. There will be one full-day field trip to the Hope Slide area (scheduled for a 'maximum-convenience' Saturday or Sunday, following Week 6).

Grades: Based on a prepared term-paper, tutorial work and a final examination.

Texts: None required. Concepts basic to the several types of hazards are given in:

Bloom, A.C. 1969 The Surface of the Earth Prentice-Hall, Foundations of Earth Science Series

Battan, L. 1961 The Nature of Violent Storms Doubleday, Anchor Science Study Series S19

Billings, W.D. 1970 Plants, Man and the Geosystem 2nd edition, Wadsworth Publishing Co., Inc.

Lecture Topic Schedule (Not necessarily in given order etc.):

Week 1 Course organisation: Working definitions of 'natural hazard' and a review of their global significance.

Weeks 2 & 3 Atmospheric hazards I: The generative processes and the havoc commonly associated with severe tropical storms. Case studies (eg. #1 of the 1972 Atlantic season - Agnes) and a brief comparative study with other types of severe storm.

Week 4 Atmospheric hazards II: Anomalous circulation patterns and drought. Case studies (eg. southern Canadian Prairies).

Week 5 Geomorphic hazards I: Catastrophic surficial movement - landslides, causes and effects. Case studies (eg. Frank, Hope slides).

Weeks 6 & 7 Geomorphic hazards II: Internal stress and movement - contemporary views on the phenomena of Earthquakes and Vulcanism. Case studies (eg. San Andreas Fault, Alaskan 1964 'quake; Krakatoa, Mt. Etna, Surtsey).

Week 8 Biotic hazards I: The physical impact of naturally set fires. Case studies (eg. Prairie-Forest boundaries) will include voluntary and involuntary roles of man.

Week 9 Biotic hazards II: Environmental change and species extinction; the controversial role of specific physical events exclusive of human activities. Case study - comparison late Pleistocene extinction with recent examples.

Week 10 Biotic hazards III: Weeds and pests, invasions and epidemics. Case studies (eg. Dutch Elm, ...).

Week 11: Earth-atmosphere hazards I: Unbalanced input output: extreme precipitation (and/or snow melt) events and hydraulic incompetence - Floods and the temerity of man. Case study (eg. Fraser Basin).

Week 12: Earth-atmosphere hazards II: Accelerated wear at the surface: soil erosion through aeolian and fluvial agency, but commonly induced by man! Case studies (eg. U.S. 'Badlands', Thar Desert, Mediterranean areas).

Week 13: Interactions between nature and man exemplified by study of atmospheric quality, from steady-state freshness to a stale imbalance. (global turbidity etc. trends, climatic variation, ...)

Some further books for selective reading; number indicates appropriate week/topic.

Bruce, J.P. and R.H. Clarke 1966 Introduction to Hydrometeorology (11)
Pergamon: Commonwealth and International Library series.

Bunting, B.T. 1965 Geography of Soils (12) Aldine.

Dury, G.H. 1969 Perspectives on Geomorphic Processes (5, 12, 13) AAC Comm. College
Geography Res. Paper No. 3.

Elton, C.S. 1958 The Ecology of Invasions by Plants and Animals (10) Methuen.

Longwell, C.R., R.F. Flint and J. Sanders 1969 Physical Geology (5, 6, 7, 11, 12)
Wiley International

Morisawa, M. 1968 Streams (11) McGraw Hill: Earth & Planetary Sciences Series

Nelson, J.G. and M.J. Chambers (eds.) 1969 Geomorphology (5, 12)

1969 Water (11)

1969 Vegetation, Soils & Wildlife (8, 12, 13)

..... 1970 Weather and Climate (4, 13)
Peethuen: Process & Method in Canadian Geography Series

Strahler, A.N. 1971 Earth Sciences (1-12) Harper & Row, 2nd edition

Sumner 1969 Geophysics, Geological Structures, and Tectonics (6, 7) W.C. Brown
Co.: Foundations of Earth Science Series

Thomas, W.L. (ed.) 1956 Man's Role in Changing the Face of the Earth (1, 6, 7)

FACULTY OF ARTS

NEW COURSE PROPOSAL

1. CALENDAR INFORMATION

Department: Geography

Course Number: 222

Issues in
Title: Economic Geography

Sub-title or Description: This course is designed to draw and expand upon the basic principles and concepts of economic geography, by focussing on a variety of important issues that fundamentally shape contemporary economic landscapes. Topics for consideration will include population growth, poverty, urban sprawl, developing countries, and economic integration at world, national, and local scales.

Credit Hours: 3

Vector Description: 1-2-0 2-2-0

Pre-requisite(s): Geography 121-3 recommended.

(Changed after Senate)

~~30 semester hours and 60 credit hours at S.F.U.~~

2. ENROLMENT AND SCHEDULING

Estimated Enrolment: 75 - 150

Semester Offered (e.g. yearly, every Spring; twice yearly, Fall and Spring):

Once in every two semesters.

When will course first be offered?

Fall semester, 1973

3. JUSTIFICATION

- A. What is the detailed description of the course including differentiation from lower level courses, from similar courses in the same department, and from courses in other departments in the University?

See attached sample outline.

- B. What is the range of topics that may be dealt with in the course?

See attached sample outline.

2.

C. How does this course fit the goals of the department?

Part of the revamping of the lower level offerings in Geography.

D. How does this course affect degree requirements?

Will have no direct effect.

E. What are the calendar changes necessary to reflect the addition of this course?

Insertion of new entry.

F. What course, if any, is being dropped from the calendar if this course is approved?

None.

G. What is the nature of student demand for this course?

Should be substantial; interest considerable when offered as 221-3.

H. Other reasons for introducing the course.

4. BUDGETARY AND SPACE FACTORS

A. Which faculty will be available to teach this course?

M.E. Eliot Hurst

R.C. Brown

T.K. Peucker

G.P.F. Stead

B. What are the special space and/or equipment requirements for this course?

None

C. Any other budgetary implications of mounting this course:

None

Approval:

Curriculum Committee:

Oct 5/72

Dean of Faculty:

Oct 26/72

Senate:

Issues in Economic Geography

This course is designed to draw and expand upon the principles and concepts of economic geography and focusing on a variety of important issues ranging from the world to the local scale.

Required Text:

M. Albaum, Geography and contemporary issues, John Wiley, 1972.

Recommended Texts:

1. J.R. Bondeville, Problems of regional economic planning, Edinburgh University Press, 1966.

2. R. Morrill and J. Wohlenberg, The geography of poverty, McGraw Hill, 1971.

3. A.B. Mountjoy (ed.), Developing the underdeveloped countries, Macmillan, 1971.

4. W. Zelinsky, A prologue to population geography, Prentice Hall, 1966

Lecture Topics:

1. Introduction: the basic tasks and approach of the economic geographer

2. Issues at the world scale:

- (a) hunger and the population explosion.
- (b) free trade, common markets and economic integration.
- (c) energy conflicts.
- (d) environmental problems.
- (e) dependent, plantation, and branch plant economies.

3. Issues at the national scale:

- (a) regional poverty; isolation and depression.
- (b) regional instability and over-specialisation.
- (c) corporate control.
- (d) economic apartheid.

4. Issues at the local scale:

- (a) urban sprawl.
- (b) urban transportation systems.
- (c) urban renewal.
- (d) rural poverty.

Some supportive readings:

Berry, B.J.L., "An indusrive approach to the regionalisation of economic development," (ed.) Githsburg, Geography and Economic Development, 1960, pp. 78-107.

_____, "Recent studies concerning the role of transportation in the space economy," AAG, Vol. 49, No. 3, 1959.

Blaut, et al, "A study of cultural determinants of soil erosion and conservation in the Blue Mountains of Jamaica," Social and Economic Studies, Vol. 8, 1959, pp. 402-420.

Buchanan, K., The transformation of the Chinese earth - perspectives on modern China, G. Bell & Sons, Ltd., 1970.

Burton, I. & Kates, R.W. (eds.), "Perception and natural resources," Natural Resources Journal, Vol. 3, No. 3, 1964.

