

GRANDE PRAIRIE REGIONAL COLLEGE

DIPLOMA NURSING PROGRAM
COURSE OUTLINE - FALL 1994

COURSE: PZ 1621 ELEMENTARY PHYSIOLOGY 1994/95

INSTRUCTOR: PAUL LEMAY OFFICE J224
TEL. 539-2863 (HOME 532-3766)

LABORATORY
TECHNICIAN: RICK SCOTT OFFICE J121
TEL. 539-2953

NATURE OF
THE COURSE: PZ 1621 considers the operation of the human body. The course
is organized to complement Structural Anatomy PE 1000.

EVALUATION: Lecture:
Tests (multiple choice, short answer and class
presentations) 3 @ 7%
1 @ 9% 30%
Comprehensive lecture final examination 40%

Laboratory:
Tests 2 @ 7.5 15%
Comprehensive laboratory final test 15%
100%

TEXTBOOKS:

Hole, John W. Jr. 1993. Human Anatomy and Physiology, 6th
Ed., Wm. C. Brown Company Publishers.

Hole, John W. Jr. 1993. Laboratory Manual Human Anatomy and
Physiology, 6th Ed., Wm. C. Brown Company Publishers.

Hole, John W. Jr. 1993. Student Study Guide Human Anatomy
and Physiology, 6th Ed., Wm. C. Brown Company Publishers

LECTURE OUTLINE

TOPICS	CHAPTER IN WHOLE
1. Introduction	
Human physiology and anatomy	1
Characteristics of life	
Maintenance of life	
Elementary chemistry	2
2. Cell Physiology	3, 4
Cell theory	
Cell membranes	
Cell organelles	
Movement through cell membranes	
Cell reproduction	
Cell metabolism	
Process	
Control of metabolic reactions	
Energy for metabolism	
Metabolic pathways	
Carbohydrate	
Lipid	
Protein	
Nucleic acids	
3. Skin and the Integumentary System	6
Growth and repair	
Regulation of body temperature	
Skin color	
Skin disorders	
4. Support and Movement	
Skeletal system	7
bone growth and development	
functions	
blood cell formation	
Muscular system	9
muscle contraction	
muscular response	
skeletal muscle actions	
5. Integration and Coordination	
Nervous system	10, 11
impulse generation and conduction	
synaptic transmission	
processing of impulses	
nerve pathways	
functional divisions of the nervous system	
meninges	

spinal cord
 brain
 peripheral nervous system
 autonomic nervous system

6.	Somatic and Special Senses 12	Receptors and sensations Somatic senses Special senses Sense of smell Sense of taste Sense of hearing Sense of equilibrium Sense of sight
7.	Endocrine system 13	hormones and their action control of hormonal secretions survey of glands
8.	Digestive system 14, 15	mechanical, chemical and enzymatic digestion along the alimentary canal nutrition and metabolism carbohydrates lipids proteins energy expenditure vitamins minerals diet
9.	Respiratory system 16	control of breathing and mechanism gas exchange transport of gasses
10.	Circulatory system. 17, 18	blood blood and blood cells blood plasma hemostasis blood groups and transfusions structure and actions of the heart blood vessels blood pressure paths of circulation
11.	Lymphatic System and Immunity 19	Formation and function of lymph

- Movement of lymph
- Lymph nodes
- Thymus and spleen
- Body defence against infection
- Nonspecific immunity
- Specific immunity

- 12. Elimination and excretion 20, 21
 - Kidneys
 - Formation of urine
 - Elimination of urine
 - Fluid, electrolyte, and acid/base balance
 - distribution of body fluids
 - water balance
 - electrolyte balance
 - acid base balance

- 13. Life Cycle 22
 - Sex cell formation
 - Endocrine control of reproduction
 - Overview of human growth and development

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PZ 1621 LABORATORY SCHEDULE 1994/95

<u>DATE/TIME</u>	<u>LAB NO.</u>	<u>TITLE</u>	<u>EXERCISE NO. PAGE</u>
Oct 27, 1:30 PM	1	Movement through Cell Membranes Physiological Recording Equipment Skeletal Muscle Contraction	4 18
	2	Self Study Reflex Arc and Reflexes	27
Class time (Nov 17?)	3	Receptors and Somatic Senses Smell and Taste Ear and Hearing Equilibrium Eye Visual Tests	31 32 33 34 35 36
Jan 5, 1:30 PM	4	PZ 1621 Laboratory Test #1 (2.5%) Action of Digestive Enzyme	40
Jan 12, 1994	5	Breathing and Respiratory Volumes and Capacities Control of Breathing	43 44
Jan 19	6	Blood Testing Blood Typing	46 47
Jan 26	7	Laboratory Test #2 (7.5%)	
Feb 2	8	The Cardiac Cycle Factors Affecting The Cardiac Cycle Pulse Rate and Blood Pressure	49 50 52
Feb 9	9	Urinalysis Fertilization	57 62
March 9	10	Laboratory final (15%)	

*1 Lab Manual

Hole, John W, Jr. 1993. Human Anatomy and Physiology
6th Ed. Wm. C. Brown Company Publishers.