S.95-67

SIMON FRASER UNIVERSITY

OFFICE OF THE VICE-PRESIDENT, ACADEMIC

MEMORANDUM

To: Senate

From: D. Gagan, Chair
Senate Committee on Academic Planning

Subject: Faculty of Arts Proposal for Environmental Studies

Date: November 8, 1995

Action undertaken by the Senate Committee on Undergraduate Studies and the Senate Committee on Academic Planning gives rise to the following motion:

Motion:

"That Senate approve and recommend approval to the Board of Governors, the Faculty of Arts Proposal for Environmental Studies as set forth in S.95-67, including

Proposed Joint Major - Geography/Economics - Environmental Specialty
Proposed Geography Major - Environmental Specialty
New courses: GEOG 389-4 Human Ecology: Human Relations to Nature
GEOG 450-4 Environmental Workshop."

Agreement has been reached between the Faculty and the Library in the assessment of library costs associated with new courses

Note: *The Faculty of Arts proposal for Environmental Studies included a proposed B.Sc. in Environmental Science (Physical Geography) which has not yet been approved by the Faculty of Science. It will come forward to Senate for approval at a later date.*

SIMON FRASER UNIVERSITY

Department of Geography

MEMORANDUM

TO:	Andrea Lebowitz Associate Dean	FROM:	R.B. Horsfall Acting Chair
RE:	Environmental Studies Proposal	DATE:	June 13, 1995

Attached is the revised Environmental Studies proposal and associated course outlines for approval by the F.A.C.C.

In response to your query regarding a new faculty member for GEOG 450, this decision will not be made for one, or possibly two, years. Hopefully, by then, the enrolment figures will justify a new position.

R.B. Horsfall

RBH/mw:

cc: John Chant, Chair
Department of Economics

Note: *The Department of Economics approved this program on November 14, 1995.*

Introduction to the Faculty of Arts Proposal for Environmental Studies

1. Rationale

Enclosed are three program proposals from the Department of Geography (Figure 1) which represent the Faculty of Arts contribution to the tri-faculty undergraduate environment program initiative (Figure 2). All proposals build upon existing strengths in Geography and Economics and, with the exception of two new transdisciplinary core courses, involve no major requests for resources.

Program I offers a highly focused and largely social scientific study of the environment in which the pedagogies from Geography and Economics are combined for a joint major in those disciplines with an environmental specialty.

Program II is designed as a Geography Major with an Environmental Specialty. At the same time, Program II offers more of a balanced integration of physical and social sciences than Program I.

Program III to be approved by the Faculty of Science Curriculum Committee builds on the strengths of the BSc program in physical geography extending it to include the transdisciplinary core courses at the lower and upper division levels. This will be a highly demanding degree providing students trained in environmental science with a broader base for understanding human environment interaction than is possible in the Faculty of Sciences five-streams in Environmental Science.

2. Demand

While some of the demand for these programs will be derived from the existing complement of students or from students planning on entering geography and/or economics, it is expected that a net increase will occur of at least 20 - 30 FTE/year.

3. Resources

Depending upon student demand within the Faculty of Arts and from the Faculties of Science and Applied Sciences, a minimum of one, and perhaps as many as three, new CFL positions will have to be created.

FIGURE 1.

