SIMON FRASER UNIVERSITY

S.77-130

MEMORANDUM

To Senate	From Senate Committee on Undergraduate Studies
Subject New Course Proposal: BISC 105-3- Biology and the Human Species	Date October 18, 1977

Action taken by SCUS at its meeting of 27th September 1977 gives rise to the following motion:

MOTION

"That the new course proposal for BISC 105-3, Biology and the Human Species, as set forth in S. 77-130 , be approved and recommended to the Board for approval."

Note - BISC 105 is proposed to provide a general introduction to concepts of Biology using the human species as the major focus. One major reason for development of this course is to provide an additional alternative to BISC 101 and BISC 102 for those Faculty of Arts students wishing to meet group requirements. Unlike the latter two courses, BISC 105 will not be a laboratory course and its offering is urgently required to relieve enrollment problems in those courses.

D. R. Birch

DRB/cg

SCUS 77-26

SIMON FRASER UNIVERSITY

MEMORANDUM

As amended by SCUS
Sept. 27, 1977

To: H.M. Evans
Registrar

From: J.M. Webster
Dean of Science

Subject: New Course Proposal - BISC 105-3
"Biology and the Human Species"

Date: September 13, 1977

Attached please find a new course proposal form and supporting documentation for BISC 105-3, "Biology and the Human Species". This course was approved by the Faculty of Science at its meeting of July 28, 1977, and is herewith forwarded to the Senate Committee on Undergraduate Studies for further consideration.

J.M. Webster

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Encl.

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

NEW COURSE PROPOSAL FORM

1. Calendar Information

Department: BioSciences

Abbreviation Code: BISC Course Number: 105 Credit Hours: 3 Vector: 3-2-0

Title of Course: Biology and The Human Species

Calendar Description of Course:
Principles and processes of general biology with emphasis on implications for the human species of: evolutionary processes; reproduction and inheritance; physiological and behavioural integration and control systems; ecology.

Nature of Course: Three lectures and two-hour tutorial demonstration (no laboratories).
Prerequisites (or special instructions): Open to all students.

What course (courses), if any, is being dropped from the calendar if this course is approved: None. The frequency of offering of BISC 003-3 will be reduced.

2. Scheduling

How frequently will the course be offered? 1 time/year.

Semester in which the course will first be offered? Spring 1978

Which of your present faculty would be available to make the proposed offering possible? F.J.F. Fisher

3. Objectives of the Course

The new course will deliberately focus upon human biology at every point. The course will therefore meet currently unsatisfied needs in the Biology curriculum. The course may be of particular value to non-Biology majors, who are interested in important biological principles but who lack a formal background in plant or animal science.

4. Budgetary and Space Requirements (for information only)

What additional resources will be required in the following areas:

Faculty: None

Staff: Occasional use of technical staff to set up demonstrations.

Library: Present holdings sufficient.

Audio Visual: Normal course requirements.

Space: University facilities adequate.

Equipment: Current departmental resources sufficient.

5. Approval

Date: 29 June 1977 13/9/77 27 Sept. 1977

Department Chairman Dean Chairman, SCUS

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

NEW COURSE PROPOSAL

Dept. of Biological Sciences F.J.F. Fisher

Biology and the Human Species

Biological Sciences 105

Description

A comprehensive overview of basic principles and processes of biology using the human species wherever possible as the starting point for each focus of interest:- Evolutionary Processes - origins to present day; Chemistry & Physiology - mechanisms underlying development, structure, metabolism, and behavior in animals and plants; Inheritance and Reproduction - cellular basis of variation and development; Systems and Control - integrating mechanisms of physiology and behavior; Ecology - habitats, communities and population interactions with special reference to human resources, pollution and values. Text: Robert A. Wallace Biology: The World of Life Goodyear Publishing Co., California 1975.

Rationale

During the past ten years there has been a dramatic increase in public awareness and concern for many questions of a directly biological nature that have become manifestly significant for human welfare. Potentially threatening changes in the physical environment due to industry, new doubts about food quality, burgeoning problems of human demography, and even outbreaks of new diseases have produced an array of anxieties concerning life phenomena, confusing even to the otherwise fairly well informed.

Although many of these problems have been approached in various courses in the Bioscience curriculum it has generally been one at a time and with little coordination. In the present proposal, an attempt has been made deliberately to draw together the biological insights which bear upon these problems in the form of a General Introductory Course in Biology centered particularly upon the Human Species.

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Aims

While this course is intended to provide the same level of knowledge with regard to principles and processes as our present introductory courses, it will nevertheless differ very strongly in its greatly enhanced human perspective and in the kinds of examples and data used to illustrate principles. For this reason it may be taken very profitably by biology majors without excessive redundancy or overlap. The emphasis will be more upon the principles covered in BISC 102 than those in BISC 101. Current lack of laboratory space demands extended use of demonstration-experiments rather than conventional lab-instruction.

This course is expected to be of value to students of all faculties because of its deliberate focus upon human concerns at every point but it will also stand on its own right as a long-needed component of the bioscience program. It will thus provide necessary biological insights for beginning biology majors as well as appropriate knowledge for many non-science students who have sought such opportunities in the past (e.g. from Anthropology, Archeology, Communications, Economics, Geography, Kinesiology, Psychology etc.). It should therefore be of particular value as an elective for the new Arts Faculty science requirements.

Outline of Weekly Topics

Nature and origin of life on earth, prokaryotes and eukaryotes.
(Seminar: Extraterrestrial Life)

Cell structure and function, mitosis and physiology.
(Seminar: Cancer and Immunity)

Metabolism, energy transfer, photosynthesis, and growth.
(Seminar: Growth and No-Growth)

Differentiation, Morphogenesis, and development.
(Seminar: Thalidomide and Measles)

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Endocrinology, neurophysiology and other integrative processes.

(Seminar: Coordination and Drugs)

Heredity, reproduction and variety.

(Seminar: Why Sexuality?)

Evolution of the primates, early and modern man.

(Seminar: Intelligent Apes?)

Biological diversity: selected groups of plants and animals.

(Seminar: Creation or Natural Selection?)

Ecological interactions and stability principles.

(Seminar: Ecocatastrophe)

Biological universals underlying competition, territoriality, and reproductive behaviour.

(Seminar: Human Aggression)

Sociobiological mechanisms of group survival.

(Seminar: Language and Communication)

World population, resources, environmental quality and prerequisites for long-range human survival.

(Seminar: 1984 and 2001)

In preparation for forum discussion with a guest speaker each week a comprehensive reserve reprint list will be provided in advance.

SIMON FRASER UNIVERSITY

MEMORANDUM

To Dr. L. Kemp, Chairman
Curriculum Committee
Faculty of Science

From Sheila Roberts, Secretary
Faculty of Arts Curriculum Committ

Subject BISC 105

Date June 15, 1977

At its meeting of May 12, 1977 the Faculty of Arts Curriculum Committee considered BISC 105, which had been received for overlap consideration. The Committee saw no substantive overlap with the courses offered in the Faculty of Arts, and after some discussion passed the following motion:

> *"That the Faculty of Arts Curriculum Committee express its appreciation to the Biology Department for offering an additional course to facilitate Arts students."*

Sheila Roberts

S. Roberts

cc. Mr. H.M. Evans