S.89-43

SIMON FRASER UNIVERSITY

MEMORANDUM

To: Senate

From: L. Salter
Chair, SCAP

Subject: School of Kinesiology -
Curriculum revisions
Reference: SCUS 89-13
SCAP 89-28

Date: November 9, 1989

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 as set forth in S.89-43 the proposed curriculum revisions including

New courses -	KIN 105 - 3	Fundamentals of Human Structure and Function
	KIN 205 - 3	Introduction to Human Physiology
Deletion of -	KIN 100 - 3	Introduction to Human Structure and Function"

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

NEW COURSE PROPOSAL FORM

1. Calendar Information

Department: Kinesiology

Abbreviation Code: KINE Course Number: 105 Credit Hours: 3 Vector: 3-0-1

Title of Course: Fundamentals of Human Structure and Function

Calendar Description of Course:

This course will provide students with basic physiology of the nervous system, and muscle, endocrine system, cardio-respiratory system, kidney and gastrointestinal system. KINE 205 may be taken in lieu of KINE 105. KINE majors and honors students may not receive credit for KINE 105. Students with credit for KINE 100 may not receive credit for KINE 105.

Nature of Course: 3 x 50 min lectures & 1 x 50 min tutorial OR offered by DISC.

Prerequisites (or special instructions):

Prerequisites: Grade 11 Biology, Chemistry and Physics are recommended.

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

KINE 100

2. Scheduling

How frequently will the course be offered? Once per semester.

Semester in which the course will first be offered? 90-3 or later

Which of your present faculty would be available to make the proposed offering possible? E. Banister, P. Bawa, G. Bhakthan, S. Brown, I. Mekjavic, T. Richardson, M. Savage, G. Tibbits.

3. Objectives of the Course

This course is for students with nonscientific background. These students will be given the basic knowledge of the structure of the human body and the functioning of various systems of the body.

4. Budgetary and Space Requirements (for information only)

What additional resources will be required in the following areas:

Faculty

Staff

Library

Audio Visual

Space

Equipment

No additional requirements. The frequent offerings of Kine 100-3 will be split into offering of Kine 105 and Kine 205.

5. Approval

Date: [illegible] OCT 0 [illegible]

Department Chairman

Dean

Chairman, SCUS

KINESIOLOGY 105

FUNDAMENTALS OF HUMAN STRUCTURE AND FUNCTION

OVERVIEW:
The scope of this course is similar to Kinesiology 205, "Introduction to Human Physiology", which is required for Kinesiology majors. However, KIN 105 assumes no science background and includes less detail regarding mechanisms of function. As such, KIN 105 is intended for Kinesiology minors, Health and Fitness Certificate students, Gerontology diploma students, and students interested in learning more about their own bodies.

PREREQUISITES:
None. High school chemistry and biology will be helpful, but are not required.

TEXT (REQUIRED):
Macey, R.I. Human Physiology, Second Edition. Englewood Cliffs, N.J.: Prentice-Hall, 1975. (The selection of text is not finalized; this text is representative of the type of text to be used in this course).

GRADING:

Midterm examinations (2 @ 25%)	50%
Final examination (comprehensive)	50%

BRIEF COURSE OUTLINE:

- The internal environment
- Homeostasis
- Cells and cellular organelles
- Cell membranes
- DNA, RNA, and protein synthesis
- Energy metabolism
- Brain, spinal cord, nerves
- Action potentials and graded potentials
- Negative feedback and positive feedback systems
- Endocrine glands and hormones
- Muscle (skeletal, cardiac, and smooth)
- Muscle excitation and contraction
- Heart, blood, and blood vessels
- Regulation of blood pressure and blood flow
- Airways and lungs
- Mechanics of breathing
- Regulation of cellular oxygen, carbon dioxide, and acidity
- Kidneys
- Regulation of body water and electrolytes
- Gastrointestinal system
- Digestion and absorption of nutrients
- Reproductive system
- Male and female sexual response
- Conception, fetal development, birth
- Immune system
- Antibody production, phagocytosis, and other responses to pathogens

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

NEW COURSE PROPOSAL FORM

1. Calendar Information

Department: Kinesiology

Abbreviation Code: KINE Course Number: 205 Credit Hours: 3 Vector: 3-0-1

Title of Course: Introduction to Human Physiology

Calendar Description of Course:

This course will introduce the physiological concepts of membrane biophysics, the nervous system and muscles, cardio-respiratory system, kidney and gastrointestinal system. Students with credit for KINE 100 may not receive credit for KINE 205.

