



**I. COURSE DESCRIPTION:**

This course is a continuation of the study of the healthy human body. This course will study the structure and function of the respiratory, immune and lymphatic systems. A regional study of the upper limb, lower limb and back completes the course.

**II. LEARNING OUTCOMES:**

Upon successful completion of this course the student will be able to:

1. Explain basic concepts relevant to field of microbiology.
2. Describe the structure, function and location of the major blood vessels, lymphatic and immune systems.
3. Describe the regional anatomy of the upper limb, back, lower limb, head, neck, shoulders, abdomen and thorax.
4. Explain muscle physiology.
5. Palpate and explain the location of all palpable muscles of the limbs, neck, head, abdomen, thorax and back.

**III. TOPICS:**

**A. Basic Concepts of Microbiology:**

1. Common infective agents
2. Structure and function of bacterial cell and virus
3. Chain of infection
4. Body's defence mechanism
5. Prevention of infection

**B. Lymphatic System:**

1. Lymphatic vessels
  - distribution and structure
  - lymph transport
2. Lymph cells, tissues and organs
3. Lymph nodes
  - location of superficial nodes (applied)
  - structure and function
4. Other lymph organs
  - structure and function of spleen, thymus, tonsils

**III TOPICS (Continued)**

**C. Circulatory System**

1. Location and distribution of all major blood vessels.

**D. Immune System:**

1. Non-Specific body defences
  - a) surface membrane barriers
  - b) non-specific cellular and chemical defences
    - phagocytosis
    - inflammatory process and repair
    - body's antimicrobial substances
    - fever
2. Specific body defences: immunity
  - a) antigens
  - b) cells of the immune system
  - c) humoral immune responses
    - definition
    - structure and function of components and cells
    - active and passive immunity
    - vaccination protocol in Canada
  - d) cell mediated immune response
    - definition
    - structure and function of components and cells
  - e) homeostatic imbalances
3. Developmental aspects of immunity

**E. Respiratory System:**

1. Functional anatomy
2. Mechanics of breathing
3. Gas exchanges in the body
4. Transport of respiratory gases by blood
5. Control of respiration
6. Developmental aspects

**F. Microbiology**

**G. Neurophysiology**

**III TOPICS (Continued)**

**H. Regional Anatomy of Upper Limb:**

1. Detailed description of muscles for back, upper and lower limbs, thorax, abdomen and head, neck and shoulders
  - location
  - origin/insertion
  - action
  - innervation
2. Palpable surface landmarks
3. Muscle Physiology of skeletal muscle and smooth muscle

**IV. REQUIRED RESOURCES/TEXTS/MATERIALS:**

Marieb, Elaine. (1998). Human Anatomy and Physiology (4<sup>th</sup> ed.). The Benjamin/Cummings Publishing Co. Inc.

Kaput, The Anatomy Colouring Book, Harper-Collins.

Taber's Cyclopedic Medical Dictionary, (1993), (17<sup>th</sup> ed.). F.A. Davis.

Moore, Keith. (1999). Clinical Oriented Anatomy. (4<sup>th</sup> ed.). Lippincott.

Biel, Andrew. (1997). Trail Guide to the Body. Andrew Biel.

Disposable gloves, protective eye wear.

**V. EVALUATION PROCESS/GRADING SYSTEM:**

**A. Evaluation Methods**

Allan's Theory	=	20%
Marion's Theory	=	30%
Lab Exam	=	15%
Theory Exam	=	35%

**V. EVALUATION PROCESS/GRADING SYSTEM:**

**B. Grading**

1. Students need to pass theory independently in order to receive a pass in this course.
2. All students must pass the biology lab test in order to receive a pass in this course.
3. Students who miss scheduled tests during the semester will not be allowed to write on another day.
4. If the instructor has been appropriately notified of your absence for the test, the test you missed will count for the same percentage as you receive on the final exam. If you have not notified your instructor you will receive a grade of 0 for the missed test.
5. Each student must write the final exam and do any required assignments.

**C. Supplemental Exam**

1. A supplemental examination will be offered individually for theory and biology lab.
2. A supplemental exam will only be offered to students who have been unsuccessful in theory and/or biology lab.
3. The final grade for the semester will be based solely on the supplemental exam. The grade achieved will not be higher than a "C".
4. Supplemental exams will not be repeated.

**V. EVALUATION PROCESS/GRADING SYSTEM:**

The following semester grades will be assigned to students in postsecondary courses:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 - 100%	4.00
A	80 - 89%	3.75
B	70 - 79%	3.00
C	60 - 69%	2.00
R (Repeat)	59% or below	0.00
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field placement or non-graded subject areas.	
U	Unsatisfactory achievement in field placement or non-graded subject areas.	
X	A temporary grade. This is used in limited situations with extenuating circumstances giving a student additional time to complete the requirements for a course (see <i>Policies &amp; Procedures Manual – Deferred Grades and Make-up</i> ).	
NR	Grade not reported to Registrar's office. This is used to facilitate transcript preparation when, for extenuating circumstances, it has been impossible for the faculty member to report grades.	

**VI. SPECIAL NOTES:**

Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your instructor and/or the Special Needs office. Visit Room E1204 or call Extension 493, 717, or 491 so that support services can be arranged for you.

**VI. SPECIAL NOTES:**

Retention of course outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Rights and Responsibilities*. Students who engage in “academic dishonesty” will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course, as may be decided by the professor. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

The Professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

**VII. PRIOR LEARNING ASSESSMENT:**

Students who wish to apply for advanced credit in the course should consult the instructor/coordinator.

**VIII. DIRECT CREDIT TRANSFERS:**

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.