

**SIMON FRASER UNIVERSITY**

**MEMORANDUM**

**To:** Senate

**From:** J.W.G. Ivany  
Chair, SCAP

**Subject:** School of Kinesiology -  
Curriculum Revisions

**Date:** November 17, 1988

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

Motion:

that Senate approve and recommend approval to the Board of Governors curriculum revisions in the School of Kinesiology as set forth in S.88-48 including a proposal for a new Extended Studies Diploma in Occupational Science.

Note: Editorial changes will be made in approved Calendar material to reflect Senate action on November 7, 1988 to change the name of Extended Studies Diplomas to Post Baccalaureate Diplomas.

Present Description:

KIN 142-3 Introduction to Kinesiology  
An analysis of the physiological and psychological status of the individual in relationship to physical performance.

KIN 143 Exercise Management  
Describes the principles and practices in exercise management for men and women. Special reference is given to the cardio-respiratory system. Medical clearance from a personal physician is advised.

KIN 305 Human Physiology I  
Prerequisites: KIN 100, BISC 201, CHEM 251, 256.

KIN 306 Human Physiology II (Principles of Physiological Regulation)  
Prerequisites: KIN 100, BISC 201, CHEM 251, 256.

KIN 407-3 Human Physiology Laboratory  
Provides the student with familiarity in using current methods of physiological and biomedical evaluations in diagnosis and research, including pulmonary function, cardiovascular physiology, kidney and liver function, thermal regulation, hormonal action.  
Prerequisite: KIN 305 (which may be taken concurrently).

Proposed Description:

KIN 142. Introduction to Kinesiology.  
Basic procedures for the assessment of the status and performance of the individual according to the principles of anthropometry, functional anatomy, biomechanics, exercise physiology, and motor learning.

KIN 143. Exercise Management.  
Introduces the student to the areas of exercise management and exercise physiology. The importance of individual variation and personal exercise prescription is emphasized. Medical clearance from a personal physician is recommended:

KIN 305.  
Prerequisites: KIN 100, BISC 201, CHEM 251, CHEM 256, PHYS 101, PHYS 102, MATH 154, MATH 155.

KIN 306.  
Prerequisites: KIN 100, BISC 201, CHEM 251, CHEM 256, PHYS 101, PHYS 102, MATH 154, MATH 155.

KIN 407-3. Human Physiology Laboratory  
Experiments dealing with the nervous, muscular, cardiovascular, respiratory and renal systems are covered.  
Prerequisites: KIN 305, KIN 306, one of which must already have been completed and the other can be taken concurrently.

Rationale:

School of Kinesiology and the courses have evolved over the years and the proposed description is more accurate description of the course.

This is a better description of the course as it has been taught over the past few years.

Physiology requires the fundamentals of Chemistry and Physics. Like all other biological sciences Physiology has become more mathematical and hence basic knowledge of calculus is essential.

KIN 407 covers whole of physiology, but KIN 306, covering neuro & endocrine systems, was not a prerequisite.

Present

KIN 442-3. Biomedical Systems.

Prerequisites: CMPT 103, MATH 152 or 155, KIN 100 and PHYS 102.

KIN 496-3. Directed Study  
Directed reading and literature research on topics selected in consultation with the supervising instructor. This course may be repeated for additional credit or taken concurrently with KIN 498-3  
Prerequisites: Consent of advisor is to be obtained before the start of the examination period of the semester prior to the one in which the student plans to register for this course.

KIN 498-3. Undergraduate Research  
Directed study and research selected in consultation with the supervising instructor. Those students completing an honors degree will be required to submit a paper based on this research, for departmental approval. This course may not be repeated for additional credit or be taken concurrently with KIN 496-3.  
Prerequisites: Honors standing or consent of Chairman; approval of the research project is to be obtained before the start of the examination period of the semester prior to the one in which the student plans to register for this course.

Proposed

Kin. 442.

Prerequisites: CMPT 103 or KIN 203, PHYS 101, PHYS 102, MATH 154, MATH 155, KIN 100.

KIN 496. Directed Study I  
Directed reading and literature research on topics selected in consultation with the supervising instructor. This course may not be repeated for additional credit. A student who has completed KIN 499 may not receive credit for KIN 496. A short proposal of the project, approved by the course supervisor must be submitted for approval to the Director before the first registration period for the semester in which the student plans to register.  
Prerequisites: A minimum CGPA of 3.0 and a minimum of 90 credit hours are required.