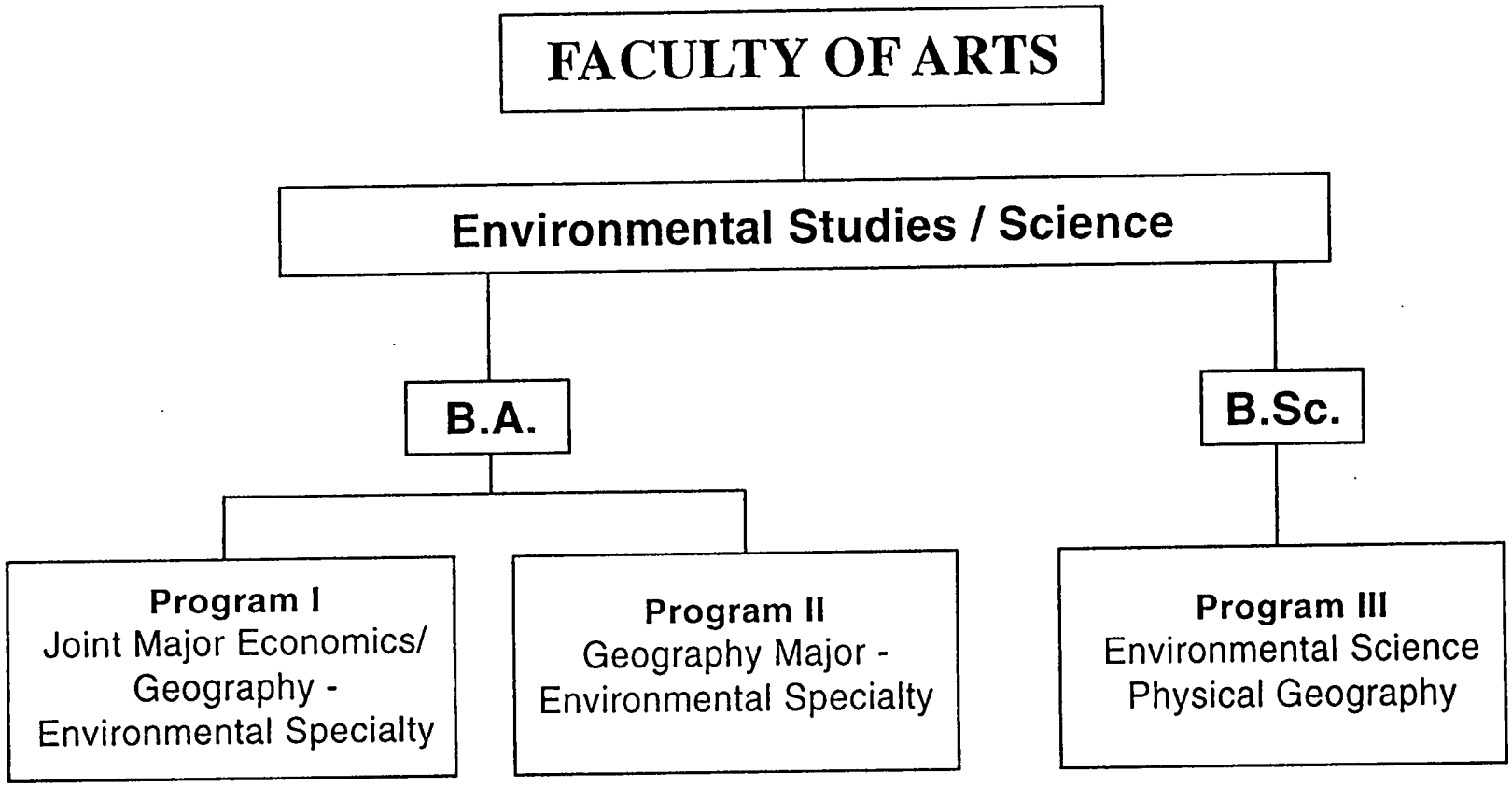
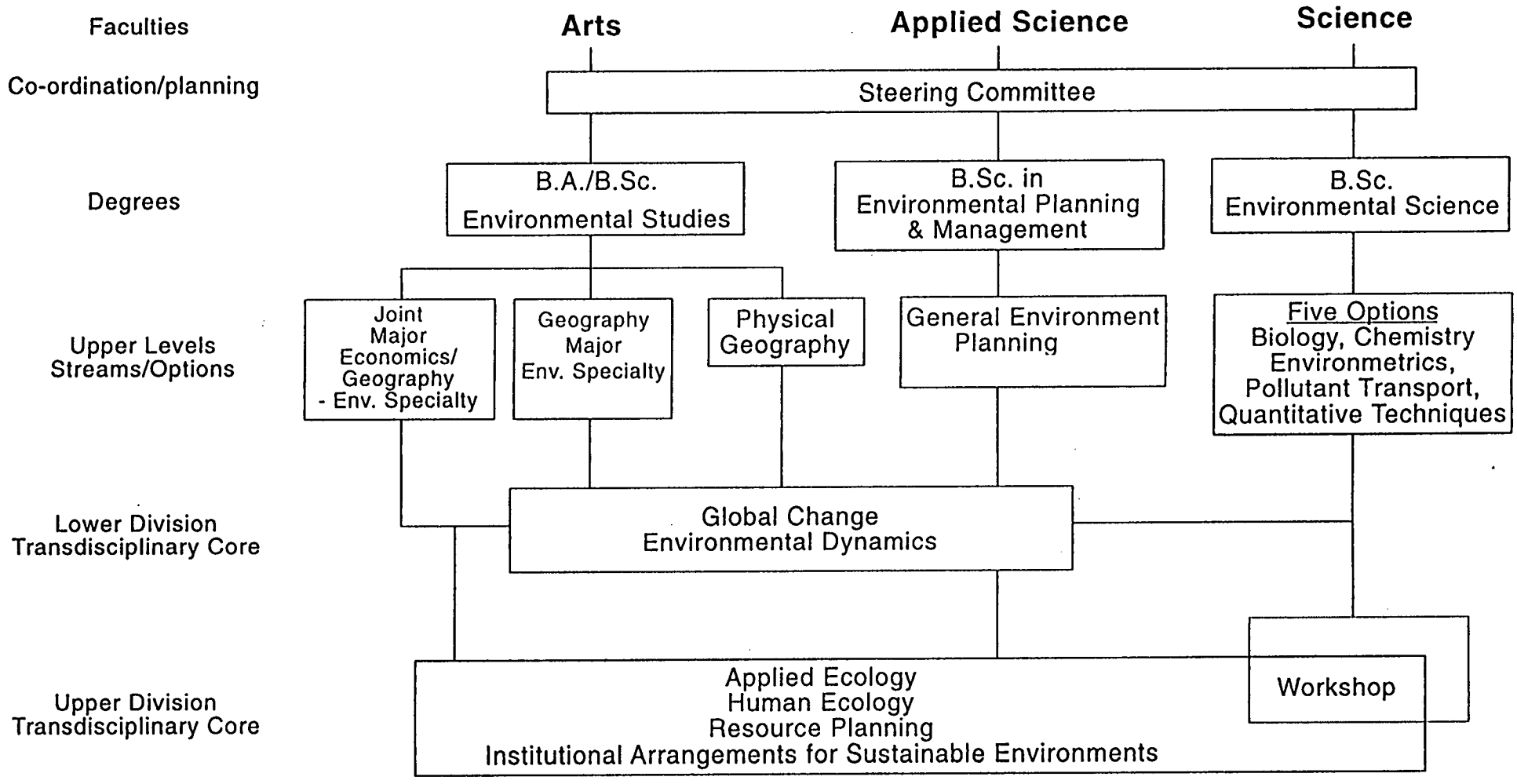

