



**EFFECTIVE: SEPTEMBER 2001**

**CURRICULUM GUIDELINES**

**A:** Division: **Science and Technology**

Date: **15 January 2001**

**B:** Department/  
Program Area: **Biology**

New Course

Revision

If Revision, Section(s) Revised: **A, B, G, J, M, N, O, P, Q, R**

Date Last Revised: **March 1985**

**C: BIOL 110**

**D: Principles of Biology:the Biosphere**

**E: 5**

Subject & Course No.	Descriptive Title	Semester Credits
<p><b>F:</b> Calendar Description: This course is an introduction to the biosphere, the diversity of life and biotic interactions. The anatomy and physiology of organisms are also studied.</p>		
<p><b>G:</b> Allocation of Contact Hours to Types of Instruction/Learning Settings</p> <p>Primary Methods of Instructional Delivery and/or Learning Settings: <b>Seminar, Audio/transcript, Lecture, Student directed learning, Laboratory</b></p> <p>Number of Contact Hours: (per week / semester for each descriptor) <b>Seminar/lecture 2 hours/week.</b> <b>Audio/transcript/student directed learning 2 hours/week.</b> <b>Laboratory 3 hours/week</b></p> <p>Number of Weeks per Semester: <b>14</b></p>	<p><b>H:</b> Course Prerequisites: None</p>	<p><b>I:</b> Course Corequisites: None</p>
	<p><b>J:</b> Course for which this Course is a Prerequisite: (with Biol 210) Biol 300, 301, 302, 320, 321 and 322</p>	
	<p><b>K:</b> Maximum Class Size: 20</p>	
	<p><b>L:</b> PLEASE INDICATE:</p> <p><input type="checkbox"/> Non-Credit</p> <p><input type="checkbox"/> College Credit Non-Transfer</p> <p><input checked="" type="checkbox"/> College Credit Transfer: Requested <input type="checkbox"/> Granted <input checked="" type="checkbox"/></p>	
<p>SEE BC TRANSFER GUIDE FOR TRANSFER DETAILS (<a href="http://www.bccat.bc.ca">www.bccat.bc.ca</a>)</p>		

**M:** Course Objectives/Learning Outcomes

Upon completion of this course, students will:

1. Understand and be able to demonstrate an understanding of the relationship between the biotic and abiotic components of the biosphere, their interactions and relationship to evolution.
2. Be capable of using and demonstrating techniques for identifying plants and animals, including use of the microscope and dichotomous keys.
3. Understand and be able to explain the evolutionary relationships among major taxa.
4. Understand and be able to explain the anatomy, physiology and functional relationships of certain organisms within each major group.
5. Appreciate the scientific process, including the use of testable hypotheses.
6. Be able to demonstrate the use of common laboratory equipment.
7. Appreciate the study of Biology as a multi disciplinary adventure.

**N:** Course Content

The major topics in the course include the following:

1. Introduction to Evolution and Taxonomy
  - C theory of evolution
  - C introduction to components of the biosphere: levels of organization (from cells to biosphere)
  - C principles of taxonomy - binomial system of nomenclature
  - C construction of dichotomous keys, and use of the microscope to examine cells, organisms
  - C survey of major taxa, from viruses to animals
2. Introduction to Ecological Systems
  - C organization of biomes
  - C succession in terrestrial and aquatic habitats
  - C population dynamics and community interactions
  - C energy flow and nutrient cycling
  - C analysis of experimental design in energy flow
3. Introduction to how various organisms accomplish:
  - C support and movement
  - C nutrition and digestion
  - C respiration
  - C circulation of gases, fluids and materials
  - C reproduction
  - C excretion of wastes
  - C sensory perception and nervous coordination

Laboratory techniques:

  - C techniques required for the use of common laboratory equipment
  - C use of compound and stereomicroscopes
  - C preparation of various wet mounts for microscope work
  - C introduction to experimental methods
  - C various plant and animal dissections
  - C development of dichotomous keys

**O:** Methods of Instruction

This course involves two hours of lecture/seminar/week, two hours of student directed learning (audio/transcript) and three hours of laboratory work. The information content is integrated with laboratory experiments, problem sets, transcripts, journal articles and textbook readings.

**P:** Textbooks and Materials to be Purchased by Students

Campbell, Neil A., Jane B. Reece and Lawrence G. Mitchell. 1999. **Biology**, 5<sup>th</sup> Edition.  
Addison Wesley Longman, Inc.

Douglas College produced manual. **Biology 110: the Biosphere**. Fall 2000

**Q:** Means of Assessment

TYPE OF EVALUATION	POINTS
Weekly Class Evaluations	25
Laboratory Evaluations (see note 2 below)	
Laboratory Examination	
-midterm	5
-final	10
Comprehensive Examinations	
-midterm	30
- final	<u>30</u>
TOTAL	100

GRADES:	A <sup>+</sup> 95-100	A 90-94	A <sup>-</sup> 85-89	B <sup>+</sup> 80-84	B 75-79
	B <sup>-</sup> 70-74	C <sup>+</sup> 65-69	C <sup>-</sup> 55-59	P 50-54	F 0 - 49

## Notes:

1. Weekly Class Evaluations:  
Each week, there will be written evaluations in class based on the learning outcomes and other material covered in the previous week. There will normally be 10 weekly evaluations and the best 9 out of 10 evaluations will be averaged to determine this portion of the grade.
2. Laboratory Reviews:  
Required laboratory reviews will be assigned in most weeks, and these reviews must be completed in the laboratory in the week that they are assigned. The laboratory reviews are intended to provide an opportunity to review particular material with each student. Completion of the review will result in a grade of P (Pass), or R (Review Recommended) being marked on the laboratory card. If more than one review is not completed satisfactorily, (P or R), **one mark will be deducted from the course total for each lab review in excess of one that is not completed.**
3. Comprehensive Examinations:  
The final examination will cover the entire course. If the student achieves a better grade on the final exam than on the mid-term examination, the mid-term grade will be raised to equal that achieved on the final examination.
4. Spelling:  
Errors in spelling may result in lost marks, up to a maximum of 5% of each class evaluation, laboratory examination or comprehensive examination.

**R:** Prior Learning Assessment and Recognition: specify whether course is open for PLAR

At the moment, there is no provision for PLAR, other than that normally done by comparing transcripts of biology courses taken within the last five years to the Biology 110 course content.

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 Course Designer(s)
 

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 Education Council/Curriculum Committee Representative
 

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Dean/Director

Registrar

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