Doody, A.F. & Davidson, W.R., "The next revolution in retailing," Harvard Business Review, 1967.

Eliot Hurst, M.E., "Movement structure and household travel behaviour," Urban Studies, 1969.

_____, "Land use traffic generation relationships," AAG, March, 1970.

_____, A geography of economic behaviour, Duxbury Press, 1972.

Friedmann, J.R.P., "Locational aspects of economic development," Land economics, Vol. 32, 1956, pp. 213-227.

Fryer, D.W., "World income and types of economies: the pattern of world economic development," Economic Geography, Vol. 34, 1958, pp. 283-303.

Krumme, G., "Toward a geography of enterprise," Economic Geography, 1960, pp. 30-40.

Labasse, Jean, L'organisation de l'espace: éléments de géographie volontaire, Herman, 1955.

Levitt, K., Silent Commander, Macmillan, 1970.

Lowenthal, D., West Indian Societies, O.U.P., 1972.

_____, Daniel, R. & Eliot Hurst, M.E., "A systems analytic approach to economic geography," AAG College Commission, Pub. No. 8, 1968.

McIlce, R.B., A primer on economic geography, Random House, 1971.

Peet, R. (ed.), Geographical perspectives on American poverty, Antipode Monograph No. 1, 1972.

____ (ed.), Geographical perspectives on American poverty and social wellbeing, Toronto U.P., 1972.

Porter, P.W., "Environmental potentials and economic opportunities - a background for cultural adaptation," Am. Anthr., Vol. LXVII, No. 2, 1965, pp. 409-420.

Rose, H. (ed.), Ghetto formation in North American cities, Perspective in Geography, Vol. 2, 1972, Northern Illinois University Press.

Spencer, J.E., "The cultural factor in 'underdevelopment': the case of Malaya," (ed.) Ginsburg, Geography and Economic Development, No. 62, 1960, pp. 35-48.

Sprout, H. & M., "The ecological perspective on human affairs," Princeton U. Press, Chs. 6 & 7, 1965.

Taaffe, E.F., Morrill, R.L. & Gould, P.R., "Transport expression in underdeveloped countries: a comparative analysis," Geog. Review, pp. 503-529.

Ullman, I.E., "Regional development and the geography of concentration," Papers & Procs., Reg. Sci. Assoc., Vol. 4, 1958, pp. 179-195.

Wolpert, J., "The decision process in spatial context," AAG, Vol. 54, No. 4, December 1964.

FACULTY OF ARTS
NEW COURSE PROPOSAL

1. CALENDAR INFORMATION

Department: Geography Course Number: 242-3 Title: Social Space
Sub-title or Description:
Spatial differentiation of human organisation, activity and works

Credit Hours: 3 Vector Description: 1-2-0
Pre-requisite(s): 30 semester hours credit.
~~At least 30 semester hours of credit at S.F.U.~~

2. ENROLMENT AND SCHEDULING

Estimated Enrolment: 40
Semester Offered (e.g. yearly, every Spring; twice yearly, Fall and Spring):

Once every two semesters.

When will course first be offered?

Fall semester, 1973

3. JUSTIFICATION

A. What is the detailed description of the course including differentiation from lower level courses, from similar courses in the same department, and from courses in other departments in the University?

The facts and processes of distribution of such human attributes as language, religion, social organization, political form, etc.; and of crops, diets, tools, buildings and others of man's works.

B. What is the range of topics that may be dealt with in the course?

All human ways and works, viewed distributionally.

C. How does this course fit the goals of the department?

It conforms to the need for more factual information among students, and also to current research interests of several faculty. In particular, it will enhance the comparative background of students who go on into regional or urban planning, resource management, and kindred occupations.

D. How does this course affect degree requirements?

It provides a wider option in course choice.

E. What are the calendar changes necessary to reflect the addition of this course?

Insertion of course description; addition of course to appropriate lists of those satisfying certain requirements for degrees.

F. What course, if any, is being dropped from the calendar if this course is approved?

None

G. What is the nature of student demand for this course?

Probably substantial, given the important place occupied by these topics within the geographic literature.

H. Other reasons for introducing the course.

To reflect recent developments within geography, and to some extent in other disciplines (e.g., anthropology).

4. BUDGETARY AND SPACE FACTORS

A. Which faculty will be available to teach this course?

L. J. Evenden

E. M. Gibson

R. B. Horsfall

P. L. Wagner

(and probably some others)

B. What are the special space and/or equipment requirements for this course?

None

C. Any other budgetary implications of mounting this course:

Minor

Approval:

Curriculum Committee:

Dean of Faculty:

Senate:

Oct. 5/72

Oct. 26/72

- XI. The artistic traditions of mankind
Ref.: A. Malraux, Museum without walls.
- XII. Crops and diets
Ref.: E. Isaac, Geography of domestication (. . . Prentice-Hall, 1970).
- XIII. Political division and territoriality
Ref.: R. Kasperson and J. Mingli, The structure of political Geography,
(Chicago: Aldine, 1969).

FACULTY OF ARTS

NEW COURSE PROPOSAL

1. CALENDAR INFORMATION

Department: Geography

Course Number: 251-3 Title: Methods in Spatial Analysis

Sub-title or Description: A systematic introduction to the quantitative and theoretical approach to the study of geography

Credit Hours: 3

Vector Description: 2-1-2

Pre-requisite(s): ~~20 semester hours of credit at 3.F.U.~~
30 semester hours credit

2. ENROLMENT AND SCHEDULING

Estimated Enrolment: 45

Semester Offered (e.g. yearly, every Spring; twice yearly, Fall and Spring):

Once a year

When will course first be offered?

Fall semester, 1973

3. JUSTIFICATION

A. What is the detailed description of the course including differentiation from lower level courses, from similar courses in the same department, and from courses in other departments in the University?

A discussion of quantitative and theoretical geography as it has been developed in the past decade.

B. What is the range of topics that may be dealt with in the course?

The course examines specific quantitative and theoretical problems and methods like spatial relations, the gravity model, nodes and networks, spatial trends, etc.

- C. How does this course fit the goals of the department?

The department believes a systematic treatment of modern geographical methods at this level to be more satisfactory than ad hoc treatment throughout the program as needs arise.

- D. How does this course affect degree requirements?

The course does not change any degree requirements.

- E. What are the calendar changes necessary to reflect the addition of this course?

Add Geography 251-3, Methods in Spatial Analysis

A Systematic introduction to the quantitative and theoretical approach to the study of geography.

- F. What course, if any, is being dropped from the calendar if this course is approved?

No course being dropped.

- G. What is the nature of student demand for this course?

The student demand for this course is estimated at 45 or more per year. The course will be attractive to those who intend to find employment in areas of applied and physical geography.

- H. Other reasons for introducing the course.

4. BUDGETARY AND SPACE FACTORS

A. Which faculty will be available to teach this course?

R. C. Brown
R. B. Horsfall
E. J. Hickin
T. K. Peucker

B. What are the special space and/or equipment requirements for this course?

A calculator room with 1 calculator per 5 students.

C. Any other budgetary implications of mounting this course:

15 min. computer time per student.

Approval:

Curriculum Committee:

Dean of Faculty:

Senate:

Oct. 5/72

Oct. 26/72

Geography 251-3

Methods of Spatial Analysis

A systematic introduction to the quantitative and theoretical approach to the study of geography,

Subjects

Introduction: the normative approach and quantitative methods

The problem of measurement and scaling

Descriptive statistics in geography

The description of spatial relations

Sociological and geometric-geostatistical aspects of interaction

Geometric-geostatistical parameters in point-distributions

Spatial trends and regularities in a region

The quantitative treatment of spatial diffusion

Classifications

Complementarity, transferability and flow-networks

The gravity model

Some books:

GREGORY, S. Statistical Methods and the Geographer, 2nd ed. London 1968

ABLER, R., J. Adams, & P. Gould: Spatial Organisation, 1971

KING, L. J. Statistical Analysis in Geography, 1969.