FACULTY OF ARTS
Environmental Studies / Science
B.A.
B.Sc.
Program I
Joint Major Economics/
Geography -
Environmental Specialty
Program II
Geography Major -
Environmental Specialty
Program III
Environmental Science
Physical Geography

FIGURE 2.

Undergraduate Environment Program



Program I

Joint Major - Geography/Economics - Environmental Specialty

Lower Division - 42 semester hours, to include:

Economics Requirements

Same as Economic Major plus Econ 260 (can be counted as one of 200-level requirement)

Geography Requirements - 18 semester hours

Same as Geography Major plus Geog 215

In addition students must complete two transdisciplinary compulsory 100 level courses (6 semester hours):

ENPL 100-3 Global Change
ENPL 200-3 Environmental Dynamics

Upper Division - 49 semester hours, to include:

Economics -

25 semester credit hours in Economics to include:

ECON 301-5 Intermediate Microeconomic Theory
305-5 Intermediate Macroeconomic Theory
362-4 Economics of Natural Resources
BUEC 333-3 Elementary Economic and Business Statistics II
and at least two 400-level Economics or Buec courses

Group requirement: one course as specified in Economics requirements

Geography -

24 semester credit hours in Geography to include:

GEOG 322-4 World Resources
382-4 Population Geography

One of

GEOG 323-4 Geography of Manufacturing
385-4 Food Production and the Environment
386-4 Medical Geography
383-4 Regional Development and Planning I

And 3 from the following:

GEOG 421-4 Geography of Resource Development
422-4 Geography of Third World
426-4 Multinational Corporations and Regional Development
444-4 Regional Development and Planning II
449-4 Environmental Processes and Urban Development

In addition students must complete five transdisciplinary core courses (18 semester hours):

GEOG 445-4 Resource Planning
ENPL 311-3 Sustainable Environments
GEOG 389-4 Human Ecology
ENPL 356-3 Management Institutions
GEOG 450-4 Workshop

Breadth Requirements:

The following courses are recommended for breadth requirements:

HUM 325-3 Humanity and the Natural World
CMNS 322-4 Communication in Conflict and Intervention
446-3 The Communication of Service and the Transfer of Technology
ARCH 101-3 Introduction to Archaeology
365-3 Ecological Archaeology
386-3 Archaeological Resource Management
PHIL 120-3 Facts and Values
244-3 Introduction to the Philosophy of Natural nd Social Science
WS 204-3 Women, Science and Technology
HIST 369-3 The History of Science: 1100 - 1725
SA 371-4 The Environment and Society

