

## **Biology 030 Lecture Section A, Lab Section X**

*5 Credits, 15 Weeks, 6 hours lecture + 2 hours lab*

### **Course Description**

Topics studied include cells, chemistry, enzymes, human body systems (anatomy and physiology) and the concept of homeostasis. Alberta Education Course Equivalency: Biology 30

### **Prerequisites**

#### **Biology 20 or 25 (with a grade of 60% or better)**

As the review component of Biology 030 is brief, students are expected to already have an understanding of characteristics of living things, the scientific method, basic chemistry for biological systems, important biological molecules, cell theory, and cell structure and function.

#### **English 10**

This is the co-requisite to Biology 025. Strong English reading and writing skills are essential for success in Biology 030.

### **Instructor**

Patricia L. Collins

Room 205, Office S

780-791-8955

patricia.collins@keyano.ca

### **Office Hours**

Mondays 3:00 pm – 3:50 pm

Tuesdays 1:00 pm – 2:50 pm

Fridays 1:00 pm – 2:50 pm

## Class Schedule

Monday Lectures	1:00 – 2:50 pm	Room S216
Tuesday Lectures	10:00 – 11:50 am	Room S214
Wednesday Lectures	1:00 – 2:50 pm	Room S207

**Friday Labs**                      10:00 – 11:50 am                      **Room 234**

(only meet for labs on dates noted on *Calendar of Important Events*)

## Required Resources

1. ***Inquiry into Life*** by S. S. Mader & M. Windelspecht, 14<sup>th</sup> Ed., McGraw Hill (13<sup>th</sup> ed. is also acceptable)
2. **Biology 030 Student Notes Package** (available at Bookstore)
3. **Lab Coat** (must be knee-length; available in the Bookstore, or at Coverall, or via Sears catalogue)

## Course Outcomes

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

1. explain the relationship between developments in imaging technology and the current understanding of the cell.
2. describe the function of cell organelles and structures in a cell, in terms of homeostasis, and use models to explain these processes and their applications.
3. explain how the human digestive and respiratory systems exchange energy and matter with the environment.
4. explain the role of the circulatory and defense systems in maintaining an internal equilibrium.
5. explain the role of the excretory system in maintaining an internal equilibrium in humans through the exchange of energy and matter with the environment.
6. explain the role of the musculoskeletal system in the function of other body systems.

7. explain how the nervous system controls physiological processes.
8. explain how the endocrine system contributes to homeostasis.
9. explain how survival of the human species is ensured through reproduction.
10. explain how human reproduction is regulated by chemical control systems.
11. show concern for safety in planning, carrying out and reviewing laboratory activities, referring to the Workplace Hazardous Materials Information System (WHMIS) and consumer product labels.
12. work collaboratively in planning and carrying out laboratory investigations and in generating and evaluating scientific ideas.

## Evaluation

Daily work & Quizzes	10%
Projects and Pre-Lab Quizzes	25%
Midterm Exams (2)	30%
Lab Exam	5%
Final Exam (cumulative)	30%

*The minimum standard for passing this course is a grade of 50%; the minimum grade of progression is 60%.*

## Performance Requirements

1. Biology 030 Section A is designed as a *face-to-face course*, so success is improved by regular attendance. Extended or frequent absences cannot easily be accommodated and could impact your overall mark. Some suggestions for handling occasional absences include:
  1. checking the Calendar of Events and PowerPoint slides covered in each chapter by logging into **ilearn Keyano** (<http://ilearn.keyano.ca>)\*\*.
  2. finding a “classroom buddy” who you can contact for details regarding what you have missed, because exact slides and daily homework will **not** be recorded on **ilearn**.
  
2. To ensure that everyone is evaluated fairly, and that you receive your marks and feedback in a timely fashion, assigned work will receive:
  1. full marks when received in class, on the due date. ☺
  2. the earned grade, minus 5%, if received during office hours but still on the due date.
  3. the earned grade, minus 20%, for each additional day late, if received during our scheduled class time or during office hours.
  4. a mark of zero, if pushed under my office door, left in an office door pouch, or if received after I have returned them.
  
3. To ensure that it is your learning, your thoughts, and your work that is being evaluated,
  1. work submitted by non-attending students may not be marked, so please keep in touch!
  2. any work showing evidence of copying or plagiarism will receive a mark of zero (see “Student Rights and Responsibilities” in the Credit Calendar).
  3. in-class quizzes cannot usually be rewritten, as these are meant to give you immediate feedback on your progress.
  4. a missed exam may be written at an alternate time only under certain exceptional circumstances, at the instructor’s discretion. The instructor must be contacted within 24 hours of the scheduled exam, and documentation (e.g. a doctor’s note) provided.
  5. the final exam will be written on the date scheduled by the College; otherwise, the procedure for “Deferred Final Examination” in the Credit Calendar is to be followed.
  