FACULTY OF ARTS

NEW COURSE PROPOSAL

1. CALENDAR INFORMATION

Department: Geography Course Number: 262-3 Title: Canada

Sub-title or Description: The geographical character of Canada; the Canadian environment; regional differences in socio-economic growth.

Credit Hours: 3

Vector Description: 2-1-0

Pre-requisite(s):

30 semester hours credit
Students who have credit for geog. 162-3 may not take this course for further credit.

2. ENROLMENT AND SCHEDULING

Estimated Enrolment: 100 per offering occasion.

Semester Offered (e.g. yearly, every Spring; twice yearly, Fall and Spring):

Once in every two semesters.

When will course first be offered?

Fall semester, 1973

3. JUSTIFICATION

A. What is the detailed description of the course including differentiation from lower level courses, from similar courses in the same department, and from courses in other departments in the University?

To give greater emphasis to Canadian Geography at the lower level and to fit into the basic re-organization of the lower-level Geography programme.

B. What is the range of topics that may be dealt with in the course?
The systematic geography of Canada.
Socio-economic disparities.
Canadian urban regions.
The geography of the separatist movements.
Ethnic mosaic.
The opening of the Canadian North.

C. How does this course fit the goals of the department?

It fits in terms of:

1. Giving as great an emphasis to Canada as possible.
2. Giving an appreciation of a major segment of the earth's surface.

D. How does this course affect degree requirements?

Does not change the basic degree requirements.

E. What are the calendar changes necessary to reflect the addition of this course?

A new course number and description.

F. What course, if any, is being dropped from the calendar if this course is approved?

To take the place of Geography 162-3.

G. What is the nature of student demand for this course?

Substantial, based upon student requests for lower level course on Canada.

H. Other reasons for introducing the course.

Aids in better organizing the course offerings of the department.

3.

4. BUDGETARY AND SPACE FACTORS

A. Which faculty will be available to teach this course?

G.A. Rheumer
P.M. Koroscil

B. What are the special space and/or equipment requirements for this course?

None - requires same space and similar equipment now required for Geography 162-3.

C. Any other budgetary implications of mounting this course:

None.

Approval:

Curriculum Committee:

Dean of Faculty:

Senate:

Oct. 5/72

Oct 26/72

GEOGRAPHY 262-3

CANADA

- 2 weeks: The Systematic Geography of Canada**
- The Physical Landscape
 - Climate Soils Vegetation
 - Landforms, Hydrology
- 2 weeks: The Settlement Process in Canada**
- Indian Culture Landscape
 - The History of Settlement Sequent Occupance of
 Selected Regions, the Opening of the North
- 2 weeks: Settlement Patterns**
- The Ethnic Mosaic
 - Population Distribution
- 3 weeks: Resource Exploitation**
- Agricultural Regions
 - Socio-Economic Disparities
 - The Foreign "Take-over" - Forests and Mines
 - Water and Air Pollution
 - Atlantic and Pacific Fisheries
 - Big Dam Business
- 2 weeks: Canadian Urban Regions**
- Secondary Processing
 - Service Industries
 - Urban Blight in Canada
 - Rurban Fringe
- 1 week: Canada and World Affairs**

FACULTY OF ARTS

NEW COURSE PROPOSAL

1. CALENDAR INFORMATION

Department: Geography Course Number: 263-3 Title: Selected Regions
Sub-title or Description:
A study of the geographical character of a major world region.

Credit Hours: 3

Vector Description: 2-1-0

Pre-requisite(s): 30 semester hour credit

~~30 semester hours of credit.~~

this course may not be counted more than once toward the degree

2. ENROLMENT AND SCHEDULING

Estimated Enrolment: 100

Semester Offered (e.g. yearly, every Spring; twice yearly, Fall and Spring):
Once in every two semesters

When will course first be offered?

Fall 1973

3. JUSTIFICATION

A. What is the detailed description of the course including differentiation from lower level courses, from similar courses in the same department, and from courses in other departments in the University? An examination of the geographical character of a major world area; its resources and their use; the course will present an application of the methods of geography to the study of selected particular areas.

B. What is the range of topics that may be dealt with in the course? Geography of Europe or Africa or Middle East or Latin America or South and/or East Asia or other such areas according to need and opportunity.

- C. How does this course fit the goals of the department?
Part of a revision of the lower level programme, designed to give greater range of choice in regional courses and to offer service to area programmes outside the department.

- D. How does this course affect degree requirements?

No change

- E. What are the calendar changes necessary to reflect the addition of this course?

Part of programme review.
New entry required.

- F. What course, if any, is being dropped from the calendar if this course is approved?

Geography 161-3 Europe

- G. What is the nature of student demand for this course?

Substantial. Geography 161-3 one of our larger courses. Demand expected for cover of Africa, the Middle East, Latin America and South and East Asia at this level.

- H. Other reasons for introducing the course.

Represents potential good use of visiting and short-term appointments.

4. BUDGETARY AND SPACE FACTORS

A. Which faculty will be available to teach this course?

Europe - A. MacPherson, T.K. Peucker, R.B. Sagar, et al.

Africa - R.B. Sagar, A. MacPherson, et al.

Latin America - F.F. Cunningham, et al.

South and East Asia - M.E. Eliot Hurst, S.T. Wont, et al.

Middle East - visiting lecturer as opportunity arises.

U.S.A. - G.A. Rheumer, T. O'Riordan, et al.

B. What are the special space and/or equipment requirements for this course?

None

C. Any other budgetary implications of mounting this course:

None

Approval:

Curriculum Committee:

Oct 5/72

Dean of Faculty:

Oct 26/72

Senate:

COURSE OUTLINE

Geography of Europe

As divisive nationalism gradually, if erratically, loses ground, Western Europe promises to emerge as a major world force in the last quarter of the twentieth century. The European Economic Community is already by far the world's largest trading bloc; when the United Kingdom and other countries negotiating membership join, it will be the largest manufacturing and economic unit - although relatively poor in certain raw materials. With the U.S.S.R., Europe contains five of what have been identified as the ten major world powers of the present day and probably, the 'futurists' tell us, of the next hundred years.

This course examines the geographic character of Europe, its landscapes, diversity of life styles and economic achievement, and major problems. An attempt will be made to interpret these in terms of past and present physical and cultural environments and to provide a basis for an analysis of the geographic patterns of urbanization, industrialization, transportation, social conditions, etc. The course might also be seen as an example of the application of geographic ideas and concepts to the study of a specific and limited, if very populous and complex, part of the earth's surface.

Organization

Lectures: Tuesday and Thursday at 11:30 a.m., in Room 3150 AQ

Tutorials: One hour every two weeks, time and place to be arranged at registration.

Lectures and tutorials will commence on September 7th.

Readings

- 1) Course Text: S.F.U. Readings in the Geography of Europe 1972 Edition, available for \$1.50 from A. MacPherson
Recommended, but not prescribed, is J. Gottman, A Geography of Europe, particularly Part I and Chapters 4, 10, 14 and 19.
- 2) Regular use of a good atlas is essential. Recommended is Goode's World Atlas (available as paperback, \$4.50).
- 3) A supplementary list of works for reference will be distributed during the first week of classes.

Course Assessment

<u>Tutorial Work</u>	30%
Participation	10%
Projects and Presentations	20%
<u>Examinations</u>	
Midterm	20%
Final	50%

Note: The midterm examination will be held during lecture time and will be of the 'open book' type.