Nature of Course: 3 x 50 min lectures & 1 x 50 min tutorial.

Prerequisites (or special instructions):

CHEM 104, PHYS 101, BISC 101.

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

KINE 100

2. Scheduling

How frequently will the course be offered? Once per semester.

Semester in which the course will first be offered? 90-3 or later.

Which of your present faculty would be available to make the proposed offering possible? E. Banister, P. Bawa, G. Bhakthan, S. Brown, I. Mekjavic, T. Richardson, M. Savage, G. Tibbits.

3. Objectives of the Course

This course is meant to teach physiology to students with a scientific background, most of whom will go on to finish a Bachelor's degree in the faculty of science or applied science.

4. Budgetary and Space Requirements (for information only)

What additional resources will be required in the following areas:

Faculty

Staff

Library

Audio Visual

Space

Equipment

No additional requirements. Faculty members who have taught Kine 100 will now teach Kine 205.

5. Approval

Date: 12 Sept 89

Department Chairman

Dean

Chairman, SCUS

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KINESIOLOGY 205

INTRODUCTION TO HUMAN PHYSIOLOGY

OVERVIEW:
The course is an introductory survey of human physiology with an emphasis on mechanisms of regulation and integration. Anatomy of structures will be detailed only when it is critical to a functional understanding. Although this is intended as a survey course, some topics will be covered in reasonable detail in order to give insight into mechanisms of function.

PREREQUISITES:
Chem 104, Phys 101, Bisc 101.

TEXT (REQUIRED):
Human Physiology: The Mechanisms of Body function. Vander, Sherman & Luciano, McGraw-Hill, 4th. Ed., 1985.

GRADING:

Tutorial Participation	5%
Midterms (2 @ 25% each)	50%
Final	45%

BRIEF COURSE OUTLINE:

- Cell Physiology
  - Membrane structure and function
  - Molecular biology
  - Energy metabolism
  - Electrophysiology
- Homeostasis
  - Neural control mechanisms
  - Hormonal control mechanisms
- Coordinated Systems
  - Muscle physiology
  - Cardiovascular function
  - Respiration
  - Regulation of electrolyte concentrations
  - Digestion
  - Energy balance
  - Defense mechanisms
  - Reproduction
  - Sensory systems
  - Motor control

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SIMON FRASER UNIVERSITY

MEMORANDUM

To: Janet Blanchet Faculty of Applied Sciences	From: Parveen Bawa Undergrad Chairman School of Kinesiology
Subject:	Date: June 30, 1989

JUSTIFICATION FOR CHANGING PRE-REQS

FROM KIN 100 TO KIN 105 & 205

Kin 100 is being dropped; Kin 105 and 205 will replace this course. For those courses required by Kin Majors and Honours Kin 205 will be a prereq. For those courses required by Kin Minors and Certificate in Health and Fitness Kin 105 will be a prereq.

For courses required for Kin Majors and Honours Prereq of Kin 205 is to be substituted for Kin 100:

Justification: Kin 100 has always been taught at 200 level. The following courses are taken by Kin Majors and are not required for Kin Minors:

Kin 305 - Human Physiology I:

Kin 306 - Human Physiology II:

Kin 341 - Sports Medicine I:

Kin 343 - Fitness Appraisal and Guidance:

For courses required for Minors and Certificate in Health and Fitness Prereq of Kin 105 is to be substituted for Kin 100:

Justification: Kin 100 has been toodifficult for Minor and Certificate in Health and Fitness people.

Kin 220 - Human Foods and Nutrition: This course is popular with non Majors.

Kin 325 - Basic Human Anatomy: Kin Majors cannot receive credit for this course.

Kin 370 - Biomechanics in Physical Activity: Kin Majors cannot receive credit for this course.

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Kin 375 - Physiological Basis of Growth and Development Auxology: This course is required for Kin 470 for which Kin Majors cannot receive credit.

