

SIMON FRASER UNIVERSITY

S.83-51

MEMORANDUM

To..... SENATE

From..... SENATE COMMITTEE ON UNDERGRADUATE STUDIES

.....
Subject..... KINESIOLOGY - PROPOSED NEW COURSES
KIN. 325-3 - BASIC HUMAN ANATOMY;
KIN. 141-3 - INTRODUCTION TO SPORT
SCIENCE

.....
Date..... MAY 18, 1983

Action undertaken by the Senate Committee on Undergraduate Studies at its meeting of May 17, 1983 gives rise to the following motion:-

MOTION:

"That Senate approve and recommend approval to the Board of Governors, as set forth in S.83 - ~~51~~, the proposed

New course KIN. 325-3 - Basic Human Anatomy
New course KIN. 141-3 - Introduction to Sport Science"

Subject to the approval of KIN. 325-3 by Senate and the Board, the Senate Committee on Undergraduate Studies approved waiver of the two semester time lag requirement in order that this course may be first offered for Spring 1984-1.

It is noted that KIN. 325-3 is a revised DISC format of KIN. 326-3 - Functional Anatomy. It is proposed that KIN. 325-3 be available only through DISC.

(ISC. 83-7)
revised.

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

NEW COURSE PROPOSAL FORM

1. Calendar Information

Department: KINESIOLOGY

Abbreviation Code: KIN Course Number: 325

Credit Hours: 3 Vector: 3-1-0

Title of Course: BASIC HUMAN ANATOMY

Calendar Description of Course:

An introductory course in human anatomy for students interested in physical education, health science professions and liberal arts. Brief discussions of applied anatomy, aging, common dysfunctions and diseases are also included to enable the students to appreciate the relationship between structure and function.

Nature of Course Lecture and tutorial

Prerequisites (or special instructions): KIN 100-3 and 142-3. Available only through correspondence. This course forms part of the sequence of courses for those intending to teach physical education and will not be counted as an upper level optional course for a major in Kinesiology. (No further credit for students who have KIN 326).

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

None

2. Scheduling

How frequently will the course be offered? Every semester if needed

Semester in which the course will first be offered? 1984-1

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

N.M.G. Bhakthan,

3. Objectives of the Course

To provide a sound understanding of the three dimensional structure of the major systems in the body and how this structure relates to performance in daily living.

4. Budgetary and Space Requirements (for information only)

What additional resources will be required in the following areas:

Faculty None

Staff None

Library None

Audio Visual None

Space None

Equipment None

5. Approval

Date:

3rd March 83

19 April 83

N.M.G. Bhakthan
Department Chairman

J. W. Salvo
Dean

Chairman, SCUS

Rationale for a Kinesiology Course (KIN. 325-3) available only through DISC

The existing laboratory oriented course in Functional Human Anatomy (KIN. 326-3) is very expensive to run through the DISC format and the drop rate is very high (60-70%). The prime cause seems to be the two weeks laboratory component to be completed on campus. The Department has the option of either dropping the availability of this course through DISC format or modifying the nature of the course so that the students do not have to spend two weeks on campus to complete the laboratory component.

The Department decided to change the course from a theory laboratory format to only theory format and offer it through a new title and number. Hence the proposal for KIN. 325-3. This course will be available only through the DISC format. Students who have credits for KIN. 326-3 may not take KIN. 325-3 for further credit. KIN. 325-3 may be counted towards upper division requirements for a minor but not for a major or Honors in Kinesiology. Students who complete KIN. 325-3 and then decide to go through a major program in Kinesiology should audit KIN. 326-3 (laboratory component) and will be exempted from doing KIN. 326-3 as a required course.

KINESIOLOGY 325-3 BASIC HUMAN ANATOMY

Recommended Text Book Basic Human Anatomy by Alexander P. Spence
1982.

Course Outline:

Unit 1 Introduction to Anatomy

- Anatomical terminology
- Body positions
- Directional terms
- Regional terms
- Body planes
- Body cavities
- Fundamental tissues
- Epithelial tissues
- Connective tissues
- Muscle tissue
- Nervous tissue
- Review Questions

Unit 2 The Integumentary System

- Epidermis
- Dermis
- Hypodermis
- Glands of the Skin
- Hair
- Nails
- Common Pathologies of the integumentary system
- Review Questions

Unit 3 The Skeletal System

- Functions of the skeletal system
- Classification of bones
- Gross Anatomy of the bones
- Microscopic Anatomy of the bones
- Composition of bone
- Response of bone to stress
- Development of Bone
- Bone pathologies
- Effects of aging on the skeletal system
- Axial skeleton
- Appendicular skeleton
- Review Questions

Unit 4 Articulations

- Classification of joints and movements
- Synovial joints
- Glenohumeral joint
- Elbow joint