The final examination, which will also be of the 'open book' type, will consist of eight questions of which three shall be attempted; it will be based

Lecture Outline

The following is the planned programme of lectures:

<u>Date</u>	<u>Topic</u>	<u>Lecturer</u>
Sept. 7	Introduction - the "personality of Europe"	A.M.
" 9	European landscapes - slides	A.M.
" 14	Regions in geography - European examples and problems.	A.M.
" 16	"Natural" landscapes; challenges and opportunities	
" 21	(a) <u>Climates</u> : The Mediterranean	A.M.
" 23	(b) <u>Climates</u> : Atlantic and Continental	A.M.
" 28	(c) <u>Landforms</u> : Hills and Plains	A.M.
" 30	(d) <u>Landforms</u> : Mountains and Rivers	A.M.
	Cultural Landscape, Early Episodes in the Evolution of Europe.	T.K.P.
Oct. 5	The Emergence of Industrial Europe	T.K.P.
" 7	Agriculture and Intensification.	T.K.P.
" 12	The Growth of the Markets and their Hinterlands Political Implications	T.K.P.
" 14	The Transportation Pattern	T.K.P.
" 19	Transportation Competition	T.K.P.
" 21	The Great European Migrations after World War II	T.K.P.
" 26	Midterm Examination	
" 28	Current trends in urbanization and city development	T.K.P.
Nov. 2	Technologies, societies and landscapes (I)	A.M.
" 4	" " " (II)	A.M.
" 9	The urban idea; negative and positive attitudes; problems today.	A.M.
" 11	Remembrance Day Holiday	
" 16	Urbanization and the rural landscape	T.K.P.
" 18	Coping with change - planning	T.K.P.
" 23	Movements for union	T.K.P.
" 25	Prospects for Europe	T.K.P.
Dec. 2	Europeans contrasts; life style and economic disparities	A.M.
" 5	Conclusions; the lessons of Europe	A.M.

Tutorials

Tutorial topics will be assigned during the first week of term.

FACULTY OF ARTS

NEW COURSE PROPOSAL

1. CALENDAR INFORMATION

Department: GEOGRAPHY Course Number: 349-3 Title: Human Microgeography

Sub-title or Description:

An examination of human interaction with physical environments, focusing on the individual as the unit of analysis, with special emphasis upon the designed environment.

Credit Hours: 3 hours Vector Description: 2-1-0

Pre-requisite(s): Geography 241-3 -

2. ENROLMENT AND SCHEDULING

Estimated Enrolment: 60

Semester Offered (e.g. yearly, every Spring; twice yearly, Fall and Spring):

Once yearly (fall or spring)

When will course first be offered?

~~6 months after Senate authorization~~

Fall 73-3

3. JUSTIFICATION

- A. What is the detailed description of the course including differentiation from lower level courses, from similar courses in the same department, and from courses in other departments in the University?

The course will deal with the individual in interaction with his environment: his efforts toward its modification, as well as his responses to, and perception of various environmental features. Principal attention will be given to fixed-feature space; social groups and semi-fixed-features will only be considered as modifiers of the interaction between the individual and his (relatively stable) physical surroundings.

- B. What is the range of topics that may be dealt with in the course?

General organizing theories

Jurisdiction

Human needs, and design for privacy

Stimulus deficiency and overload

Human use of private space

Human use of public space

Recreational needs and recreational planning

Functional bases of environmental design

C. How does this course fit the goals of the department?

With the increasing emphasis upon environmental problems and human satisfaction with environment, a need for a course such as this has developed. Using examples of environmental design in Western Canada, the course fits readily into the departments statement of goals.

D. How does this course affect degree requirements?

No effect.

E. What are the calendar changes necessary to reflect the addition of this course?

Addition.

F. What course, if any, is being dropped from the calendar if this course is approved?

None.

G. What is the nature of student demand for this course?

Substantial verbal indication of interest.

H. Other reasons for introducing the course.

Incorporates specialty and interests of faculty member who was hired to expand departmental offerings in this area. Course will be of central importance for those students going into the planning professions.

3.

4. BUDGETARY AND SPACE FACTORS

A. Which faculty will be available to teach this course?

R.B. Horsfall

B. What are the special space and/or equipment requirements for this course?

None

C. Any other budgetary implications of mounting this course:

None

Approval:

Curriculum Committee:

Dean of Faculty:

Senate:

Oct. 19/72

Oct. 26/72

COURSE OUTLINE (PROVISIONAL)

Course Content:

The course will deal with the individual in interaction with his environment: his efforts toward its modification, as well as his responses to, and perception of various environmental features. Principal attention will be given to fixed-feature space; social groups and semi-fixed features will only be considered as modifiers of the interaction between the individual and his (relatively stable) physical surroundings.

Course Structure:

Two one-hour lectures and one one-hour tutorial per week. A field research project will be required of each student, on a subject approved by the instructor. Grade will be determined as follows:

mid-term exam	20%
final exam	30%
tutorial participation	20%
field project	30%

Recommended Readings:

- Alexander, C., "The Goodness of Fit and Its Source," in Notes on the Synthesis of Form, Cambridge, Mass., 1964, Harvard University Press.
- Alexander, C., "The City as a Mechanism for Sustaining Human Contact," in W.R. Ewald, Jr. (ed.) Environment for Man, Indiana University Press.
- Altman, I. & Hythorn, W.W., "The Ecology of Isolated Groups," Behavioural Science, 1967, 12, 169-182.
- Blaut, J.M., "Studies in Developmental Geography," Place Perception Research Reports, #1, Oct. 1969, Dept. of Geography, Clark University.
- Burnett, C.H., "A Linguistic Structure for Architectonic Communication," in G.J. Coates, (ed.) Response to Environment, Chapel Hill, 1969, Univ. of North Carolina Press.
- Calhoun, J.B., "Ecological Factors in the Development of Behavioral Anomalies," in J. Zubin, (ed.) Comparative Psychopathology, 1967.
- Chapin, F.S., "Some Housing Factors Related to Mental Hygiene," Journal of Social Issues, 1951, 8.
- Chain, I., "The Environment as a Determinant of Behavior," Journal of Social Psychology, 1954, 39, 115-127.

- Cogswell, A.R., "Housing, the Computer and the Architectural Process," Law and Contemporary Problems, 1962, 32, 274-285.
- DeJong, D., "Images of Urban Areas," Journal of the American Institute of Planners, 1962, 28, 266-76.
- DeLong, A.J., "Coding Behavior and Levels of Cultural Integration: Synchronic and Diachronic Adaptive Mechanisms in Human Organizations," EDRA Conference, Oct. 1970, Pittsburgh.
- Fried, M. & P. Gleicher, "Some Sources of Residential Satisfaction in the Urban Slum," Journal of the American Institute of Planners, 1961, 27, 305-315.
- Gans, H., The Urban Villagers, Glencoe, 1962, Free Press.
- Gould, P.R., "Problems of Space Preference Measures and Relationships," Geog. Analysis, 1969, 1, 31-44.
- " " , On Mental Maps, Ann Arbor, 1966, U. of Michigan Press.
- Huff, D.L., "A Topographical Model of Consumer Space Preferences," Papers & Proceedings of the Regional Science Assoc., 1960, 6, 159-173.
- Isaacs, R.R., "The Neighborhood Theory: An Analysis of its Inadequacy," Journal of the American Institute of Planners, 1948, 14, 15-23.
- Lee, T., "Urban Neighborhood as a Socio-Spatial Schema," Human Relations, 1968, 21, 241-268.
- Lowenthal, D., "Environmental Perception and Behavior," University of Chicago, Research Paper #109, 1967.
- " " , "Geography, Experience, and Imagination: Towards a Geographical Epistemology," Annals, Amer. Assoc. Geographers, 1961, 51, 241-260.
- Lynch, K. & L. Rodwin, "A Theory of Urban Form," J. American Institute of Planners, 1958, 24.
- Parr, A.E., "In Search of Theory," Arts and Architecture, 1965, 82, 14-16.
- Peterson, G.L., "A Model of Preference: Quantative Analysis of the Perception of Visual Appearance of Residential Neighborhoods," Journal of Regional Science, 1967, 7, 19-31.
- Rodwin, L. & Associates, Planning Urban Growth and Regional Development, Cambridge, 1969, M.I.T. Press.
- Saarinén, T.F., The Perception of the Drought Hazard on the Great Plains, U. of Chicago, Research Paper #106, 1966.

Stea, D., "Space, Territory and Human Movements," Landscape, 1965, 15, 13-16.

Trowbridge, C.C., "On Fundamental Methods of Orientation and Imaginary Maps," Science, 1913, 990, 888-897.

Wallace, A., "Planned Privacy: What's its Importance for the Neighborhood?" Journal of Housing, 1956, 13, 13-14.

