

Division: ACADEMIC

 DATE: February 28, 1992

 B: Department: SCIENCE & MATHEMATICS

 New Course: X

Revision of Course Information form: _____

DATED: _____

C: <u>Biology 109</u>	D: <u>Human Anatomy and Physiology</u>	E: <u>3</u>
Subject & Course No.	Descriptive Title	Semester Credit

F: Calendar Description

This course introduces the basic organization of the human body and examines the anatomy and physiology of cells, tissues, integumentary system, skeletal system, articulations, muscular systems and nervous system. Enrolment is usually limited to students in the Physical Education program.

Summary of Revisions:
 (Enter date & section)
 Ex: Section C,E,F, &R

G: Type of Instruction:	Hours Per Week/	
	Per Semester	
Lecture	_____ Hrs.	
Laboratory	<u>3</u> Hrs.	
Seminar	<u>2</u> Hrs.	
Clinical Experience	_____ Hrs.	
Field Experience	_____ Hrs.	
Practicum	_____ Hrs.	
Shop	_____ Hrs.	
Studio	_____ Hrs.	
Student Directed Learning	_____ Hrs.	
Other	_____ Hrs.	
TOTAL	<u>5</u> HOURS	

H: Course Prerequisites:
 Nil

I: Course Corequisites:
 Nil

J: Course for which this course is a pre-requisite
 Bio 209, PE 309, PE 409

K: Maximum Class Size:
 25

M: Transfer Credit:
 Requested _____
 Granted X
 Specify Course Equivalents or Unassigned Credit as Appropriate

 U.B.C. BIO 109/209 = PE 391(3)
 S.F.U. BIO 109/209 = KIN 205(3) + KIN(3)
 U. Vic. BIO 109/209 = PE 141(1.5) + 241B(1.5) or PE 100 level(3)

 OTHER:

L: College Credit Transfer X
 College Credit Non-Transfer _____

Suzanne Perks
 COURSE DESIGNER(S)
[Signature]
 DIRECTOR/CHAIRPERSON

[Signature]
 DIVISIONAL DEAN
[Signature]
 REGISTRAR

**N: Textbooks and materials to be purchased by students
(Use Bibliographic Form):**

1. Spence, A.P. and E.B. Mason. Human Anatomy and Physiology. West Publishing Co. St. Paul, Minn. 1992.

2. Biology 109 Laboratory Manual.

Complete Form with Entries Under the Following Headings:

- O. Course Objectives; P. Course Content; Q. Method of Instruction;
R. Course Evaluation

P. Course Objectives:

Upon completion of this course, the student should be able to:

1. describe the structure and function of cells
2. explain how materials enter into and exit from cells
3. describe the structure and function of epithelial, connective, muscular and nervous tissue
4. explain homeostatic mechanisms in the human body
5. describe the body's structure and organization
6. describe the structure and function of the integumentary system
7. describe the structure and function of cartilage and bone
8. name the bones making up the skeleton
9. describe the structure and function of fibrous, cartilaginous and synovial joints
10. describe first, second and third-class levers and explain biomechanical principles
11. describe the structure and function of smooth, cardiac and skeletal muscle
12. describe kinds of muscle contractions and explain the mechanism of contraction
13. name major skeletal muscles and give their origins, insertions and functions
14. describe the organization of the nervous system
15. describe the structure and function of nervous tissue, brain and spinal cord
16. explain the mechanism of nerve impulse transmission
17. describe types of sensory receptors and explain reflex arc physiology
18. describe disorders of the joints and the integumentary, skeletal, muscular and nervous systems
19. identify structures on slides, models and charts and conduct tests and experiments related to course objectives

9. **MUSCULAR SYSTEM**
- muscle types
 - characteristics
 - muscle growth and development
 - skeletal muscle
 - types of fibers
 - gross anatomy
 - microscopic anatomy
 - mechanism of contraction
 - kinds of contractions
 - smooth muscle
 - structure and function
 - cardiac muscle
 - structure and function
 - muscle homeostasis
 - muscle disorders
 - principal skeletal muscles
10. **NERVOUS SYSTEM**
- organization - CNS, PNS, ANS
 - growth and development
 - brain - structure and function
 - spinal cord-structure and function
 - physiology of impulse transmission
 - spinal and cranial nerves
 - neurotransmitters
 - reflex arc
 - sensory receptors
 - proprioception
 - sensory and motor pathways
 - motor unit
 - special senses - vision, hearing, smell, taste
 - nervous system disorders

Q. Method of Instruction

There is a weekly lecture and laboratory period. In the lecture, the student is evaluated on the previous week's work by a written test. The current week's work is introduced and discussed.

In the laboratory period, students study basic human anatomy and physiology using models, charts, microscope slides, demonstration materials, audiotapes, videotapes, and test procedures.

R. Evaluation

Evaluation will be carried out in accordance with Douglas College policy. The instructor will present a written course outline with specific evaluation criteria at the beginning of the semester. Evaluation will be based on the following:

1.	Weekly tests	10 - 20%
2.	Laboratory evaluations	10 - 20%
3.	Laboratory examinations:	
	a) Midterm	5 - 10%
	b) Final	5 - 10%
4.	Comprehensive examinations:	
	a) Midterm	20 - 30%
	b) Final	20 - 30%