UNIVERSITY COLLEGE of the FRASER VALLEY

COURSE IMPLEMENTATION DATE:
COURSE REVISED IMPLEMENTATION DATE: [**September 2003**]
COURSE TO BE REVIEWED DATE: [**September 2007**]
(Four years after implementation date)

OFFICIAL COURSE OUTLINE INFORMATION

Students are advised to keep course outlines in personal files for future use.

Shaded headings are subject to change at the discretion of the department and material will vary - see course syllabus available from instructor

FACULTY/DEPARTMENT: **BIOLOGY DEPARTMENT**

BIO 112		**5**
COURSE NAME/NUMBER	FORMER COURSE NUMBER	UCFV CREDITS

INTRODUCTORY BIOLOGY II

COURSE DESCRIPTIVE TITLE

CALENDAR DESCRIPTION:

Continues the study begun in BIO 111 of the principles of biology. This course includes a study of the interaction of organisms with one another and with their physical environment as they relate to the anatomy and physiology of plant and animal systems, the diversity of life on the planet, and evolution.

PREREQUISITES: Biology 111 or instructor's permission

COREQUISITES: None

SYNONYMOUS COURSE(S)
(a) Replaces: N/A
(Course #)
(b) Cannot take N/A for further credit
(Course #)

SERVICE COURSE TO:
(Department / Program)
(Department / Program)

TOTAL HOURS PER TERM: **102**

STRUCTURE OF HOURS:

Lectures:	**45**	hrs
Seminar:		hrs
Laboratory:	45	hrs
Field Experience:		hrs
Student Directed Learning:		hrs
Other (Specify): Tutorial	12	hrs

TRAINING DAY-BASED INSTRUCTION
LENGTH OF COURSE:
HOURS PER DAY:

MAXIMUM ENROLMENT: **36**

EXPECTED FREQUENCY OF COURSE OFFERING: Every year

WILL TRANSFER CREDIT BE REQUESTED? **YES** X **NO**

TRANSFER CREDIT EXISTS IN BCCAT TRANSFER GUIDE: **YES** X **NO**

AUTHORIZATION SIGNATURES:

Course designer(s): Barbara Moon, Terry Starr, Tony Stea
Chairperson: *(Curriculum Committee)*
Department Head: Edith Camm
Dean: K. Wayne Welsh
PAC Approval in Principle Date:
PAC Final Approval Date: January 29, 2003

BIO 112

COURSE NAME / NUMBER

LEARNING OBJECTIVES / GOALS / OUTCOMES/ LEARNING OUTCOMES:

After completing this course, a student will have a firm understanding of the basic facts, concepts, principles and vocabulary of modern biology. Specifically, a student will understand the principles of biological diversity of plants and animals, modern evolutionary theory, plant and animal anatomy and physiology, and the concepts and principles of ecology. After completing the laboratory sessions, a student will have an understanding of basic biological techniques and the use of standard equipment. Specifically, a student will gain experience in observation and classification and comparative anatomy. Students will also conduct long-term independent research projects. After successfully completing this course, a student will have an understanding of modern biology sufficient to allow them entry into second year majors courses in biology.

METHODS:

Lectures and tutorials which will include: demonstrations, small group discussions, audiovisual presentation, the use of models, video tapes, overhead transparencies, and charts. The tutorials will be used for general discussions, amplification of materials in the lectures and reading assignments, answering student queries, small group discussions, and quizzes.

Laboratory exercises, in a series of three hour laboratory sessions, will cover the materials given in lectures.