Webber, M., The Urban Place and the Nonplace Urban Realm, 1964, Univ. of Pennsylvania Press.

Wohlwill, J.F., "The Concept of Sensory Overload," EDRA Conference, Oct. 1970.

FACULTY OF ARTS
NEW COURSE PROPOSAL

1. CALENDAR INFORMATION

Department: Geography

Course Number: 431-5

Title:

Sub-title or Description:

The Landscape in Science,
Art, Music and Literature.

Credit Hours: 5

Vector Description: 3-2-0

Pre-requisite(s): Students must have the minimum requirements, appropriate to their major or honours subject, for taking a 400 level course.

2. ENROLMENT AND SCHEDULING

Estimated Enrolment: 45

Semester Offered (e.g. yearly, every Spring; twice yearly, Fall and Spring):
Yearly

When will course first be offered?

Fall 1973 or Spring 1974

3. JUSTIFICATION

- A. What is the detailed description of the course including differentiation from lower level courses, from similar courses in the same department, and from courses in other departments in the University?

The relationships between scientific and artistic evaluations of landscape. Holistic approaches are common to other Geography Courses, but this one is markedly interdisciplinary, and there are no other courses in the University seeking to make this particular synthesis. The utilitarian perceptions of landscape cannot be ignored but they will not be emphasised so that overlap with economic geography and environment courses can be avoided.

- B. What is the range of topics that may be dealt with in the course?

18th and 19th Century Western Culture (i.e. European and North American)

1. The development of scientific views of landscape (e.g. geological and geomorphological)

2. Landscape in the arts-pictorial and architectural, musical, literary

3. Land as an economic resource and the effects of its use on its appearance.

The focus of the course is the interaction of these in their socio-economic context.

C. How does this course fit the goals of the department?

The Geography Department has a strong interest in interdisciplinary study. Social and aesthetic considerations have been generally neglected in the scientific study of landscape.

D. How does this course affect degree requirements?

Nil

E. What are the calendar changes necessary to reflect the addition of this course?

F. What course, if any, is being dropped from the calendar if this course is approved?

None

G. What is the nature of student demand for this course?

The proposal was well received by students at the open meetings for Review of the Undergraduate Programme of the Geography Department. The Geography Students Union has elected a committee of 4 to help with detailed formulations.

H. Other reasons for introducing the course.

The Faculty concerned are enthusiastic about its prospects. F.F. Cunningham was given a Canada Council Award for Summer '72 to research the relationships implicit in the course description.

4. BUDGETARY AND SPACE FACTORS

A. Which faculty will be available to teach this course?

F.F. Cunningham (Geography)
R.M. Schafer (Communications)
T. Maynard (English)

B. What are the special space and/or equipment requirements for this course?

Room with movable tables, blackout, facilities for presentation of slides, tapes, records. A range of slides of paintings, drawings, buildings; of recordings; of books, will be required. A substantial amount of these are in the University at present, and F.F. Cunningham's research grant material, principally slides and books, reverts to the University. (see specimen course outline - item VIII).

C. Any other budgetary implications of mounting this course:

Nil

Approval:

Curriculum Committee:

Oct. 19/42

Dean of Faculty:

Oct. 26/42

Senate:

Specimen Course Outline (Provisional)

Geography 431-5

I The principal aim of this course is to investigate and promote the cross-fertilisation of different perceptions of landscape - scientific, aesthetic and utilitarian. A specific period (substantially the 18th and 19th Centuries) and a specific major society (Western Society, meaning European and North American) have been selected to exemplify this multi-disciplinary topic.

II Time allotment (5 hours - 3 x 1 hour lecture; 1 x 2 hour tutorial)

Weekly module	Day 1	Lecture 1	:	Lecture 2
	Day 2	Lecture 3	:	Tutorial - a) assignment b) discussion

The proportion of lectures reflects the importance and range of content in the course. A weekly set of 'readings' (they will include listening to music and examining art) will be a required part of the course.

III Lecture Sequence (Some guest lecturers will be invited)

Section A "The Age of Reason In The West"

Week 1	Lecture 1	Scientific Ideas about Landscape C 1700 and their origins	FI
	Lecture 2	The characteristics of Western Music C 1700	RMS
	Lecture 3	Thomas Burnett and Telluris Theoria Sacra	TM
Week 2	Lecture 1	The State of Western Landscape Art C 1700	FFC
	Lecture 2	The Rationalist View of Man's Place in the Universe	
	Lecture 3	Baroque vs. Renaissance Principles in Music	RMS
Week 3	Lecture 1	"Historical Painting and Portraiture are Superior to Landscape Painting" - Sir Joshua Reynolds	FFC
	Lecture 2	Questions of Form and Nationalism in Baroque Music	RMS
	Lecture 3	Landscape Gardening in Theory and Practice	TM
Week 4	Lecture 1	The Wernerian explanation of Landscape	FFC
	Lecture 2	The Fusion of Style in J.S. Bach	RMS
	Lecture 3	The Geocentric Universe and the Concept of Paradise	TM

Section B "The Age of Revolutions"

Week 5	Lecture 1	The New Geology and its opponents - the posthumous triumph of James Hutton	FFC
	Lecture 2	Some aspects of Music and Landscape (Interior and Exterior)	RMS
	Lecture 3	The Utopian Tradition in Literature	RM

Page 2

- Week 6 Lecture 1 The New Geology - its impacts on the European Landscape Painters FFC
 Lecture 2 Beethoven: the First "Industrial" Composer RMS
 Lecture 3 The Pastoral Poem: its background and achievement TM
- Week 7 Lecture 1 Realism versus Romanticism as exemplified in Constable and Turner. FFC
 Lecture 2 Absolute vs. Program Music RMS
 Lecture 3 Attempts at Realism in Literary Descriptions of Landscape TM
- Week 8 Lecture 1 Lyell, Agassiz and Davis - the influence of Darwinism On Landscape Study FFC
 Lecture 2 The Rise of Romantic Music RMS
 Lecture 3 The Landscape of the Oriental Tale in English 18th C. TM
- Week 9 Lecture 1 Caught by the Camera - the Pre-Raphaelite Cul de Sac FFC
 Lecture 2 The Decline of Romantic Music RMS
 Lecture 3 Retreat into imagined and idealised landscapes other than the Pastoral TM
- Week 10 Lecture 1 Impressionist Landscape Art FFC
 Lecture 2 Impressionist Music
 Lecture 3 The Melancholy and Graveyard School in Poetry and Prose

Section C "The Age of Technology"

- Week 11 Lecture 1 The Science and Art of Landscape lose one another FFC
 Lecture 2 The Deliberate Attempt to create Unpopular Music RMS
 Lecture 3 The Rise of the Gothic Story and its Setting TM
- Week 12 Lecture 1 The Environmental Crisis
 Lecture 2 The Relationship of Music to the Contemporary Soundscape RMS
 Lecture 3 19th Century Reactions to Landscape TM
- Week 13 Open Forum - An Evaluation of the Course

IV Tutorial Assignments

These will be presented by students individually or in groups. The Topic may be chosen from the following list or, alternatively, formulated by students in which case the topic needs approval from the Course Instructors.

The Agrarian Revolution and its effect on landscape
The Canadian Group of Seven
Modern Urbanisation - Science without Art?
Literary, Artistic and Practical Utopias in North America
Environmental Determinism in National Schools of Music?
Landscape Ideas in Ballet
The Pioneer Ethics and Landscape

Changing Townscapes in Vancouver
How the Chinese have looked at Landscape Art
Indian, Eskimo, and White Perceptions of Canadian Landscape
Man's Place in Nature
Myths into Landscape
Landscape Heroes
The "Unprofitable" Landscape as Challenge
Canadian Landscape Poetry

V Term Paper

The topic is the choice of the individual student, provided it is relevant to the course and is interdisciplinary in intent. Its precise title must be agreed in advance with the Course Instructors as a group, so that each paper is indeed individual.