KIN 498. Directed Study II  
Directed study and research in consultation with the supervising instructor. A short proposal of the project approved by the course supervisor must be submitted for approval to the Director of Kinesiology before the first registration period of the semester in which the student plans to register. A student who has completed KIN 499 may not receive credit for KIN 496.  
Prerequisites: A minimum CGPA of 3.0 and a minimum of 90 credit hours are required.

Rationale

This course needs the fundamentals of Math, Physics & Physiology.

*revision to*  
A ~~new~~ course KIN 499-15 is being proposed for Kinesiology. A student should be allowed to take one or the other of 496 or 499. The description for 496 is being made explicit and stricter.

The description for KIN 498 is being made clearer and stricter.

PresentKIN 499-15. Individual Study Semester

A full semester research project under the guidance of a faculty member who will chair a two-member supervisory committee. This course is required for students in the sports science honors program. Students wishing to take this course must apply for admission by submitting a research proposal to the Departmental Undergraduate Curriculum Committee at least two months prior to the semester in which the course will be taken. An honors thesis must be written and must be submitted within 15 days after the classes end in the semester. Students completing KIN 499-15 may not include KIN 496, 498 or any other individual study semester course as part of the 132 hours of their degree program.

## Prerequisites:

1. Completion of all the lower level required courses for the honors program.
2. Completion of 90 semester hours which should include at least 22 semester hours of upper level Kinesiology courses appropriate to the subject of the intended research as determined by the Departmental Undergraduate Curriculum Committee.
3. At the time of application, have a minimum CGPA of 3.0 and a minimum GPA in Kinesiology of 3.0
4. Permission of the department.

ProposedKIN 499-15. Individual Study Semester

Directed study and research project in Kinesiology. With the advice of two supervisors, one of whom must be a faculty member in the School of Kinesiology, the student will submit a proposal (500 words) to the Kinesiology Undergraduate Curriculum Committee before the end of the classes in the semester previous to the one in which the student wishes to undertake KIN 499. Once the project is approved, the student will carry out research and present the work in the form of a written scientific paper by the last day of classes of that semester. The paper will also be presented orally as a seminar in an open forum at the end of the semester. Students completing KIN 499 may not receive credit for either KIN 496 or KIN 498. Prerequisites: A minimum CGPA of 3.0, 90 completed credit hours and permission of the School.

Rehandle

Most of the students and faculty have found 498-3 inadequate for research. Students who would like to do proper research thesis prefer to spend more time in it. KIN 499-15 has been available to Sports Science and Applied Physiology Honours students only and not to Kines. Honors and Kin. Majors. A 15 credit course should be available to all honors (i.e. Kines. Sports Science and Applied Physiology) and Kines. Majors.

## Present

### Kines. Honours

An honors program (requiring 132 semester hours for graduation) is available to students at the end of their fourth level. Entry into the honors program requires approval of the Director of the School. The honors program is identical to the major program except that, in the upper levels the students will be required to complete an honors paper and not less than 60 hours of upper division course work numbered 300 and above, including the courses specified for a major. Any additional hours may be for course work in Arts or Business Administration, Education (excluding EDUC 401/401, 405), Applied Sciences, or Science.

## Proposed

### Kinesiology Honors Program

An honours program (requiring 132 semester hours for graduation) is available to students towards the end of their fourth level. A student applying for honours must have a minimum CGPA of 3.0. The student will be required to do an honours thesis KIN 499-15. In order to graduate with honours, the student must maintain a minimum CGPA of 3.0 at the time of graduation. Entry into the honours program requires the final approval of the Director of Kinesiology.

## Rationale

### Kinesiology Honours Program

A 3 credit research project was not found to be adequate by the students and the faculty. A 15 credit research project for Honours students has been available only to Applied Physiology & Sports Science candidates and not to Honours in Kines students. Now it is being extended to all.

PresentCurrent Major Requirements

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and including not more than 9 hours from the following:

KIN 420-3, 421-3, 422-3, FPA 324-3, BICH 440-3.

Kinesiology Minor Program

The basic requirements will be (a) KIN 100-3 (Introduction to Human Structure and Function), KIN 142-3 (Introduction to Kinesiology), (b) 18 hours additional course work in the School of Kinesiology of which at least 15 hours must be selected from courses numbered 300 and above. For the purpose of meeting these requirements, the dance courses FPA 120-34, 121-3, and 324-3 may be treated as Kinesiology courses. Students using this minor in preparation for teaching are urged to select the courses for their minor program as suggested under the Faculty of Education.