PRIOR LEARNING ASSESSMENT RECOGNITION (PLAR):

Credit can be awarded for this course through PLAR YES X NO

METHODS OF OBTAINING PLAR:

1. *To permit enrollment in Biology 112 (Instructor's permission)*
   If a student's prior learning experiences give the student a good chance for success in Biology 112, an instructor may permit the student to register. Generally, the instructor will interview the student, and will examine the student's record to see marks in related or pertinent courses. (Example: a student with an agricultural diploma from a UK institution was considered to be eligible for Bio 111 and 112, even though he lacked the formal requirements.)
2. *To permit a student to receive credit for Bio 112 without taking the course*
   (a) Articulated courses
   Credit is assigned at Admissions & Records for courses that have previously been articulated as Biology 112.
   (b) Non-articulated courses taken at other institutions
   Faculty members scrutinize the syllabus or course outline to see if a basis for credit assignment exists. The student may instead wish to challenge the course.
   (c) Course challenge
   The student must challenge both lecture and lab components of the course. The student will be provided with a copy of the syllabus and information about how to obtain a copy of the current text and lab manual. The student will also be given information about exam style and expected standards.
   The student can sit the examination for the lecture portion of the course at a time convenient to both student and instructor. However, since it is not reasonable to expect a lab instructor to set up a lab exam for one student, our practice has been to permit the student to write the exam for the laboratory portion of the course at the same time it is written by a regular class.
   (d) Students enrolled in Biology 111 or 112 for a second time are not obliged to take the laboratory part of the course if their previous lab marked was > 70%.

TEXTBOOKS, REFERENCES, MATERIALS:

Texts:
Biology, 6th ed. Campbell et al.
Lab manual: UCFV in-house lab manual
In-class reading assignments

Laboratory Book Resources
The following books are typical of many available in the lab:
- Biology names and terms dictionary
- Dissecting manuals for rat, frog, pigeon, fish, etc.
- Human anatomy.
- Human histology.
- Student electron micrograph collection.

Library Resources:

The library has a comprehensive collection of reference materials at the appropriate level that covers all aspects of the topics covered in this course.

Periodicals:
Nature
Science
Scientific American

Video tapes:
A comprehensive collection of video tapes dealing with all aspects of the course is available both for class room use and for student in library, or at home use.

SUPPLIES / MATERIALS:

Students may be required to buy a lab coat.

STUDENT EVALUATION:

Lecture midterm exam	25%
Lecture final exam	30%
Tutorial quizzes	10%
Lab mark	35%

COURSE CONTENT:

WEEK 1:	Lectures:	Course introduction & introductory activities (Handouts) Descent with modification (Ch. 22)
	Lab:	Monera
WEEK 2:	Lectures:	Evolution of populations (Ch. 23)

		Origin of species (Ch. 24)
	Lab:	Protista, Fungi
WEEK 3:	Lectures:	Tracing phylogeny (Ch. 25) Plant evolution (Ch. 29/30)
	Lab:	Plant diversity
WEEK 4:	Lectures:	Invertebrates & origin of animals (Ch. 32/33) The vertebrate genealogy (Ch. 34)
	Lab:	Invertebrate diversity
WEEK 5:	Lectures:	Plant structure and growth (Ch. 35) Transport in plants (Ch. 36)
	Lab:	Vertebrates
WEEK 6:	Lectures:	Plant reproduction and development (Ch. 38) Plant control systems (Ch. 39)
	Lab:	Review; Project planning and early set-ups
WEEK 7:	Lectures:	Midterm Break Lecture midterm exam
	Lab:	No labs
WEEK 8:	Lectures:	An introduction to animal physiology (Ch. 40) Animal nutrition (Ch. 41)
	Lab:	Lab final exam
WEEK 9:	Lectures:	Circulation (Ch. 42) Gas exchange (Ch. 42)
	Lab:	Research projects
WEEK 10:	Lectures:	The body's defenses (Ch. 43) Chemical regulation (Ch. 45)
	Lab:	Research projects
WEEK 11:	Lectures:	Nervous systems (Ch. 48) Movement (Ch. 49)
	Lab:	Research projects
WEEK 12:	Lectures:	Introduction to ecology (Ch. 50) Population ecology (Ch. 52)
	Lab:	Research projects
WEEK 13:	Lectures:	Community ecology (Ch. 53) Ecosystems (Ch. 54)
	Lab:	Oral presentations; Hand-in reports
WEEK 14:	Lectures:	Conservation ecology (Ch. 55)
	Lab:	No lab
WEEKS 15 & 16:		Lecture final exam (see posted exam schedule)