VI Grades

50% Term Paper
20% Tutorial Assignment
30% Discussion participation

VII Course Instructors

Frank F. Cunningham	Department of Geography
R. Murray Schafer	Communications Studies
Temple Maynard	Department of English

VIII Source Materials

The Library has a good coverage of relevant books on geomorphology, history of science, history of art and literature. The art coverage is in process of further extension. The Library collection of music on records is also ample, though the course will require that more of these are available on tapes (the Library understandably regards discs as master copies not for general use). The Audio Visual Centre of the Library has a large collection of slides on townscapes, architecture, and on works of art (being catalogued). The Arts Centre has a more extensive collection of art slides.

118

L.J. Euenden B.A. (McMaster), M.A. (Georgia),
Ph.D. (Florida)

FILED. (Tolmivergh).

Urban Geography, Local Government...

E. M. Gibson B.A., M.A. (W. Ontario),

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Urban Cultural Geography: Methodology

E. J. Hickin B.A., Ph.D. (Sydney),

Assistant Professor

ငါ့အဖေအမေတို့က

R. B. Horjeli E.A. (Recd College)

M.A., Ph.D. (Johns Hopkins),

Assistant Professor

**Environmental Psychology;
Cultural Geography;**

P. M. Korosil B.A., M.A., Ph.D. (Michigan),

Assistant Professor

Cultural Geography; North America.

T. K. Peucker Dr. Phil. (Heidelberg),

Admission - Provisions

Economic, Quantitative Computer Cartography

~~22045-B. Barker, D. L. (Henderson), J. W. (Trenton),~~

[illegible]

நெய்யாவிழா, அந்தி, பூங்கா, நெல்லை

Lower Level Course Requirements

Students who plan to major or to take honors in Geography should normally obtain credit for the following courses in the first two levels,

(e) Geography 101-3 and either 161-3 or ~~162-3~~

(5) Geography 211-3, 221-3, ~~241-3~~

(c) Geography 151.3

~~They are advised to include a course in statistics before entering the upper-level courses; they are also advised to confine themselves to either sociology 161-3 or 162-3, and not to take both courses.~~

Languages other than English

Most graduate schools require some proficiency in one or two languages other than English. Those who contemplate graduate studies in Geography are advised to include courses in languages other than English in their programs.

To Page 117

CHANGE TO Associate

To Page 117

CHANGE TO Associate

To Page 117

CHANGE TO Associate

DELETED

DELETE AND REPLACE WITH:

Lower Level Course Requirements

Students who plan to major or take honors in Geography should normally obtain credit for the following courses in the first four levels:

(a) Majors: Geography 111-3, Geography 121-3, Geography 141-3, (and Minors) and 6 additional hours selected from the other 100 and 200 level courses in Geography.

(b) Honours candidates: Geography 111-3, Geography 121-3, Geography 141-3, Geography 151-3, and 6 additional hours selected from the 100 and 200 level courses in Geography.

They are advised to include a course in statistics before entering the upper level courses; only one of Geography 262-3 and Geography 263-3 shall be included within the six additional hours required.

See New Course Proposals for new and re-numbered courses.

GEOGRAPHY 119

Faculty of Arts Requirements

All students should check that they have fulfilled the requirements for the Bachelor of Arts degree as set out by the Faculty of Arts (see pages 81 to 83).

Lower Level Course Work Sequence

The following is a recommended sequence of lower level course work for students with regular entry:

1st Semester—Geography 101-3.

2nd Semester—Geography 161-3 or 162-3.

3rd and 4th Semesters—Geography 151-3, Geography 211-3, Geography 221-3, Geography 241-3.

Students with regular entry are advised not to take more than one course in Geography in each of the first two levels. Students proposing to major in Geography or to take honors will profit greatly if they select a wide range of outside subjects during the first four levels; Economics, Anthropology and Sociology, History, and many subjects in the Science Faculty can be of great value to the prospective geographer. A student may wish to take a "minor" in one of these fields, and any faculty member in the Department of Geography will be happy to advise.

Students with advance credit or claiming advance standing in Geography should consult the Student Adviser in the Department concerning the structure of their programs.

Upper Level Course Requirements

All intending Geography major and honors students are required to consult the Department Undergraduate Adviser before undertaking advanced level courses in Geography. If the student does not consult the Undergraduate Adviser the department is not responsible for non-completion of prerequisite requirements for a major or honors student in Geography.

For General program—major in Geography.

	Semester Hours
(a) Five courses from Division A	(15)
(b) One course from Division B	(5)
(c) One course from Division C	(5)
(d) Five semester hours of credit in any other Geography course or courses at the upper level	(5)
	(30)

DELETE AND REPLACE WITH:

Lower Level Course Work Sequence

Students proposing to major in Geography or to take Honors will profit greatly if they select a wide range of outside subjects during the first four levels; Economics, Anthropology and Sociology, History, and many subjects in the Science Faculty can be of great value to the prospective geographer. A student may wish to take a "minor" in one of these fields, and any faculty member in the Department of Geography will be happy to advise.

Students with advance credit or claiming advance standing in Geography should consult the Student Adviser in the Department concerning the structure of their program.

REPLACE WITH: numbered 300 and above.

ADD: For General Program - minor in Geography, 15 semester hours of credit in Geography courses numbered 300 and above.

Much of the present entry under this head becomes redundant in view of our requirement that students shall have completed 30 semester hours before taking our 200 level courses. An entry along these lines would match with the spirit of our intention.

For Honors program in Geography

- (a) Five courses from Division A (15)
 (b) One course from Division B (5)
 (c) One course from Division C (5)
 (d) Geography 405-2, 407-3 and 401-5 (10)
 (e) 15 semester hours in other upper level courses in Geography, but not more than one course from Division C. (15)

(50)

- Division A—Geography 313-3, 314-3, 315-3, 322-3, 323-3, 324-3, 325-3, 342-3, 343-3, 344-3, 345-3, 351-3, 381-3, 382-3.
 Division B—Geography 413-5, 414-5, 415-5, 416-5, 420-5, 421-5, 422-5, 424-5, 425-5, 441-5, 443-5, 452-5.
 Division C—Geography 461-5, 462-5, 463-5, 464-5, 465-5, 466-5, 467-5, 468-5, 469-5.
 Division D—Geography 404-2, 405-4, 406-2, 407-3, 491-5.

(See next page)

INSERT THE FOLLOWING:

Individual Program

As an option to the program set out above, a student may choose a program designed to meet his own particular needs in Geography. This option would enable the student to specialize or, alternatively, to sample a wide variety of approaches to the study of landscape, and would also allow much greater flexibility in pursuing his or her own interests.

Following consultation with the department undergraduate Adviser, and having sought such faculty advice as he deems necessary, the student shall submit his proposed program to the department Curriculum Committee. The Curriculum Committee shall approve the program as submitted, suggest revisions or reject it.

Students, in choosing this option, must fulfill the Faculty of Arts requirements and those of the department, i.e. at least 15 units of Geography courses numbered 100 and 200, or in the case of students planning to take Honors, 18 units at that level; 30 units of Geography courses numbered 300 and 400 (50 for Honors).

Timing of entrance to the individual program shall be:

- (1) at the beginning of semester one
- (2) at the beginning of semester three
- (3) at the beginning of semester five, where the upper level requirements will be as above.

Students adopting the individual program at the beginning of their first or their third semesters may be allowed, with the approval of the department Curriculum Committee, to modify their proposals for the beginning of semester five.

Students may withdraw from their individual programs at any time, but will have to meet the general program requirements to remain Geography majors.

JUSTIFICATION:

Our individual programme proposal is intended to allow a greater degree of freedom and flexibility to able students who have a strong wish to work along a particular line or to develop unusual combinations of courses, and who also know their own minds. It differs from the standard programme only in that the "Divisions" requirements have been removed.

This programme has been devised as a result of many suggestions from faculty and students and is strongly supported by the department. There is likely to be a substantial demand for it, not in terms of numbers wishing to enrol but from a relatively small number of undergraduates who are keen to innovate. The department will examine most closely all requests for admission to the programme and these will have to be approved by the Department Curriculum Committee, which consists of the Department Chairman and the Chairman of the Department Undergraduate and Graduate Studies Committees.