Electives: Upper Levels

The remaining 18 hours are free electives to be chosen from courses offered by any discipline in the University. Three of these hours, however, must be from courses numbered 300 or above.

ProposedMajor requirements.

.... and including not more than 9 hours from the following: KIN 420-3, 421-3, 422-3, and BICH 440-3.

Minor Requirements.

The basic requirements will be (a) KIN 100-3 (Introduction to Human Structure and Function), KIN 142-3 (Introduction to Kinesiology), (b) 18 hours additional course work in the School of Kinesiology of which at least 15 hours must be selected from courses numbered 300 and above. Students using this minor in preparation for teaching are urged to select the courses from their minor program as suggested under the Faculty of Education.

Electives: Upper Levels

The remaining 18 hours are electives to be chosen from courses offered by any discipline in the University. At least 12 of these hours must be from courses numbered 300 or above.

Rationale

Kinesiology is an Applied Science program with enough offerings in widely different areas to satisfy its requirements. FPA courses are not needed to fill in for Kinesiology courses.

Minor Requirements

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Electives: Upper Levels

Kinesiology requires a wide variety of courses from other departments and has a wide variety of courses in the department, therefore we do not need more lower levels from other areas.

Present

Required Courses: Lower Levels

PHYS 101

PHYS 102

Proposed

Required Courses: Lower Levels

Add PHYS 130-2 (General  
Physics Laboratory A)

Rationale

Physiology, biomechanics, control systems, environmental physiology are strongly based on fundamentals of physics. Until now our students are required to take only two physics courses, PHYS 101 & PHYS 102. They are quite inexperienced in handling physics equipment e.g. oscilloscopes, resistors, capacitors, etc. Also, at this time our students are required to take six chemistry courses (three theory and three lab) and only two physics (both theory) courses. This is not a good balance for Kinesiology majors. Therefore, we should make PHYS 130-2 a required course for Kines. Majors.

SUGGESTED COURSE PATHWAY FOR KINESIOLOGY MAJORS †

I YEAR	II YEAR	III YEAR	IV YEAR
* BISC 101-4 * MATH 154-3 ** KIN 142-3 * CHEM 104-3 * CHEM 115-2 (15)	CHEM 251-3 CHEM 256-2 * PHYS 101-3 * CMPT 103-4 KIN 140-3 KIN 143-3 KIN 241-3 (15)	* KIN 306-3 ** KIN 326-3 KIN 303-3 KIN 341-3 KIN 367-3 KIN 375-3 (6)	** KIN 401-4 KIN 415-3 KIN 426-3 KIN 430-3 KIN 460-3 KIN 480-3 OR UPPER LEVELS FROM OTHER DISCIPLINES (4)
* BISC 102-4 * CHEM 105-3 * CHEM 118-2 * MATH 155-3 ** KIN 100-3 (15)	* BISC 201-3 * PHYS 102-3 * PHYS 130-2 KIN 110-3 KIN 141-3 KIN 241-3 (8 or 9)	* KIN 305-3 ** KIN 407-3 KIN 303-3 KIN 336-3 KIN 343-3 KIN 320-3 KIN 330-3 (6)	* KIN 407 KIN 402-4 KIN 410-3 KIN 441-3 KIN 442-3 KIN 485-4 KIN 461-3 KIN 467-3 KIN 420, 421, 422, 496, 498 OR UPPER LEVELS FROM OTHER DISCIPLINES Spring
TOTAL CUMULATIVE CREDITS APPROXIMATELY 30 Required Courses.	KIN 203-3 KIN 220-3 (8 or 9)	* KIN 326 KIN 343 * KIN 407 TOTAL CUMULATIVE CREDITS APPROXIMATELY 90	Graduate in the <u>Summer</u> TOTAL CUMULATIVE CREDITS 120

LOWER LEVEL REQUIRED COURSES, I.E. 51 CREDITS  
 TAKING III YEAR COURSES YOU MUST HAVE  
 BEFORE  
 FINISHED

\* MUST BE TAKEN DURING THIS SEMESTER. \*\* MUST BE TAKEN DURING THIS OR THE FOLLOWING SEMESTER.  
 † ANY COURSE IN ANY YEAR MAY BE TAKEN IN THE SUMMER OF THAT YEAR IF OFFERED.

CO-OP AND HONOUR STUDENTS ADJUST ACCORDINGLY.



