

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

**PZ 1500 Elementary Physiology I Course Outline – Fall 2006**

**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. (2006), Anatomy and Physiology : The unity of form and Function, 4th ed., McGraw-Hill, Boston MA  
ISBN 0-07-287506-2

**Resource Person :** Dr. Sean Irwin  
office - J223  
phone - 539-2860 (w)  
- 567 -2226 (h)

**Fixed Resource Session :** Mon. 1:00 - 14:20, D208  
Fri. 1:00 - 14:20, D208

**Evaluation:**

Quiz I	.....15%	To defer an exams due to illness you will require a medical note.
Fall final exam	.....35%	
Quiz II	.....15%	
Winter final exam.....	35%	
Total	100%	

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

<b>Alpha Grade</b>	<b>Approximate Percentage</b>
A+	90 – 100
A	85 – 89
A-	80 – 84
B+	76 – 79
B	73 – 75
B-	70 –72
C+	67 – 69
C	64 – 66
C-	60 – 63
D+	55 – 59
D	50 – 54
F	0 – 49

## **PZ 1500 - Elementary Physiology I - Fall 2006**

### **Week 1 :**

#### **Introduction to physiology.: Chapter 1 pg. 17 - 19**

- homeostasis
- feedback mechanisms

#### **Enzymes and Metabolism : Chapter 2 pg. 80 – 84**

- enzymes and metabolism
- ATP

### **Week 2:**

#### **The Cell : Ch. 3: 102 – 111**

- membrane transport

#### **Cellular Respiration - Ch. 26: 1013 – 1019**

- Carbohydrate metabolism

### **Week 3:**

#### **Cellular Function : Chapter 4: 131 - 142.**

- protein synthesis
- DNA replication and the cell cycle

### **Week 4:**

#### **The Circulatory System : Blood ; Ch. 18.**

- functions and properties of blood
- blood cell formation
- blood types
- hemostasis
- C.V. - coagulation disorders

#### **- Quiz I – Mon. Oct. 2**

### **Week 5:**

#### **Nervous Tissue : Ch. 12. 443 – 467.**

- cells
- electrophysiology of neurons
- synapses

### **Week 6:**

#### **Muscle Tissue : Ch. 11: 406 – 421, 426 - 428.**

- muscle tissue
- muscle innervation
- contraction and relaxation
- muscle metabolism

### **Week 7:**

#### **Somatic Reflexes : Ch. 13: 501 - 507.**

- Mechanism

#### **Autonomic Nervous System Ch. 15: 564 – 566, 574 – 579.**

- The Autonomic Nervous System
- Autonomic effects on target organs

#### **Fall Final Exam – Mon. Oct. 23**

## PZ 1500 - Elementary Physiology I - Winter 2007

### Learning Package 1.2.1 – We're Expecting (2 weeks)

#### Male Reproductive System : Chapter 27 pg. 1019, 1030.

- sex determination
- puberty

#### Female Reproductive System : Chapter 28 pg. 1059-60, 1061 – 1068.

- puberty
- oogenesis and the sexual cycle

#### Birth Control: Chapter 28 pg. 1079 – 1081.

- birth control methods

#### Human Development : Chapter 29 pg. 1090 – 1091.

- fertilization and pre-embryonic development
- C.V. – *in vitro* fertilization

### Scenario 1.2.2 – Mark Hofer (2 weeks)

#### Respiratory System : Chapter 22 pg. 851- 5; 860- 5; 867-9.

- pressure and flow - Boyles Law
- inspiration and expiration
- resistance and surface tension
- alveolar ventilation
- alveolar gas exchange
- gas transport
- systemic gas exchange
- oxygen imbalances
- C.V. - COPD

#### Quiz -

### Scenario 1.2.3 – Jean (2 weeks)

#### Sensory Organs : Chapter 16 pg. 589 - 627.

- Sensory Receptors (Pain)
- Taste (gustation)
- Smell (olfaction)
- Hearing
- Vision

### Scenario 1.2.4 – Melanie Clark (1 week)

#### Menopause : Chapter 28 pg. 1060.

- climacteric and menopause

#### Cancer and the Cell Cycle : Chapter 4 pg. 151 – 52.

- causes of cancer
- C.V. – breast cancer

#### Final Exam –