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Present Description:	Proposed Description:	Rationale:
KINE 305-3: Prerequisites: KINE 100 Bisc 201, CHEM 251, 256, PHYS 101, 102, MATH 154, 155.	KINE 305-3: Prerequisites: KINE 205, BISC 201, CHEM 251, 256, PHYS 102, MATH 155	Due to the change from KINE 100-3 to KINE 205-3.
KINE 306-3: Prerequisites: KINE 100 BISC 201, CHEM 251, 256 PHYS 101, 102, MATH 154, 155.	KINE 306-3: Prerequisites: KINE 205 BISC 201, CHEM 251, 256, PHYS 102, MATH 155	Due to the change from KINE 100-3 to KINE 205-3.
KINE 407-3: Prerequisites: KINE 305, 306, one of which must already have been completed and the other can be taken concurrently.	KINE 407-3: Prerequisites: PHYS 130, KINES 305, 306, one of which must already have been completed and the other can be taken concurrently.	PHYS 130-2 will help towards understanding the equipment for KINE 407.
KINE 442-3: Prerequisites: CMPT 103 or KINE 203, PHYS 101, 102, MATH 154, KINE 100.	KINE 442-3: Prerequisites: MATH 155, PHYS 130, KINE 305, 306.	KINE 100 did not provide sufficient background in physiology for this advanced fourth year course, so KINE 305 and 306 have been added.
KINE 480-3: Human Factors in Working Environments: A practical and theoretical consideration of the principles involved in the creation of optimal working conditions. (Lecture/Tutorial). Prerequisites: KINE 100, PHYS 101, MATH 151 or 154, and not less than 45 hours credit from Science, Computing Science, Business Administration and Economics, Psychology and Kinesiology recommended.	KINE 480-3: Human Factors in Working Environments: A practical and theoretical consideration of the principles involved in the creation of optimal working conditions. Topics include noise, vibration, lighting, biomechanics, ergonomics, heat stress and work physiology. (Lecture/Tutorial). Prerequisites: KINE 305, 306, MATH 155; KINE 401, which may be taken concurrently	The instructors feel that upper level physiology courses and both differential and integral calculus are needed as background for this course.
KINE 485-4: Man Beneath the Sea: The theme is human factors the underwater environment. The physical and physiological effects of pressure on the human body and interfacing of man decompression theory, decompression disorders, pulmonary function, underwater work,	KINE 485-4: Man Beneath the Sea: The theme is human factors in the underwater environment. The physiological effects of pressure on the human body and interfacing of man and machine underwater are considered. Topics include the history of diving, decompression	The instructors feel that upper level physiology courses and both differential and integral calculus are needed as background for this course.

underwater breathing apparatus, standard and mixed gas narcosis, saturation diving, high pressure nervous syndrome, and atmospheric diving suits. (Lecture/ Tutorial/Laboratory). Prerequisites: KINE 305 (may be taken concurrently). SCUBA diving certification (may be taken concurrently through-Recreation or by special arrangement with instructor); students must provide a medical certificate stating whether they are fit to partake in diving activities (forms available from department).	theory, decompression disorders, pulmonary function, underwater work, underwater breathing apparatus, narcosis, saturation diving, high pressure nervous syndrome, and atmospheric diving suits. (Lecture/Tutorial/ Laboratory). Prerequisites: KINE 305, KINE 306, MATH 155; KINE 401, which may be taken concurrently.	
KINE 410-3: Exercise Physiology: Advanced study of human physiological responses and adaptations to acute and chronic exercise stress. Cardio-respiratory, cellular, and metabolic adaptations to exercise will be studied and discussed in detail to provide a scientific basis for training and conditioning. (Lecture/Seminar) Prerequisites: KINE 305, 306.	KINE 410-3: Exercise Physiology: Advanced study of exercise as a perturbant to homeostasis. Focus is on the cellular mechanisms by which skeletal and cardiac muscle respond to both acute and chronic stress. (Lecture/Seminar). Prerequisites: KINE 305, 306.	The instructor for this course has changed. The present description is more appropriate to what Dr. Tibbits teaches at present.
Professional Schools: Requirements for Students Wishing to Transfer into Professional Schools: Students who have completed at least 90 semester hours of credit comprising the Science core courses, 30 upper division hours in Kinesiology including KINE 305, 306, 326, 401 and 407, and are accepted into an accredited professional program in dentistry, medicine or veterinary medicine, are eligible to receive a Bachelor of Science (Kinesiology) degree from Simon Fraser University after successful completion of the second year of professional study. To be acceptable, the courses taken in the professional program must not duplicate courses already taken at Simon Fraser University	Professional Schools: Requirements for Students Wishing to Transfer into Professional Schools: Students who have completed at least 90 semester hours of credit comprising all the required lower level courses, 30 upper division hours in Kinesiology including KINE, 305, 306, 326, 401 and 407, and are accepted into an accredited professional program in chiropractic medicine, dentistry, medicine or veterinary medicine, are eligible to receive a Bachelor of Science (Kinesiology) degree from Simon Fraser University after successful completion of the second year of professional study. To be acceptable, the course taken in the professional program must not duplicate courses already	Chiropractic Medicine has been added. However, each School of chiropractic medicine will be evaluated individually for the quality of its program. Furthermore, the completion of all lower level requirements has been added clearly.