# SIMON FRASER UNIVERSITY

FAS-UCC #88-9

## MEMORANDUM

To..... Janet Blanchet, Dr. Jay Weinkan,  
Deans. of. Science, Applied. Science,.....  
Education and Arts

From..... Parveen. Bawa.....  
..... School of Kinesiology.....

Subject..... Calendar Change.....

Date..... September 29, 1988.....

### Present Description

An Extended Diploma program in Kinesiology is available for students who have already completed a Bachelor's degree. Students must complete at least 30 credit hours from 300-400 level or graduate level Kinesiology courses including the following required courses:

Kin 305-3  
306-3  
326-3  
401-4  
407-3

The remaining 14 credit hours are to be selected in consultation with the undergraduate advisor of the school. For more information about the Extended Studies Diploma program general regulations, refer to Continuing Studies.

### Proposed Description

An Extended Studies Diploma in Kinesiology is available to students who have already completed a bachelor's degree. Students must complete at least 30 credit hours of upper division or graduate level courses. The diploma may be taken within the general area of Kinesiology or with a special emphasis in occupational science. Courses must be selected from an approved listing in consultation with a program advisor. General regulations governing the Extended Studies Diploma Program are listed under Continuing Studies. For more information about the program requirements in Kinesiology and application forms, please contact the Chair, Undergraduate Programs.

### Rationale

The rationale is to provide more flexibility within the Diploma program in Kinesiology, which will permit students to follow a structured program with special emphasis on a particular concentration. The department already offers special emphasis on sports science and environmental physiology through the honours program, and health and fitness through the certificate program. Occupational Science has been offered for several years by Kinesiology in conjunction with Continuing Studies as a non-credit program aimed at the industrial community. Many of our graduates are expressing interest in this area as a means of professional development. It is considered that the Extended Studies Diploma is the appropriate program through which to satisfy this demand. The calendar change is aimed at informing students of the opportunity to follow a credit program with special emphasis in this area.

RECEIVED

SEP 30 1988

FACULTY OF  
APPLIED SCIENCES

## Extended Studies Diploma - Kinesiology

*Proposed Revision*

An Extended Studies Diploma in Kinesiology is available to students who have already completed a bachelor's degree. Students must complete at least 30 credit hours of upper division or graduate level courses. The diploma may be taken within the general area of Kinesiology or with a special emphasis in occupational science. Courses must be selected from an approved listing in consultation with a program advisor. General regulations governing the Extended Studies Diploma Program are listed under Continuing Studies. For more information about the program requirements in Kinesiology, please contact the Chair, Undergraduate Programs.

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# Extended Studies Diploma Program

## School of Kinesiology

### OCCUPATIONAL SCIENCE

#### Concentration:

The Program consists of a minimum of 30 credits of upper division and graduate course work. Courses may be selected from the approved listing with the assistance of the Program Advisor (Professor J.B. Morrison). Students must include a minimum of 9 credits from group A and 15 credits from group B. The remaining 6 credits can be selected from groups A or B, or may be used as electives taken at Simon Fraser or any other University provided that the course material is pertinent to the program. Course selection must have written approval of the Program Advisor prior to commencement of studies.

<u>Group A</u>	<u>Core Program</u>	(9 credits minimum)
Kin. 326		Functional Anatomy
Kin. 305		Human Physiology I
Kin. 306		Human Physiology II
Kin. 407		Human Physiology Lab
Kin. 401		Biomechanics of Human Movement

<u>Group B</u>	<u>Special Topics</u>	(15 credits minimum)
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#### 1. Industrial Ergonomics

Kin. 480	Human Factors in the Working Environment
Kin. 422	Special Topics:
Kin. 467	Human Motor Performance
Kin. 885	Man-Machine Systems Seminar
Kin. 840	Gross Body Mechanics

#### 2. Industrial Toxicology

Kin. 420	Special Topics: Environmental Carcinogenesis
Kin. 421	Special Topics: Occupational Toxicology Laboratory I
Bisc.312	Environmental Toxicology I
Bisc.313	Environmental Toxicology II
Bisc.650	Industrial Toxicology
Bisc.652	Problem Analysis in Environmental Toxicology

#### 3. Industrial Relations

S.A. 308	Industrial Sociology
BUEC 384	Industrial Relations
Psych.360	Social Psychology

#### 4. Practical

Kin.498	Undergraduate Research
Kin.499	Individual Study Semester*

\*NOTE: This course is available only to students having at least 15 credits from the above listing prior to entry to the course.