Radio-ulnar joints
Hip joint
Knee joint
Ankle joint
Common joint disorders
Effects of aging on the joints

Unit 5 The muscular System

Muscle types
Embryonic development of muscle
Gross and microscopic anatomy of skeletal muscles
Contraction of skeletal muscle
Muscle actions
Pathologies of muscle
Skeletal muscles of the human body
Muscles of head and neck
Muscles of the trunk
Muscles of the upper limbs
Muscles of the lower limbs
Review Questions

Unit 6 The Nervous System

Organization of the Nervous System
Embryonic Development
Components of the Nervous System
Central Nervous System
Peripheral Nervous System
Autonomic Nervous System
Organs of the Special Senses
Review Questions

Unit 7 The Respiratory System

Embryonic Development
Nasal cavity
Pharynx
Larynx
Trachea
Bronchi
Lungs
The pleura
Mechanics of breathing
Common Diseases
Effects of Aging
Review Questions

Unit 8 The Cardiovascular System

Embryonic development of the heart
Anatomy of the heart
Circulation through the heart
Conducting system of the heart
Heart disorders

Blood vessels and lymphatics
General structure of blood vessel walls
Structure of arterial system
Structure of venous system
Diseases of the vascular system
Special circulatory pathways
Lymphatic System
Review Questions

Unit 9 The Gastrointestinal System

Embryonic Development
Anatomy of the digestive system
Mouth, tongue, teeth, salivary glands,
Pharynx, Esophagus, stomach, small intestine,
large intestine, rectum and anal canal
Accessory digestive organs
Pancreas
Liver
Gall bladder and bile ducts
Common pathologies of the digestive system
Review Questions

Unit 10 The Genitourinary System

Embryonic Development
Urinary System
Male reproductive System
Female reproductive System
Pregnancy and fetal development
Fetal circulation
Disorders of the reproductive system
Review Questions

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

NEW COURSE PROPOSAL FORM

(I.S.C. 83-6)
(revised)

1. Calendar Information

Department: KINESIOLOGY

Abbreviation Code: KIN Course Number: 141

Credit Hours: 3 Vector: 2-1-0

Title of Course: INTRODUCTION TO SPORT SCIENCE

Calendar Description of Course:

This is an introductory course presenting a broad overview of factors contributing to athletic performance. The role of the scientist in developing technologies, training environments and training methods contributing to elite performance will be studied.

Nature of Course Lecture/tutorial

Prerequisites (or special instructions):

B.C. Grade 12 sciences recommended.

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

None

2. Scheduling

How frequently will the course be offered? Twice a year

Semester in which the course will first be offered? 1983-3

Which of your present faculty would be available to make the proposed offering possible? E.W. Banister

3. Objectives of the Course

To introduce students to the scientific and medical methods used to enhance and support physical performance.

4. Budgetary and Space Requirements (for information only)

What additional resources will be required in the following areas:

Faculty none

Staff none

Library none

Audio Visual none

Space none

Equipment none

5. Approval

Date: March 31st 83

21 March 83

[Signature]
Department Chairman

[Signature]
Dean

Chairman, SCUS

KINESIOLOGY 141

INTRODUCTION TO SPORT SCIENCE

Vector: 2-1-0-

Purpose:

The aim of this course is to review scientific and medical methods enhancing and supporting physical performance in athletes. The lectures will cover a broad range of topics, stressing broad principles, the detail of which will be considered in more advanced courses later. Students will be introduced to the complexity of processes providing for the production and continuance of superior athletic performance.

Content:

Part I: Basic Elements Affecting Athletic Performance.

1. Discrimination of Natural ability, genetic factors in performance evidenced in biochemical, morphological individuality - sex differences twin studies.
2. Systems Model of Performance - Training, daily living skills feedback etc.
3. Psychological Factors in Performance - Mental Strategies.
4. Technological Innovation, Equipment, Studies, surfaces, clothing.

Part II: Sports Medicine's Role in Sustaining the Athlete

5. Skeletal Injuries - prevention, treatment rehabilitation.
6. Cardio-respiratory fitness development and maintenance.
7. Nutrition - Special requirements of the athlete.
8. Ergogenic Aids drugs, blood doping, hyperoxia, hypnosis.

Part III: Important Factors in developing Peak Performance:

9. Relative Importance of Aerobic, Anereobic and Musculoskeletal Power.
10. Evaluation of Training - its precise quantification.
11. Technology for Time/cost effective training.
12. Biomechanical Factors influencing performance.
13. Consolidation of a Systems model for evaluation of all factors affecting optimal athletic performance.

Books: Fundamentals of Sports Training

L. Matveyev, 1981

Sports Physiology

E.L. Fox, 1978