OFFICIAL UNDERGRADUATE COURSE OUTLINE (page 1)

COURSE IMPLEMENTATION DATE:	May 1994
COURSE REVISED IMPLEMENTATION DATE:	September 2013
COURSE TO BE REVIEWED:	September 2019
(six years after UEC approval)	*(month, year)*

OFFICIAL UNDERGRADUATE 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 – see course syllabus available from instructor

BIO 111	Faculty of Science/Biology	5
COURSE NAME/NUMBER	FACULTY/DEPARTMENT	UFV CREDITS

Introductory Biology I
COURSE DESCRIPTIVE TITLE

CALENDAR DESCRIPTION:

This course is for majors in biology and for career programs, such as dentistry, education, forestry, medicine, agriculture, etc., that require a rigorous treatment of current concepts in biology. The course will emphasize the molecular and cellular basis of life, biochemical processes, cellular structure and function, and genetics.

PREREQUISITES: One of Biology 11 or BIO 083 and one of Chemistry 12, CHEM 093, or CHEM 110; or one of Biology 12 or BIO 093 and one of Chemistry 11, Chemistry 12, CHEM 083, CHEM 093, or CHEM 110.

Note: as of September 2014, prerequisites will change to the following: One of Biology 11 or BIO 083 with a C+ or better and one of Chemistry 12, CHEM 093, or CHEM 110 with a C or better; or one of Biology 12 or BIO 093 with a C+ or better and one of Chemistry 11, Chemistry 12, CHEM 083, CHEM 093, or CHEM 110 with a C or better.

COREQUISITES:
PRE or COREQUISITES:

SYNONYMOUS COURSE(S):
(a) Replaces:
(b) Cross-listed with:
(c) Cannot take: for further credit.

SERVICE COURSE TO: *(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:

OTHER:
Maximum enrolment: **36**
Expected frequency of course offerings: every year
(every semester, annually, every other year, etc.)

WILL TRANSFER CREDIT BE REQUESTED? (lower-level courses only)	☒ Yes	☐ No
WILL TRANSFER CREDIT BE REQUESTED? (upper-level requested by department)	☐ Yes	☒ No
TRANSFER CREDIT EXISTS IN BCCAT TRANSFER GUIDE:	☒ Yes	☐ No

Course designer(s):	**Barbara Moon, Terry Starr, Tony Stea**		
Department Head:	**Allan Arndt**	Date approved:	**April 9, 2013**
Campus-Wide Consultation (CWC)		Date of meeting:	**April 19, 2013**
Curriculum Committee chair:	**David Fenske**	Date approved:	**May 17, 2013**
Dean/Associate VP:	**Lucy Lee**	Date approved:	**May 17, 2013**
Undergraduate Education Committee (UEC) approval		Date of meeting:	**June 21, 2013**

LEARNING OUTCOMES:

After completing this course, a student will have a firm understanding of the basic facts, concepts, principles, and vocabulary of modern biology.

Upon successful completion of this course, students will be able to:
a) discuss the principles of cell structure, cell function, and energetics.
b) use principles of classical and molecular genetics to solve genetics problems.
c) demonstrate use of biological techniques and standard equipment. Specifically, students will be able to use microscopes and design and implement experiments in enzyme kinetics, energetics, and Mendelian genetics through hands-on exercises involving hypothesis testing and small self-directed experiments.
d) demonstrate an understanding of basic cellular biology and genetics sufficient to allow them into BIO 112.

METHODS: *(Guest lecturers, presentations, online instruction, field trips, etc.)*

Lectures and tutorials which will include: demonstrations, small group discussions, audiovisual presentation, the use of models, videos, 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 complement the materials given in lectures

METHODS OF OBTAINING PRIOR LEARNING ASSESSMENT RECOGNITION (PLAR):

☒ Examination(s) ☐ Portfolio assessment ☐ Interview(s)

☒ Other (specify): a) 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.
b) The student can sit the examination for the course at a time convenient to both student and instructor.

☐ PLAR cannot be awarded for this course for the following reason(s):

TEXTBOOKS, REFERENCES, MATERIALS:

[Textbook selection varies by instructor. An example of texts for this course might be:]

Biological Science Volume 1, Pearson
Lab manual: UFV in-house lab manual
In-class reading assignments

SUPPLIES / MATERIALS:

Students are required to buy a lab coat.

STUDENT EVALUATION:

[An example of student evaluation for this course might be:]

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

COURSE CONTENT:
[Course content varies by instructor. An example of course content might be:]

Lecture topics:
The study of biology
Chemical bonding overview
Water and the environment
Macromolecules
Metabolism and enzymes
The cell
Cell membranes

Course content continued:

Cellular respiration
Photosynthesis
Cellular communication
Mitosis
Cancer
Meiosis
Mendelian genetics
Beyond Mendel
Chromosomal basis of inheritance
DNA
From gene to protein
Microbial genetics
DNA technology
Lab topics:
Measurement - Scientific Method
Microscopy and cells
Enzymes
Genetics
Membrane transport
Energy transformations
Genetics F1 count
Cell division
Genetics F2 count