EFFECTIVE: SEPTEMBER 2004
CURRICULUM GUIDELINES

A.	Division:	**Science and Technology**	Date:	**September 2004**			
B.	Department / Program Area	**Biology**	New Course			Revision	**X**
			If				

M: Course Objectives / Learning Outcomes

Upon completion of Biology 1103, the student will be able to:

1. Use a compound microscope, and describe and identify cell and tissue types in the body.
2. Describe the basic principles of homeostasis and negative feedback systems, and provide at least one example of a homeostatic mechanism.
3. Describe anatomical structures using appropriate terminology, and specify the locations of various organs and systems.
4. Describe the components and functions of the integumentary system.
5. Identify the components of the human skeleton, and describe the structure and growth of long bones.
6. Describe the types and range of movements of skeletal articulations.
7. Describe the basic principles of biomechanics.
8. Describe the location, structure, and functions of the major muscles of the body.
9. Describe the structure and functions of the cardiovascular and lymphatic systems.
10. Describe the origin, composition, and functions of blood.
11. Describe the basis of the ABO blood groups and explain the significance of this to blood transfusions.
12. Describe the mechanism of blood clotting.
13. Describe the basic organization of the immune system, and distinguish between non-specific and specific resistance, and further distinguish between cellular and humoral immunity.
14. Describe the structure and function of the respiratory system and describe the transport of gases in the blood.
15. Describe the gross anatomy of the digestive system and describe the digestion of carbohydrates, lipids, and proteins.
16. Describe the structure and function of carbohydrates, lipids, proteins, and nucleic acids.

N: Course Content:

The major topics in the course include the following:

1. The structure and function of cells:
   - The structure and function of various cytoplasmic and nuclear components.
   - The preparation of and examination (using a compound microscope) of human buccal and onion epidermal cells.
   - An explanation of the major cellular processes and their significance to the cell.
2. Homeostasis:
   - The definition of the term **homeostasis,** its importance, and the conditions required to fulfill homeostasis.
   - The definitions of the terms **internal environment, stress,** and **negative feedback system,** and their roles in homeostasis.
   - Examples of homeostatic mechanisms.

3. The organization of the human body beyond the cellular level:

- The structure and function of the four tissue types.
- The major body systems, their major organs, and the general function of each organ.
- Directional terms as they relate to the human body.
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O: Methods of Instruction

This course involves three hours per week of classroom instruction and two hours per week of laboratory activity. Classroom work will consist of two hours of lectures per week and one hour of group work (with instructor assistance) per week.

P: Textbooks and Materials to be Purchased by Students

Tortora and Grabowski. ***Principles of Anatomy and Physiology***. New York: John Wiley and Sons, Inc.

Douglas College produced manual: **Biology 1103: Human Biology I**.

Q: Means of Assessment

TYPE OF EVALUATION		**POINTS**
Class Tests and Assignments		20
Laboratory Reviews (seen Note 1 below)		(*up to* –22)
Laboratory Examination	- final	15
Comprehensive Examinations	- midterm	30
	- final	35

Course Designer(s)

Education Council / Curriculum Committee Representative

Dean / Director

Registrar