

SIMON FRASER UNIVERSITY

S77-49

MEMORANDUM

To SENATE

From SENATE COMMITTEE ON UNDERGRADUATE STUDIES

New Course Proposal: KIN.485-4 -
Subject Man Beneath the Sea

Date 1st April, 1977

Action taken by the Senate Committee on Undergraduate Studies at its meeting of March 22, 1977 gives rise to the following motion:

MOTION

That the new course proposal for KIN.485-4: Man Beneath the Sea, as set forth in S.77-49, be approved and recommended to the Board of Governors for approval

NOTE - With regard to legal, financial and insurance problems which might arise, a number of courses involving human experimentation are currently offered and the precautions utilized include student release, certified instructors and attendance of a physician. A decompression chamber is to be installed in the proposed new structure which will house the Kinesiology Department.

:ams


Daniel R. Birch

SIMON FRASER UNIVERSITY

SCUS 77-10

MEMORANDUM

Mr. H.M. Evans, Registrar and

From J. Blanchet, Secretary

Secretary, Senate Committee on
Undergraduate Studies

Faculty of Interdisciplinary Studies
Undergraduate Curriculum Committee

Subject I.S.C. 77-3, KIN. 485-4
MAN BENEATH THE SEA

Date March 15, 1977

Attached is the above-noted course proposal. Would you please place this on the agenda of the Senate Committee on Undergraduate Studies for consideration.

J. Blanchet

JB:jk

Attachment.

I.S.C. 77-3

SIMON FRASER UNIVERSITY

MEMORANDUM

RECEIVED
FEB 3 1977

Janet Blanchet, Secretary

From T.W. Calvert, Chairman

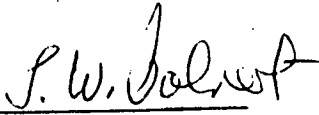
F.I.D.S. Undergraduate Curriculum
Committee

Department of Kinesiology

Subject New Kinesiology Course

Date February 2nd, 1977.

I enclose a course proposal, Man Beneath the Sea - Kinesiology 485-4 which was approved by the Kinesiology Undergraduate Curriculum Committee. If this course is approved it will be added to the list of upper level Kinesiology courses from which a major may choose 30 credits. Please bring this before the F.I.D.S. Curriculum Committee.


T. W. Calvert

TWC/gmc

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

NEW COURSE PROPOSAL FORM

Calendar Information

Department: KINESIOLOGY

Abbreviation Code: KIN Course Number: 485 Credit Hours: 4 Vector: 3-1-2

Title of Course: MAN BENEATH THE SEA

Calendar Description of Course: The theme of this course is human factors in the underwater environment. The physical and physiological effects of pressure on the human body and the interfacing of man and machine underwater are considered. Topics include the history of diving, decompression theory, decompression disorders, pulmonary function, underwater work, underwater breathing apparatus, standard and mixed gas narcosis, saturation diving, high pressure nervous syndrome, and atmospheric diving suits. Nature of Course

Prerequisites (or special instructions): Kinesiology 405 (may be taken concurrently). SCUBA diving certification (may be taken concurrently through Recreation or by special arrangement with instructor); Student must provide Medical Certificate stating whether they are fit to partake in diving activities (forms available from Department). 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? once/year

Semester in which the course will first be offered? Fall

Which of your present faculty would be available to make the proposed offering possible? Morrison

3. Objectives of the Course To give students an understanding of the physical and physiological changes which are peculiar to underwater activity and explain the theoretical basis of these changes. Laboratories will give students practical experience of working underwater and demonstrate some of the effects of high pressure discussed in lectures. (This course is designed to utilize the Environmental Laboratory in the new Kinesiology building).

4. Budgetary and Space Requirements (for information only)

What additional resources will be required in the following areas:

Faculty None

Staff T.A.

Library There has been interest in diving at SFU for at least 5 years and the major books and journals in this area are currently available in the library.

Audio Visual Normal usage of A-V aids (Gym 410).

Space Laboratories will use Kinesiology Physiology Labs (Gym 410, S.F.U. Pool) and V.G.H. Hyperbaric Research Unit.

Equipment The required equipment is available in the department - SCUBA Diving equipment and compressed air is available from Recreation.

5. Approval

Date: 15 March 1977 March 77 April 21/77

J.W. Balvret Department Chairman

R.C. Green Dean

Dr. Birch Chairman, SCUS

KINESIOLOGY 485

MAN BENEATH THE SEA

Fall, 1977
J.B. Morrison

The theme of this course will be human factors in hyperbaric environments, the emphasis being on physical and physiological effects of pressure on the human body and the interfacing of man and machine underwater. Various aspects of recreational and industrial diving, compressed air work and hyperbaric oxygen therapy will be covered. A reasonable knowledge of human function will be assumed. Course material will be selected from the following topics:

History of diving	Life support systems
Physics of compressed gases	Atmospheric diving suits
Pulmonary function	Theory of decompression
Exercise Physiology	Decompression sickness
Underwater breathing apparatus	Saturation diving
Standard and mixed gas diving	High pressure nervous syndrome
Inert gas narcosis	Dysbaric osteonecrosis
Cold exposure	Diving accidents

Nature of Course:

Lecture	3 hours
Tutorial	1 hour
Lab	2 hours

The laboratory sessions will involve: three labs in the Physiological and Human Factors Laboratories, one visit to the Hyperbaric Research Unit at V.G.H., and two underwater labs in the S.F.U. diving pool. The remainder of the lab sessions will be used as diving training sessions prior to the underwater labs. Students may find it helpful to take concurrently the skin and scuba diving course offered by Recreation.

Recommended Textbook: The Physiology and Medicine of Diving and Compressed Air Work. Ed: P.B. Bennett and D.H. Elliot - 2nd edition, Bailliere Tindall, London, 1975.

FOR FURTHER INFORMATION CONTACT J.B. MORRISON, Room 420 (291-4253) OR Neil Stainton, Room 411 - Gym.