

Y 01-02

SEP. 10 2002

**Grande Prairie Regional College
Department of Science and Technology**

**PZ 1500 Elementary Physiology I Course Outline – 1st Year Nursing (CBL)
Fall 2001**

PZ 1500 Elementary Physiology I 3(3-0-0)

This is an introductory course in physiology for the health sciences. It is available only to students in the Nursing program.

The first semester of this course covers fundamental concepts in physiology. The second semester of this course follows the topics outlined in the scenarios presented in the CBL Nursing program. Some of the topics covered will require extra reading / study by the students.

Textbook : Saladin, K.S. (2001), Anatomy and Physiology : The unity of form and Function, 2nd ed., WCB / McGraw-Hill, Boston MA
ISBN 0-07-115547-3

Resource Person : Dr. Sean Irwin

office - J223

phone - 539-2860 (w)

- 538 -1278 (h)

Fixed Resource Session : Tuesday / Thursday 13:00 – 14:20, J226

Evaluation:	Mid-term exam I.....20%
	Fall final exam35%
	Midterm exam. II.....20%
	Winter final exam.....25%
	Total 100%

Office Hours : Monday – 13:00 – 14:20 pm
Wednesday – 10:00 – 11:20 am
Friday -10:00 – 11:20 am
Also by appointment

PZ 1500 - Elementary Physiology I - Fall 2001

Week 1 :

Introduction to physiology : Chapter 1 pg. 20 - 22

- homeostasis
- feedback mechanisms

Enzymes and Metabolism : Chapter 3 pg. 82 – 98

- enzymes and metabolism

Week 2:

The Cell : Chapter 4 pg. 111 – 135.

- cell structure
- plasma membranes
- membrane transport /gating
- cellular respiration

Week 3:

Cellular Function : Chapter 5 pg. 140 - 158.

- nucleic acids
- protein synthesis
- cell cycle

Week 4 and 5:

The Circulatory System : Blood : Chapter 18 pg. 640-669.

- functions and properties of blood
- plasma
- blood cell formation
- erythrocytes - anemia
- blood types
- leukocytes
- hemostasis
- C.V. - coagulation disorders

Midterm I – Thurs. Oct. 11

Week 6:

The immune system : Chapter 21

- the lymphatic system
- innate immunity
- acquired immunity
- disorders of the immune system
- C.V. - allergies

Week 7:

Nervous Tissue : Chapter 13 pg. 430 – 453.

- cells
- electrophysiology of neurons
- synapses
- neural integration
- C.V. - Alzheimer disease

Week 8:

Muscle Tissue : Chapter 12 pg. 394 - 422.

- muscle tissue
- microscopic anatomy of skeletal muscle
- muscle innervation
- contraction and relaxation
- smooth muscle
- C.V. - Muscular Dystrophy

Week 9:

Autonomic Nervous System and Somatic Reflexes : Chapter 15 pg.525-544.

- Nature of reflexes
- Mechanism
- Flexor (withdrawal) reflex
- The Autonomic Nervous System

Fall Final Exam - Thursday Nov.16

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Evaluation:	Mid-term exam I.....	20%
	Fall final exam	25%
	Midterm exam. II.....	15%
	Winter final exam.....	40%
	Total	100%

Office Hours : Monday – 13:00 – 14:20 pm
Thursday – 11:30 – 12:50 pm
Friday -10:00 – 11:20 am
Also by appointment

PZ 1500 - Elementary Physiology I - Winter 2002

Muscle Tissue : Chapter 12

- The nerve-muscle relationship pg. 424-426
- Behavior of skeletal muscle fibers pg. 429-33
- Muscle metabolism pg. 439-41

Learning Package 1.2.1 – We're Expecting

Sexual Reproduction: Chapter 27 pg. 1017

- Sex determination pg. 1018
- Meiosis pg. 1032

The Male Reproductive System : Chapter 27

- Puberty pg. 1030-31
- Spermatogenesis pg. 1032-36

The Female Reproductive System : Chapter 28

- Puberty pg. 1056
- Oogenesis and the sexual cycle pg. 1058-65
- Methods of contraception: Clinical insight 28.4

Human Development : Chapter 29 pg. 1028 – 1030

- Fertilization and pre-embryonic development pg. 1085-89

Scenario 1.2.2 – Mark Hofer

Respiratory System : Chapter 22

- Mechanics of ventilation pg. 854-57
- Neural control of ventilation pg. 860-62
- Gas exchange and transport pg. 862, 865-68
- Blood chemistry and respiration pg. 870-71
- Chronic Obstructive Pulmonary Disease pg. 872

Quiz – Jan. 24

Scenario 1.2.3 – Misty

Sense Organs : Chapter 16

- Classification of receptors pg. 589

The Chemical Senses -

- The physiology of taste (gustation) pg. 595-96
- The physiology of smell (olfaction) pg. 598

Hearing and Equilibrium –

- The nature of sound pg. 599-600
- The physiology of hearing 603-07
- Equilibrium pg. 607-11

Vision –

- Formation of an image pg. 619-21
- Sensory transduction in the retina pg. 621-629
- Colour vision pg. 629
- Stereoscopic vision pg. 629
- The visual projection pathway pg. 630

Scenario 1.2.4 – Melanie Clark

Menopause : Chapter 28

- Climacteric and menopause pg. 1057

Cancer : Chapter 5 pg.156-59

Breast Cancer: Chapter 28 pg. 1053-56

Final Exam - February 21 13:00 - 14:30, J226