Program II

Geography Major - Environmental Specialty *

Lower Division

Students must complete a total of 24 semester hours of lower level courses including:

GEOG 100	Human Geography
111	Physical Geography
215	Biogeography
221	Economic Geography
241	Social Geography

One course from section C of the calendar and two transdisciplinary core courses:

ENPL 100-3	Global Change
ENPL 200-3	Environmental Dynamics

Upper Division

Students must complete 18 semester hours from transdisciplinary core courses:

ENPL 311-3	Sustainable Environments
GEOG 389-4	Human Ecology (or Human Relations to Nature)
ENPL 356-3	Management Institutions
GEOG 445-4	Resource Planning
GEOG 450-4	Environmental Workshop

And 24 semester hours from the following 300 level:

GEOG 315	Regional Ecosystems
322	World Resources
323	Geography of Manufacturing
327	Geography of Tourism
369	Human Microgeography
381	Political Geography
382	Population Geography
383	Regional Development and Planning I
385	Food Production and the Environment (Introduction to Agricultural Geography)
386	Medical Geography
387	Geography and Gender

And at the 400 level 12 semester hours from the following:

GEOG 420	Comparative Cultural Geography
421	Geography of Resource Development
422	Geography of Third World
426	Multinational Corporations and Regional Development
427	Selected Topics in Geography of Tourism
444	Regional Development and Planning II
449	Environmental Processes and Urban Development

* For students wishing to pursue the Co-operative Education program, they must complete 28 semester hours with a minimum GPA of 2.75. Four work semester (GEOG 302, 303, 402 & 403) must be completed.

SENATE COMMITTEE ON UNDERGRADUATE STUDIES
NEW COURSE PROPOSAL FORM

1. Calendar Information

Department Geography

Abbreviation Code: GEOG Course Number: 450 Credit Hours: 4 Vector: 1-3-0 ~~0-3-0~~

Title of Course: Environmental Workshop

Calendar Description of Course: This is an interdisciplinary course whose principle objective is to act as a roundtable and forum for in-depth analysis and resolution of important environmental issues as they relate to economy, technology, politics and culture.

Nature of Course: Seminar

Prerequisites (or special instructions): ENPL 100-3; ENPL 200-3; ENPL 311-3; ENPL 356-3; GEOG 389; GEOG 445.

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

2. Scheduling

How frequently will the course be offered? Every three to four semesters

Semester in which the course will first be offered? Fall 1998

Which of your present faculty would be available to make the proposed offering possible?
J. T. Pierce, A.M. Gill

3. Objectives of the Course As the last of the seven transdisciplinary core courses, it will allow stude from social and natural sciences background to work co-operatively in a multi-disciplinary environment the purpose of identifying and offering solutions to key environmental problems.

4. Budgetary and Space Requirements (for information only)

What additional resources will be required in the following areas:

Faculty A new faculty member to teach three transdisciplinary core courses in Geography

Staff

Library

Audio Visual

Space

Equipment

5. Approval

Date: June 2/95 1 Dec 95 Nov. 6/95

Department Chair Dean Chair, SCUS

SCUS 73-34b:- (When completing this form, for instructions see Memorandum SCUS 73-34a. Attach course outline).

GEOG 450-4 Environmental Workshop

Proposed Course Content

This is an interdisciplinary course whose ~~principle~~ principal objective is to act as a roundtable and forum for in-depth exploration and resolution of important environmental issues as they relate to economy, technology, politics/governance and culture. Through carefully designed workshops, organized around selected themes and involving a number of stakeholders from government, industry and public interest groups, emphasis will be placed on translating much of the theory of sustainable development into practical and workable terms. Students will become active participants in a co-operative and team environment in defining, researching and recommending solutions to environmental problems at the local and regional levels. In this problem solving environment, students will be expected to balance and integrate social, natural and managerial sciences.

While it is recognised that the themes will vary over time, it is proposed that the following themes be used in the first instance as focal points for case studies at the local and regional levels.

The themes are as follows:

1. Governance and environmental management
2. Technology and science in the service of the environment
3. Growth and the environment - scenario analysis
4. Conflict resolution and negotiation
5. Urban design and environmental processes
6. Energy and the environment
7. Social change and environmental imperatives

Students will be evaluated on the basis of two independently, team researched case studies, as well as a term paper and class participation.

There is no course text and library demands are expected to be minimal.

