



BIOLOGY 025
Section G
College and Career Preparation
COURSE OUTLINE
FALL 2014

BIOLOGY 025 Section G

Bio 025

6 credits, 16 weeks, 6 hours/week

Topics studied include: cell theory; cells, protein synthesis, DNA, genetics, principles of classification; comparative anatomy of representative organisms of the Monera, Protista, Fungi, Plantae and Animalia Kingdoms; ecological interrelationships and interactions; individuals, populations and species; communities, ecosystems and biomes; and man and the environment.

Alberta Education Course Equivalency: Biology 10 and Biology 20

Co-requisite: ENGL 013 or ENGL 010 or permission of the Program Chair

Class Hours: Tuesday 2:00-4:30; Wednesday 3:00-5:00; Thursday 1:00-3:00

Instructor: Melodee Helgason

Telephone: 334-2559 Office
838-4361 Cell (leave message)

E-Mail: melodee.helgason@keyano.ca

Office Hours: Monday and Tuesday 12:00-1:00
Wednesday 1:00-2:00
Thursday 12:00-1:00 and 3:00-4:00

Required Resources:

Inquiry into Life; Sylvia S. Mader, Seventh Edition

Learning Outcomes for the Course:

Upon successful completion of this course, students will be able to:

1. appreciate that scientific understanding evolves from the interaction of ideas involving people with different views and backgrounds.
2. seek and apply evidence using the scientific method when evaluating alternative approaches to investigations, problems and issues.
3. explain the cycling energy and matter through the biosphere and ecosystems.
4. explain how the biosphere is composed of ecosystems, each with distinctive biotic and abiotic characteristics.
5. demonstrate sensitivity and responsibility in pursuing a balance between the needs of humans and a sustainable environment.
6. describe the cell theory, and function of cell organelles and structures in a cell, in terms of life processes, and use models to explain these processes and their applications.
7. relate photosynthesis to storage of energy in organic compounds.
8. compare and contrast the roles of glycolysis, respiration, and fermentation in releasing potential energy from organic compounds.
9. describe, in words and in diagrams, the processes of mitosis and meiosis.
10. explain the basic rules and processes associated with the transmission of genetic characteristics.
11. explore classical genetics at the molecular level, including several human genetic disorders.
12. explain several mechanisms involved in the change of populations over time.
13. describe a community as a composite of populations in which individuals contribute to a gene pool that can change over time.
14. explain the types of interaction of individuals within and between populations.
15. describe the general characteristics of the three domains of life.

Evaluation:

This grade will be based on the following:

Unit Tests	50%
Assignments	20%
Final Exam	<u>30%</u>
Total	100%

Grading System:**Posted in Learning Centre: Keyano College Grading System: Credit Calendar**

The student must attain a grade in excess of 64%, or a 1.7 on the 4.0 Grade Scale, to assure progression to Biology 030.

Descriptor	4.0 Grade Scale	Percentage Scale
Excellent	4.0	96% - 100%
	4.0	90 % - 95 %
	3.7	85 % - 89 %
Good	3.3	81 % - 84 %
	3.0	77 % - 80 %
	2.7	73 % - 76 %
Satisfactory	2.3	69 % - 72 %
	2.0	65 % - 68 %
Minimum Prerequisite	1.7	60 % - 64 %
Poor	1.3	55 % - 59 %
Minimum Pass	1.0	50 % - 54 %
Failure	0.0	0 % - 49 %

Classroom Expectations:

In order to make the learning center a happy and productive place to learn, each student is expected to:

- attend classes regularly;
- arrive to school on time;
- phone the learning center to notify the instructor should she/he be unable to attend classes that day;
- limit the use of the school telephone to short important phone calls;
- keep her/his work table tidy;
- wash her/his own dishes;
- wear indoor shoes or slippers to help keep the classroom floors clean;
- show respect to fellow students and contribute to maintaining a peaceful learning atmosphere.

Student Rights and Responsibilities:

Students should be aware of their rights and responsibilities as laid out in the *Keyano College Credit Calendar 2014-2015*, or as included in the student package.

In order to “refrain from unduly disturbing, disrupting or otherwise interfering with studies...” (KCCC, 2014/2015), students should turn cell phones and pagers off when they come to class, and refrain from bringing children or other visitors to class.

Counselling and Disability Services:

Counselling Services provides a wide range of specialized counselling services to prospective and registered students, including personal, career, and academic counselling.

Disability Services provides educational services to students with disabilities.

Both Counselling and Disability Services are located in CC167.

Proposed Schedule:

WEEK	DATES	UNIT	TOPIC	Quizzes
1 - 2	Sept 3 - 9	1	The Study of Life (Chapter 1)	Sept 9
2 - 3	Sept 10 - 16	2	The Chemistry of Life (Chapter 2)	Sept 16
3 - 4	Sept 17 - 23	3	Cell Structure & Function The Cell Membrane (Chapters 3 & 4)	Sept 23
4 - 5	Sept 24 – Oct 2	4	Cell Division (Chapter 7)	Oct 2
6	Oct 6 - 9	5	The Molecular Basis of Inheritance DNA & Biotechnology (Chapters 24 & 25)	Oct 9
7	Oct 14 - 16	6	Patterns of Gene Inheritance (Chapter 22)	Oct 16
8	Oct 20 - 23	7	The Origins of Life Evolution (Chapters 26, 27, 28)	Oct 23
9	Oct 27 - 30	8	Viruses, Monera, Protista & Fungi (Chapters 26,27, 28)	Oct 30
10	Nov 3 - 6	9	Kingdom Monera (Chapter 28)	Nov 6
11	Nov 10 - 13	10	Kingdom Protista (Chapter 28)	Nov 13
12	Nov 17 - 20	11	Kingdom Fungi (Chapter 28)	Nov 20
13	Nov 24 - 27	12	Kingdom Planate (Chapter 29)	Apr 11Nov 27
14	Dec 1 - 4	13	Kingdom Animalia (Chapter 30)	Dec 4
15	Dec 8 - 11	14	Ecology The Biosphere Ecosystems and Communities Populations (Independent Study)	_____
16	Dec 15 - 17	Final Exam	To Be Scheduled	

Please Note:

This course outline may be modified at the instructor's discretion to facilitate unforeseen time constraints

Important College Dates:

Fall 2014

Orientation Day	September 2
First Day of Class	September 3
Last day to ADD Courses	September 9
Tuition is due (\$100 late fee charged after this date)	September 9
Last day to DROP Courses with full refund (\$100 deposit is non-refundable)	September 16
Last day to WAIVE SAKC health and dental plan or add family	September 16
Last day to submit Keyano College Fall Awards Applications	September 30
Last day to WITHDRAW with a refund (50%)	October 10
Last day to WITHDRAW (Grade of W)	November 26

Authorization: Biology 025 Section G

This course outline has been authorized by the following individuals:

M. Helgason _____
(Instructor)

Lisa Turner _____
(Chair)

Guy Harmer _____
(Dean)

Course Outline Effective Date: September 3, 2014