

Science Department
Grande Prairie Regional College

PZ1500 A2/B2 Elementary Physiology I 3(3-0-0)
2008 -- 2009

General Information:

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|--------------|---|---------|--------------------|
| Instructor: | Ray Kardas | Office: | C418 |
| Phone: | 539-2990 | E-Mail: | rkardas@gprc.ab.ca |
| Class Time: | Tuesdays/Thursdays from 1:00 – 2:20 in D208 | | |
| Office Time: | TBA | | |

Course Description:

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 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.

Transferability: UA, UC, AU, AF, Other

Textbook: Stanfield, C.L. and Germann, W.J. (2009). Principles of Human Physiology, 3rd ed. San Francisco: Pearson.

Evaluation:

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|-------------------|------------|
| Quiz I | 15% |
| Fall Final Exam | 35% |
| Quiz II | 15% |
| Winter Final Exam | <u>35%</u> |
| Total | 100% |

Grading System:

| Letter Grade | Grade Point Value | Percentage Range |
|--------------|-------------------|------------------|
| A+ | 4.0 | 94 – 100 |
| A | 4.0 | 89 – 93 |
| A- | 3.7 | 85 – 88 |
| B+ | 3.3 | 81 – 84 |
| B | 3.0 | 77 – 80 |
| B- | 2.7 | 72 – 76 |
| C+ | 2.3 | 69 – 71 |
| C | 2.0 | 64 – 68 |
| C- | 1.7 | 60 – 63 |
| D+ | 1.3 | 55 – 59 |
| D | 1.0 | 50 – 54 |
| F | 0.0 | Below 50 |

Course Schedule – Fall 2008:

- Week 1: Introduction to Physiology: Chapter 1, pgs. 9 – 18
- Homeostasis
 - Feedback mechanisms
- Cell Structure and Function: Chapter 2, pgs. 22 – 56
- Week 2: Cell Metabolism: Chapter 3, pgs. 59 – 92
- Membrane transport
- Week 3: Cell Membrane Transport: Chapter 4, pgs. 95 – 123
- Week 4: The Circulatory System (Blood): Chapter 15, pgs. 437 – 451
- Functions and properties of blood
 - Blood cell formation
 - Blood types
 - Hemostasis
 - C.V. coagulation disorders
- Quiz 1: September 30, 08
- Week 5: Nervous Tissue: Chapter 7, pgs. 167 – 194
- Cells
 - Electrophysiology of neurons
 - Synapses
- Week 6: Muscle Tissue: Chapter 12, pgs. 323 – 358
- Muscle tissue
 - Muscle innervations
 - Contraction and relaxation
 - Muscle metabolism
- Week 7: Somatic Reflexes: Chapter 9, pgs. 216 – 242
- Mechanism
- Autonomic Nervous System: Chapter 11, pgs. 303 – 320
- The autonomic nervous system
 - Autonomic effects on target organs

Fall Final Exam: October 21, 08