UNIVERSITY COLLEGE of the FRASER VALLEY

PAC FORM #2

COURSE IMPLEMENTATION DATE:[January 1997]
Revised: May 2000
COURSE TO BE REVIEWED DATE:[September 2004]
(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

BIO 416		3
COURSE NAME/NUMBER	FORMER COURSE NUMBER	UCFV CREDITS

EVOLUTION
COURSE DESCRIPTIVE TITLE

CALENDAR DESCRIPTION:
An investigation of the mechanisms and processes of the evolution of biological organisms. The history and development of evolutionary thought and contemporary issues are discussed.

PREREQUISITES: BIO 210 and BIO 220, and either BIO 312 or BIO 320

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: 105

STRUCTURE OF HOURS:

Lectures:	65	hrs
Seminar:	25	hrs
Laboratory:		hrs
Field Experience:		hrs
Student Directed Learning:	15	hrs
Other (Specify):		hrs

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

MAXIMUM ENROLMENT: 35

EXPECTED FREQUENCY OF COURSE OFFERING:

WILL TRANSFER CREDIT BE REQUESTED? YES ____ NO X

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

AUTHORIZATION SIGNATURES:

Course designer(s): David G. Harper
Chairperson: *(Curriculum Committee)*
Department Head: E. Camm
Dean: J. Snodgrass
PAC Approval in Principle Date:
PAC Final Approval Date: December 13, 2000

BIO 416

COURSE NAME / NUMBER

LEARNING OBJECTIVES / GOALS / OUTCOMES/ LEARNING OUTCOMES:

To give the student an understanding of:

1. the history and development of evolutionary concepts and principles
2. gene expression in changing environments and population genetics
3. species concepts and speciation
4. contemporary issues in evolutionary biology

METHODS:

A combination of lectures, small groups/seminars, student presentations and written assignments.

PRIOR LEARNING ASSESSMENT RECOGNITION (PLAR):

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

METHODS OF OBTAINING PLAR:

TEXTBOOKS, REFERENCES, MATERIALS:

Evolution, by Mark Ridley, Blackwell Scientific
Assigned readings from library resources

Additional Reading Resources:

Briggs	Palaeobiology: A Synthesis
Calow	Evolutionary Synthesis
Carroll	Vertebrate Palaeontology and Evolution
Cockburn	Introduction to Evolutionary Ecology
Dawkins	The Selfish Gene
	The Extended Phenotype
Futuyma	Evolutionary Biology
Gould	Wonderful Life
Nisbet	Living Earth
Stewart	Palaeobotany and Evolution of Plants
Stickberger	Evolution
Weiner	The Beak of The Finch
Wilson & Bossert	A Primer of Population Biology

SUPPLIES / MATERIALS:

STUDENT EVALUATION:

Term Paper	25%
Oral Presentation	15%
Midterm Exam	25%
Final Exam	35%

COURSE CONTENT:

Pre-Darwin: The Fossil Record
Darwin's Theories
Natural Selection
Mechanisms of Inheritance
Neo-Darwinism
Population Genetics
Species Concepts and Speciation
Phylogenetic Systematics
Contemporary Issues:
- Molecular Evolution
- Heterochrony and Development
- Senescence
- Coevolution
- Sexual Selection
- Game Theory
- Punctuated Equilibrium
- Sociobiology
- Human Evolution