A. MacPherson, Sept. 28th/72.

(Page 120 continued)

Description of Courses		Frequency of offerings:
Geography 001-3 The Geography of Technocratic Society A geographic view of the human and environmental costs and benefits of a technology which enables man to challenge, adapt, and threaten the ecosystem. (2-1-0)		Frequency of offerings is based on the committee's perception of student needs for basic courses and of the department's ability to mount the new programme without undue pressure on our present teaching resources, particularly faculty. We believe the proposals to be practical.
101-3 General Geography Introducing basic geographical concepts and methods; an analysis of systematic and regional approaches to Geography. (2-1-0)	INSERT: GE06 111, 121 and 141 here.	
151-3 Cartography An introduction to the interpretation of maps and air photography; geographical illustration, representation and analysis of geographical statistics. (1-0-3) Prerequisite: Geography 101-3	DELETE Pre-requisite	
161-3 Europe A study of the geographical character of Europe. An examination of the regional resources; other geographical implications focusing on contemporary problems and future development. (2-1-0) Students are advised to take Geography 101-3 before enrolling in this course; unless student intends to take only one course in Geography the Department recommends that it be Geography 101-3.	DELETE Course Description	No prerequisites shall be required for Geography 001-3, or for courses at the 100 level. Geography 161-3, Europe to be replaced by Geography 263-3, Another Region.

72-73 UNDERGRADUATE CALENDAR

PROPOSED CHANGES 73-74

REMARKS

GEOGRAPHY 121

162-3 Canada and the United States of America

An examination of the geographical character of Canada and selected parts of the U.S.A. with special reference to the development of regional identities within the two countries. (2-1-0)

Students are advised to take Geography 101-3 before enrolling in this course, where a student intends to take only one course in Geography. The department recommends that it be Geography 101-3.

DELETE Course Description

Geography 162-3, Canada and the United States of America to be replaced by Geography 262-3, Canada.

241-3 Physical Geography

An introduction to climate, landforms, soils and vegetation; their origins, distributions, and interrelationships. Laboratory work and field trips are included. (2-1-0)

Pre-requisite: One of Geography 101-3, 161-3 or 162-3 or permission of the Undergraduate Advisor

Geography 211-3 becomes Geography 111-3 (Insert between 101 and 121)
CHANGE TO (2-0-1)

DELETE Pre-requisite

ADD: Students who have taken GEOG 211 may not take this course for credit.

NEW COURSE PROPOSAL attached (number change only).

ADD NEW COURSE:

112-3 Introductory Geology

Basic geology for geographers - an introduction to mineralogy, petrology, weathering, structural geology, methods of dating geological information and the geological column. (1-0-2) Laboratory work and field trips are included.

Geography 221-3 becomes Geography 121-3 (Insert between 111 and 141)

NEW COURSE PROPOSAL attached

NEW COURSE PROPOSAL attached (number change only).

261-3 Economic Geography

A geographic view of economic activities, examining spatial organization and spatial interactions within and between local, regional and world economies. (2-1-0)

Pre-requisite: One of Geography 101-3, 161-3 or 162-3 or permission of the Undergraduate Advisor

DELETE Pre-requisite
GEOG 221 may not take this course for credit.

261-3 Social Geography

Basic cultural, sociological, political, and demographic concepts that contribute to an understanding of the spatial existence of man and of his involvement with the physical environment. (1-2-0)

Pre-requisite: One of Geography 101-3, 161-3 or 162-3 or permission of the Undergraduate Advisor

DELETE Pre-requisite
GEOG 241 may not take this course for credit.

Geography 241-3 becomes Geography 141-3 (Insert between 121 and 151)

NEW COURSE PROPOSAL attached (number change only).

(see next page)

(Page 121 Continued)

ADD THE FOLLOWING NEW COURSES:

201-3 Development of Geographical Ideas

An introductory survey of important geographical ideas in historical perspective. (1-2-0)

Prerequisite: 30 cumulative credit hours

212-3 Geography of Natural Hazards

A detailed examination of the occurrence and reasons for several major natural hazards and catastrophes with appropriate attention to their importance to societies. Lab work and field trips will be included. ~~(2-0-1)~~ (2-1-0)*Prerequisite: 30 cumulative credit hours*

222-3 Issues in Economic Geography

This course is designed to draw and expand upon the basic principles and concepts of economic geography, by focussing on a variety of important issues that fundamentally shape contemporary economic landscapes. Topics for consideration will include population growth, poverty, urban sprawl, developing countries, and economic integration at world, national, and local scales. ~~(2-0-1)~~ (2-2-0)*Prerequisite: Geography 121-3 recommended.**30 cumulative credit hours*

242-3 Social Space

Spatial differentiation of human organization, activity and works. (1-2-0)

Prerequisite: 30 cumulative credit hours

251-3 Methods in Spatial Analysis

A systematic introduction to the quantitative and theoretical approach to the study of geography. (3-1-2)

Prerequisite: 30 cumulative credit hours

262-3 Canada

The geographical character of Canada; the Canadian environment; regional differences in socio-economic growth. (2-1-0)

Prerequisite: 30 cumulative credit hours

263-3 Selected Regions

A study of the geographical character of a major world region. (2-1-0)

211-3 should read 111-3

Upper Level Courses

Students without the stated prerequisites may be granted permission to enroll in 300 and 400 level courses by the Department's Undergraduate Adviser.

Division A

Normally students enrolling in Division A courses must have accumulated 60 semester hours of credit. Students with 48 or more semester hours of credit and taking 12 hours of lower level courses may enroll in a 300 level course with permission of the Undergraduate Adviser.

312-3 Geomorphology

An examination of landforms, processes, laws, and theories of development; types and distributions. (2-1-0)

Prerequisite: Geography 211-3

NEW COURSE PROPOSALS are attached for all these completely new courses.

(For 200 level courses, the students shall be required to have 30 semester hours of credit at the University, not necessarily in Geography).

72-73 UNDERGRADUATE CALENDAR

PROPOSED CHANGES 73-74

REMARKS

122			
314-3 Climatology I The basic principles of physical and dynamic climatology; classification of climate, small-scale climates, climate change and applied climatology. <i>Prerequisite: Geography 244-3</i> (2-1-0)	211-3 should read 111-3		
315-3 Biogeography I An introduction to vegetation and soils; description, sampling and survey methods; basic ecological concepts, dynamics and classification. Man's place in the soil-vegetation system. <i>Prerequisite: Geography 244-3</i> (2-0-2)	211-3 should read 111-3		
317-3 Soil Geography An introduction to soils and soil geography. Factors and processes of soil formation, profile description and soil surveying. Elementary field and laboratory techniques of soil analysis. <i>Prerequisite: Geography 244-3 or permission of the instructor.</i> (1-0-3)	211 should read 111-3		
322-3 Geography of Primary Activities An examination of the physical, social, economic and political factors giving rise to the geography of primary activities. <i>Prerequisite: Geography 221-3</i> (2-1-0)	221-3 should read 121-3		
323-3 Geography of Manufacturing Basic analyses of manufacturing location, linkages and flows, and the processes of decision-making, locational adaptation and adoption. <i>Prerequisite: Geography 221-3</i> (2-1-0)	221-3 should read 121-3		
324-3 Geography of Transportation An empirical and theoretical examination of the geographical aspects of transportation systems. <i>Prerequisite: Geography 221-3</i> (2-1-0)	221-3 should read 121-3		
325-3 Geography of Tertiary Activities Central place theory, marketing and retail location, urban economic base, land use models, and tourism. <i>Prerequisite: Geography 221-3</i> (2-1-0)	221-3 should read 121-3		
342-3 Geography of Prehistoric Societies Theoretical and applied analysis of a paleogeography, including the relationships between man and environment. Ecology, physical processes as environmental indices, world regionalization of early subsistence and settlement patterns, urban and agricultural diffusion. <i>Prerequisite: Geography 244-3</i> (2-1-0)	241-3 should read 141-3		

If New Course Proposals covering the numbering changes are approved, the changes on this page would then be "editorial" changes.