and must be acceptable for transfer credit. Candidates must apply for transfer credit and for receipt fo the B.Sc. (Kinesiology degree through the Office of the Registrar, Simon Fraser University.	taken at Simon Fraser University and must be acceptable for transfer credit. Candidates must apply for transfer credit and for receipt of the B.Sc. (Kinesiology) degree through the office of the registrar, Simon Fraser University.

At the end of Kine 496, 498, 499 course descriptions ADD:

Kinesiology Majors are permitted to count a maximum of six credits from Kine 496, 498, and 499 towards ther degrees.

NOTE: If the proposal for KINE 105 & KINE 205 goes through, then for all courses or requirements where KINE 100 is required, KINE 105 (Minors and Health and Fitness program) or KINE 205 (Majors, Honors, Applied Physiology Honors, and Sports Science Honors) will be substituted appropriately.

B.Sc. Honors in Applied Physiology

Upper Level Requirements (Page 61 - 1989/90 Calendar)
Faculty of Applied Sciences

Delete: Kin 498-3 Directed Study II
Add: Kin 499-15 Individual Research Semester

This course was introduced for the Honors Programs in Kinesiology to provide the student, in consultation with a faculty member, sufficient time to complete a significant research project. The course was added to the Sports Science requirements last year and should have been added to the Applied Physiology Honors Program as well.

SIMON FRASER UNIVERSITY

MEMORANDUM

To: Janet Blanchet, Secretary to F.A.S. Undergraduate Curriculum Committee	From: Parveen Bawa, Chairman Kinesiology Undergraduate Curriculum Committee
Subject: Additional Calendar Changes	Date: 20th July 1989

Enclosed please find additional calendar changes which were approved by the School of Kinesiology on October 11th, 1988 and December 6th, 1988.

Present Description	Proposed Description	Rationale
1. P.60 Lower level requirements		
Computing Science CMPT 103-4 Introduction to Pascal	Computing Science CMPT 103-3 Introduction to Pascal or KIN 203-3 Computer applications in Kinesiology. Change applies to Major Program, Applied Physiology and Sports Science.	KIN 203-3 is of more benefit to Kinesiology students.
2, KIN 351, KIN 352, KIN 451, KIN 452, KIN 499	At the end of KIN 351, KIN 352, KIN 451, KIN 452 and KIN 499 add A student may not register for KIN 499 and CO-OP (KIN 351, KIN 352, KIN 451, KIN 452) concurrently.	Each of the CO-OP jobs and KIN 499 (Individual Research Semester) require full time involvement Either the student will not do a good job of either one of them if the two jobs are separate. If the two jobs are not separate then the student is being paid for KIN 499 and receiving credit for CO-OP.

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SIMON FRASER UNIVERSITY

MEMORANDUM

To: Lana Cooke Deans' Office Faculty of Applied Sciences	From: Parveen Bawa Undergrad Chairman
Subject: Calendar Changes	Date: Sept. 25, 1989

Enclosed please find additional calendar changes which were approved by the School of Kinesiology on Dec. 6, 1988.

The changes are:

1. KIN 460: Change prerequisites from BISC 202 and KIN 430 to BISC 201, KIN 105, KIN 142 and 90 credit hours.

2. KIN 461: Change prerequisites from KIN 305 and KIN 306 to KIN 105, KIN 142 and 90 credit hours.

KIN 105 is added instead of KIN 205 because a large number of Gerontology students take these courses.

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