Course format - 1 three hour seminar/week

Evaluation -	Final Examination	25%
	Term Paper	20%
	Team Presentations	55%

SENATE COMMITTEE ON UNDERGRADUATE STUDIES
NEW COURSE PROPOSAL FORM

1. Calendar Information - Department Geography

Abbreviation Code: GEOG Course Number: 389 Credit Hours: 4 Vector: 2-2-0

Title of Course: Human Ecology: Human Relations to Nature

Calendar Description of Course: This course introduces the student to concepts and theories relating to the way human populations organize in order to maintain themselves in given environments. Major themes will be: 1) processes of adaptation to environmental conditions; 2) the development of a system of relationship which allows a population to act as a unit within the content of prevailing technology and communication; and 3) the evolution of the system according to changing capacities for growth. Other themes will be the politics of nature, eco-feminism, and the social construction of nature.

Nature of Course:

Prerequisites (or special instructions): ENPL 100-3; and ENPL 200-3

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

2. Scheduling

How frequently will the course be offered? Every 3rd or 4th semester

Semester in which the course will first be offered? January 1997

Which of your present faculty would be available to make the proposed offering possible?
J.T. Pierce, B. Pitman

3. Objectives of the Course As one of five upper division transdisciplinary core courses to be taken by Faculty of Arts and Applied Science students, the course aims to provide a firm grounding in the theoretical debates regarding society's relationship and evolution within environmental systems.

4. Budgetary and Space Requirements (for information only)

What additional resources will be required in the following areas:

Faculty A new faculty member to teach the three transdisciplinary core courses in Geography

Staff

Library

Audio Visual

Space

Equipment

5. Approval

Date: July 24, 95 1 Aug 95 Nov 6/95

Department Chair Dean Chair, SCUS

SCUS 73-34b:- (When completing this form, for instructions see Memorandum SCUS 73-34a. Attach course outline).

GEOG 389-4 Human Ecology: Human Relations to Nature

Proposed Course Content

Human ecology is concerned with the way in which human populations organize in order to maintain themselves in given environments. The study of human ecology has traditionally focussed on three themes: (1) the process of adaptation to environmental conditions; (2) a system of relationships which enables a population to act as a unit within the context of prevailing technology and communication; and (3) the evolution of the system according to changing capacities for growth. Increasingly, human ecology is concerned with such things as the politics of nature, eco-feminism, and the social construction of nature.

Topics

(1) Philosophical and conceptual issues in human ecology

- environmentalism/worldviews
- eco-feminism
- valuation of nature
- ecology of knowing
- health paradigms

(2) Historical/cultural perspectives on resource use and resource conservation

- hunting and gathering societies
- pre-industrial
- industrial
- the strong principle

(3) Population, Resources and Environment

- exponential growth
- throughput of matter and energy
- assimilation capacity
- substituion vs. complementarity
- reconciling human welfare and environmental protection
- energy and economics
- progress redefined

(4) Population and Income Growth

- population dynamics
- population distribution
- development issues
- politics of 'population control'

(5) Carrying Capacity

- history and concept
- examples from renewable resource sectors - agriculture, forestry, fisheries
- recent developments- ecological footprints

(6) Perturbations to environmental systems

- water
- climate/atmosphere
- biochemical cycles
- food chains
- ecological accounting.

(7) Using Human Ecology for Problem Solving

- health
- industrial ecology
- public policy
- urban form

Text - P. Ehrlich et al. 1993 Human Ecology. San Francisco: Freeman

Course Format - One two hour lecture and one two hour tutorial/week

Evaluation -		
	Final Examination	35%
	Oral and written presentations	50%
	Short paper	15%

References

Wright, S.D. et al. 1993. Human Ecology: Crossing Boundaries. Chicago: University of Chicago Press.

Hawley, A., 1986. Human Ecology: a Theoretical Essay. Chicago: University of Chicago Press.

Ehrlich, P. et al. 1993. Human Ecology. San Francisco: H. Freeman & Co.

Miller, G.T., 1992. Living in the Environment. Belmont, CA: Wadsworth.

Turner II, B.L., et al., eds., 199?. The Earth as Transformed by Human Actions: Global and Regional Change. New York: Cambridge University Press.

Redclift, M. and Benton, T., eds., 1994. Social Theory and the Global Environment. London: Routledge.

Smil, V., 1994. Global Ecology. London: Routledge.

Steiner, D. and Nauser, M., 1993. Human Ecology: Fragments of Anti-Fragmentary Views of the World. London: Routledge.