72-73 UNDERGRADUATE CALENDAR	PROPOSED CHANGES 73-74	REMARKS
GEOGRAPHY 123 343-3 Geography of Transitional Societies Theoretical and empirical approaches to environmental problems of the world's transitional societies, environment and cultural change, cultural processes and the development of primary production and urban growth. <i>Prerequisite: Geography 244-3</i> (2-1-0) 344-3 Geography of Contemporary Industrial Societies Theoretical and empirical approaches to environmental problems of contemporary industrial societies with particular reference to North America. Symbolic ecology, slum and elite habitats, cultural processes and adaptation to environmental change. <i>Prerequisite: Geography 244-3</i> (2-1-0) 345-3 Historical Geography Geographical factors in the settlement of Canada and the United States; the role of the frontier and geographic factors in the changing nature of resource perception. <i>Prerequisite: Geography 244-3</i> (1-2-0) 351-3 Advanced Cartography Cartographic techniques and materials; processes and photographic methods applicable to cartographic and geographic presentation; problems of presentation. <i>Prerequisite: Geography 151-3</i> (1-0-3) 351-3 Political Geography Theoretical approaches to problems of the interactions of political decisions and power structures with territorial organization. <i>Prerequisite: Geography 244-3</i> (2-1-0) 352-3 Population Geography A study of the application of theories of population growth and demographic techniques; a consideration of the implications of these on the distribution and evolution of population in selected areas. <i>Prerequisite: Geography 241-3 and 244-3</i> (2-1-0) Division B Where specific requirements are not stated, the following courses are extensions of work at the 300 level. At least 12 units of 300 level Geography are required before entering a Division B course. Admission is granted by the Undergraduate Adviser. 413-5 Geomorphology II The appreciation of statistical and other methodologies in the examination of theoretical and applied problems in landform analysis. (2-3-0) <i>Prerequisite: Geography 313-3</i>	241-3 should read 141-3 241-3 should read 141-3 241-3 should read 141-3 241-3 should read 141-3 NEW COURSE: Geog 345-3 Human Microgeography An examination of human interaction with physical environments, focusing on the individual as the unit of analysis, with special emphasis upon the designed environment. 2-1-0 241-3 should read 141-3 221-3 and 241-3 should read 121-3 and 141-3	"Editorial" changes New Course Proposal

124

414-5 Climatology II

Applied climatology. Field techniques and the statistical tools used with reference to selected universal problems. (2-3-0)
Prerequisite: Geography 314-3

415-5 Biogeography II

A review of some major world vegetation types and their associated soils. Emphasis will be placed on ecological problems and research methodology; human interference and human perception. (2-3-0)
Prerequisite: Geography 315-3

416-5 Pleistocene Geography

An examination of the physical and cultural geography of the Pleistocene. Climatic change and associated geomorphic processes will be studied in relation to the human occupancy of the earth, and the landscape changes that result. (2-3-0)
Prerequisite: Geography 317-3 and 311-3

420-5 Comparative Cultural Geography

A comparative study of selected world cultures and landscapes in the light of recent theoretical developments in geography. (2-3-0)
Prerequisite: Geography 342-3 or 343-3

421-5 Geography of Resource Development

Geographical aspects of development and management of natural resources. Particular attention will be given to contemporary problems in Western Canada. (2-3-0)
~~*Prerequisite: Geography 317-3 and 311-3*~~

DELETE

422-5 The Geography of Lesser Developed Countries

A geography study in both theoretical and empirical terms of 'development' and 'underdevelopment' with particular references to selected lesser developed regions. (2-3-0)
~~*Prerequisite: Geography 317-3 and 311-3*~~

DELETE

424-5 Urban Transportation

An extension of the theoretical and conceptual approach to transportation (*Geography 324-3*), but with application to urban areas. (2-3-0)
Prerequisite: Geography 324-3

425-5 Geography of Communications

A geographical study of circulation and communication theories. (2-3-0)
Recommended prerequisite: Geography 324-3 and 344-3

211-3 and 241-3 should read 111-3 and 141-3

GEOGRAPHY 125	ADD NEW COURSE Geog 431-5 The Landscape in Science, Art, Music and Literature. 3-2-0	New Course Proposal
411-5 Geography of Urban Regions An evaluation of the nature of urbanization, having specific reference to theories of urban spatial structure and to comparisons of urbanization in Canada and abroad. (2-3-0) <i>Prerequisite:</i> One of <i>Geography 323-3, 324-3, 325-3, 343-3, 344-3, 345-3, 352-3</i> 413-5 Regional Planning Concepts and theories of regional development and environmental planning; the spatial component of regional planning problems; goal formulation, process and implementation. (2-3-0) <i>Recommended prerequisite:</i> <i>Geography 323-3, 325-3 and 344-3</i> 432-5 Theoretical and Computer Cartography A study of theoretical problems of cartography and their implementation in the computerised manipulation and representation of surfaces and maps. (2-1-2) <i>Prerequisites for geographers:</i> <i>Geography 151 and upper level standing.</i> <i>Prerequisites for non-geographers:</i> <i>Programming knowledge and upper level standing.</i> Division C These courses are primarily intended for Geography majors and prospective honors candidates in their seventh or eighth semesters. Familiarity with the principal fields of systematic geography will be expected, and students applying for admission to these courses should have completed at least twelve semester hours of systematic geography at the 300 level. Other students may be admitted with the permission of the Undergraduate Adviser. 451-5 Western Europe The geographical character of Western Europe and of its current political, economic, and social patterns. (2-3-0) 452-5 Canada Selected problems in the Geography of Canada; emphasizes territorial differentiation in cultures, regional resource problems, interregional resource conflicts, and the question of the geographical basis for national unity. (2-3-0) 453-5 United States of America A detailed examination of particular geographical problems in the United States of America. (2-3-0) 454-5 Interregional Africa Africa between the Tropics; attention will also be given to the general problems of low latitude regions and of developing countries. (2-3-0)	NO CHANGE NO CHANGE NO CHANGE	

126

465-5 Middle East

Analysis of a developing region, considering problems of subsistence agriculture, rapid urbanization and industrialization, resource development, intra-regional conflicts. (2-3-0)

466-5 South and South-east Asia

The Indian sub-continent and south-eastern Asia, emphasizing areal differentiation of cultural and natural environment, resource and national space conflicts, regional development, urbanization and external relations. (2-3-0)

467-5 Latin America

A geographical survey of Latin America, its environmental problems and national unities, economic enclaves and regional variations in cultural and economic growth; significance as a world region. (2-3-0)

468-5 USSR

The structure and trends of geographic development, emphasizing area differentiation of cultural and physical environments and the spatial structure of the economy. (2-3-0)

469-5 The North American "Middle North"

Special attention will be given to resource appraisal and utilization, spatial organization, and the consideration of future development; comparisons will be made with experience of sub-Arctic development in other parts of the world. (2-3-0)

Division D

Courses in this division are primarily intended for candidates for honours in Geography but, with the exception of Geography 491-5, they are open to Geography majors also. Geography 406-2 and 407-3 should be taken in the fifth and sixth semesters.

404-2 Seminar

(0-2-0)

405-4 Seminar

(0-4-0)

Geography 404-2 and 405-4 are designed for upper level Geography major and honours students who wish to continue research started in conjunction with an earlier course.

Permission to enter these courses requires written consent both from the faculty member willing to supervise the research and the undergraduate adviser.

406-2 Geographical Methodology

Methods of geographical research, types of explanations, theory and hypothesis formulation, geographical testing and research design. (0-2-0)

NO CHANGE

NO CHANGE

GEOGRAPHY 127

407-3 Quantitative Methods in Geography
An examination of the basic quantitative techniques used in geographical investigation. (2-1-0)

Prerequisite: Geography 406-2 and Mathematics 101-3 or permission of the undergraduate adviser. In special circumstances the Department may permit a student to take Geography 406-2 and Geography 407-3 in the same semester.

491-5 Honors Essay

All candidates for honors will be required to submit a major paper on a geographical topic to be selected in consultation with the department.

NO CHANGE