



EFFECTIVE: SEPTEMBER 2003 CURRICULUM GUIDELINES

A. Division: Science and Technology

Effective Date: September 2003

B. Department / Program
Area: Biology

Revision

New Course

If Revision, Section(s)

Revised: F,G,K,O,P,Q,R

Date of Previous Revision: January 2001

Date of Current Revision: May 2002

C: Biology 110

D: Principles of Biology: the Biosphere

E: 5

Subject & Course No.	Descriptive Title	Semester Credits						
<p>F: Calendar Description:</p> <p>This course is an introduction to the biosphere, the diversity of life and biotic interactions. The anatomy and physiology of various organisms is also studied. With Biology 210, this course fulfills the requirements of a first year university Biology course.</p>								
<p>G: Allocation of Contact Hours to Type of Instruction / Learning Settings</p> <p>Primary Methods of Instructional Delivery and/or Learning Settings:</p> <p>Lecture/Tutorial/Laboratory</p> <p>Number of Contact Hours: (per week / semester for each descriptor)</p> <p>Lecture/Tutorial 4 hours/week Laboratory 3 hours/week</p> <p>Number of Weeks per Semester: 14</p>	<p>H: Course Prerequisites:</p> <p>None</p>							
	<p>I: Course Corequisites:</p> <p>None</p>							
	<p>J: Course for which this Course is a Prerequisite</p> <p>(with Biol 210) Biol 300, 301, 302, 320, 321 and 322</p>							
	<p>K: Maximum Class Size:</p> <p>35</p>							
<p>L: PLEASE INDICATE:</p> <table style="width: 100%;"> <tr> <td style="width: 50px;"><input type="checkbox"/></td> <td>Non-Credit</td> </tr> <tr> <td><input type="checkbox"/></td> <td>College Credit Non-Transfer</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>College Credit Transfer:</td> </tr> </table> <p>SEE BC TRANSFER GUIDE FOR TRANSFER DETAILS (www.bccat.bc.ca)</p>			<input type="checkbox"/>	Non-Credit	<input type="checkbox"/>	College Credit Non-Transfer	<input checked="" type="checkbox"/>	College Credit Transfer:
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M: Course Objectives / Learning Outcomes

Upon completion of this course, the students will:

- 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.
- Be capable of using and demonstrating techniques for identifying plants and animals, including use of the microscope and dichotomous keys.
- Understand and be able to explain the evolutionary relationships among major taxa.
- Understand and be able to explain the anatomy, physiology and functional relationships of certain organisms within each major group.
- Appreciate the scientific process, including the use of testable hypotheses.
- Be able to demonstrate the use of common laboratory equipment.
- Appreciate the study of Biology as a multi disciplinary activity.

N: Course Content:

The major topics in the course include the following:

Introduction to Evolution and Taxonomy

- theory of evolution
- introduction to components of the biosphere: levels of organization (from cells to biosphere)
- principles of taxonomy – binomial system of nomenclature
- construction of dichotomous keys, and use of the microscope to examine cells, organisms
- survey of major taxa, from viruses to animals

Introduction to Ecological Systems

- organization of biomes
- succession in terrestrial and aquatic habitats
- population dynamics and community interactions
- energy flow and nutrient cycling
- analysis of experimental design in energy flow

Introduction to how various organisms accomplish:

- support and movement
- nutrition and digestion
- respiration
- circulation of gases, fluids and materials
- reproduction
- excretion of wastes
- sensory perception and nervous coordination

Laboratory techniques:

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

O: Methods of Instruction

There are four hours of lecture or tutorials per week, and three hours of laboratory work. The information content is integrated with laboratory experiments, problem sets, journal articles and textbook readings.

P: Textbooks and Materials to be Purchased by Students

Campbell, Neil A., and Jane B. Reece. 2002. **Biology**, 6th Edition. Benjamin Cummings

Douglas College produced manual: **Biology 110: the Biosphere**

Q: Means of Assessment

<u>TYPE OF EVALUATION</u>	<u>POINTS</u>
Tests and Assignments	20
Laboratory Reviews (see note 1 below)	(up to -22)
Laboratory Examination - final	15
Comprehensive Examinations - midterm	30
- final	<u>35</u>
TOTAL	100
GRADES:	A+ 95-100 A 90-94 A- 85-89 B+ 80-84 B 75-79 B- 70-74
	C+ 65-69 C 60-64 C- 55-59 P 50-54 F 0-49

Notes:

1. 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), two marks will be deducted from the course total for each lab review in excess of one that is not completed.** A student **must complete 50% of the reviews to receive a P or better grade in the course.**

2. Comprehensive Examinations:

There will be one midterm worth 30 marks in week 7 which will cover the course content to that point. The final examination will cover the entire course. If the student achieves a better grade on the final exam than on the midterm examination, the midterm grade will be raised to equal that achieved on the final examination.

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

There is no provision of PLAR, other than that normally done by examining transcripts and comparing course outlines of biology courses taken within the last five years elsewhere to the Douglas College Biology 110 course content.

 Course Designer(s)

 Education Council / Curriculum Committee Representative

 Dean / Director

 Registrar