



**School of Arts & Science  
BIOLOGY DEPARTMENT**  
**BIOL 103- 004A and 004B**  
**Non-Majors General Biology**  
**2016 Fall**

## COURSE OUTLINE

The Approved Course Description is available on the web @ [D2L Biology 100](#)

Ω Please note: this outline will be electronically stored for five (5) years only.  
It is strongly recommended students keep this outline for your records.

### 1. Instructor Information

(a)	Instructor:	Geoff Haywood, Ph.D.		
(b)	Office Hours:	12.30 AM – 1.20 PM Tue; Wed.		
(c)	Location:	F246		
(d)	Phone:	370-3196	Alternative Phone:	
(e)	Email:	<a href="mailto:haywoodg@camosun.bc.ca">haywoodg@camosun.bc.ca</a>		
(f)	Website:	D2L		

### 2. Intended Learning Outcomes

Upon completion of this course, the student will be able to:

1. Describe the concept of homeostasis.
2. Explain how basic physicochemical changes can impact cell function.
3. Work in a culture of scientific endeavor and use critical thinking skills.
4. Identify the critical roles played by water in the maintenance of life on earth.
5. Explain the structures and roles of biological macromolecules, particularly carbohydrates, proteins and lipids.
6. Describe the complexity and diversity of cellular ultrastructure and the functions of significant cellular organelles, in particular chloroplasts, mitochondria, ribosomes, Golgi apparatus, cilia and flagella.
7. Describe basic metabolism and energy producing pathways within the cell.
8. Explain the concept of the gene in the contexts of both Mendelian inheritance as well as the biochemical expression of genetic information.
9. Relate the structure of nucleic acids to the storage and replication of genetic information.
10. Explain the mechanisms used to regulate and translate genetic information into the assembly of functional proteins.
11. Describe the interactions between the environment and long-term changes in genetic information, particularly in consideration to neoplasia.
12. Describe the anatomy of the human digestive, cardiovascular and excretory systems and explain how the physiology of these organ systems is related to organization at the molecular and cellular level.
13. Describe the structure and explain the functions of the human immune system. Apply this knowledge to immune dysfunction, particularly allergies and AIDS.

### 3. Materials

(a) Textbook: (**Recommended**) T Audesirk, Audesirk, G and Byers, B. 2008. Biology: Life on Earth, 8<sup>h</sup> ed., Pearson Education, San Francisco.

(b) Lab Manual Biology 103 (**Required**) (latest version)

### 4. Course Content and Schedule

Timetable of lectures and Labs.

Wk	Date	Lecture Topics	Lab	Lab Topic
1	Sep 6-9	Scientific method, chemistry bonding, water		
2	Sep 12 – 16	water , pH, macromolecules	1	Metric measurements/ pH
3	Sep 19 - 23	The cell, organelles, energy enzymes, thermodynamics	2	Microscope/ cells
4	Sep 26 – 30	photosynthesis, metabolism	3	Macromolecules
5	Oct 3 - 7	Review - <b>Midterm 1 Exam</b>	4	Diffusion & osmosis
6	Oct 10	Thanksgiving – no classes		
	Oct 11 - 14	Cell division, cell cycle Mitosis, meiosis		no labs
7	Oct 17 - 21	Mendel – genetics – inheritance and environment	5	Enzymes
8	Oct 24 - 28	DNA replication and mutations	-	Lab Exam 1
9	Oct 31 - Nov 4	Protein synthesis Transcription/ translation	6	Mitosis
10	Nov 7 - 10	Homeostasis <b>Midterm 2 Exam</b>		no labs
	Nov 11	<b>Remembrance Day</b> – no lectures no labs		
11	Nov 14 - 18	Human physiology respiration Nervous system	7/8	Inheritance Cat lab
12	Nov 21 - 25	Circulatory system	9/10	Nutrition Human physiology
13	Nov 28 – Dec 2	Digestive system Excretory system	10	Human physiology
14	Dec 5 – 9	Reproductive system		Final Lab Exam
	Dec 12 - 16	Final Exam Week		



<b>CW</b>	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.
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## 7. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

### LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College calendar, at Student Services or the College web site at [camosun.ca](http://camosun.ca).

### STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services and on the College web site in the Policy Section.

### ADDITIONAL COMMENTS AS APPROPRIATE OR AS REQUIRED

### PLEASE READ THE INFORMATION BELOW

#### STUDENT ASSIGNMENTS

Assignments will be given out on the Thursday of each week and are due in on the following Monday – at the beginning of the lecture period.

Assignments received on the day due will be marked out of 100% - but if not received until the following day will be marked out of 80%. There will be a further drop of 20% for any assignment not received until Thursday. Any assignment not received by the following Thursday (1 week after given out) will receive a zero mark.

Assignments **MUST** be printed as hard copies. Hand-written assignments will **NOT** be accepted, nor any as emails unless there is an illness involved in their tardy return – for which a doctor's note will be required. Any absence from lectures or labs for a legitimate reasons (serious illness, funerals, bereavements) **MUST BE REQUESTED IN ADVANCE**. Attendance at a wedding is **NOT** considered a legitimate reason to miss classes