4. To ensure that you have developed the skills required for working safely in a college laboratory, and to ensure success in post-secondary laboratory-based courses, you need to

1. complete your WHMIS training through **ilearn Keyano**\*\* prior to your first lab. You must score at least 80% on the quiz to be certified, and you must be certified to attend labs.
2. be present for every laboratory period for your lab section. **Make-up time or switching lab dates/sections is not an option**, due to limited facilities and workloads of technical staff.
3. complete four labs plus the Lab Final Exam to receive a course grade greater than 60%.

\*\*Should you have trouble logging into **ilearn Keyano**, please contact Keyano College Information and Technology Services ([its.helpdesk@keyano.ca](mailto:its.helpdesk@keyano.ca) or 780-791-4965).

Check <http://www.keyano.ca/Services/InformationTechnologyServices> for their up-to-date hours of operation.

### ***Academic Regulations***

Copy the following link into your web browser to review Keyano College's Academic Regulations, Student Rights and Responsibilities, and how to change courses through the Office of the Registrar:  
[http://www.keyano.ca/Portals/0/Documents/Academic%20Calendar/academic%20regulations\\_0.pdf](http://www.keyano.ca/Portals/0/Documents/Academic%20Calendar/academic%20regulations_0.pdf)

#### **Contact Information for Office of the Registrar:**

8115 Franklin Avenue T9H 2H7

Tel: (780) 791-4801 Fax: (780) 791-4952

Keyano College Main Switchboard Toll Free: 1-800-251-1408

Email: [registrar@keyano.ca](mailto:registrar@keyano.ca)

### ***Academic Schedule***

1. Orientation Day September 2

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2.	First day of classes	September 3
3.	Last day to ADD courses	September 9
4.	Tuition is Due (\$100 late fee charged after this date)	September 9
5.	Last day to DROP courses with full refund (minus \$100 deposit)	September 16
6.	Last day to WAIVE SAKC health and dental plan or add family	September 16
7.	Last day to submit Keyano College Fall Awards Applications	September 30
8.	Last day to WITHDRAW with a refund (50%)	October 10
9.	Last day to WITHDRAW (grade of W)	November 26

Final Exam Week (CCP) is **Monday, December 15 through Wednesday, December 17.**

All final exams must be written on the specified examination day, or conditions listed in the Keyano College Calendar under “Deferred Final Examinations” apply. **Wait until December 18, 2014 to book travel or other plans.**

To view all important dates in the academic schedule, copy the following link into your web browser, click on the Credit Calendar image and flip to page 8:

<http://www.keyano.ca/Academics/CreditCalendar>

## Proposed Topics

<u>Units of Study</u>	<u>Text References</u>	<u>Labs</u>
<b>Unit 1 - Building a Foundation</b>		
1. introduction	slides	#1
2. the study of life	Ch. 1	
3. the molecules of cells (review)	Ch. 2	
4. cell structure and function (review)	Ch. 3	<b>Microscopes</b>
5. membrane structure and function	Ch. 4	
6. enzymes and metabolic pathways	Ch. 6	
7. human organization	Ch. 11	
<b>Unit 2 - Supporting Cell Function</b>		
8. digestion/nutrition	Ch. 14	
9. circulation	Ch. 12	#2
10. blood (as a specialized tissue)	Ch. 12/13	
11. lymphatic system/immunity	Ch. 13	
12. respiration	Ch. 15	
13. excretion	Ch. 16	#3
<b>Unit 3 - Directing Cell Function</b>		
14. nervous system	Ch. 17	
15. senses	Ch. 18	#4
16. musculoskeletal system	Ch. 19	
17. endocrine system	Ch. 20	
18. reproductive systems	Ch. 21	<b>Lab exam</b>

## **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.

**For more information, copy the following link into your web browser:**

**<http://www.keyano.ca/Services/DisabilityServices>**



## Calendar of Important Events

*All dates on the following calendar are tentative; shaded areas indicate no Biology 030 classes.*

Week	Monday	Tuesday	Wednesday	Thursday	Friday
1	September 1 Labour Day Holiday	2 Orientation Day	3 First day of Biol 030!	4	5
2	8	9	10	11	12 Lab Intro—Room 233
3	15	16	17	18	19 Lab #1
4	22	23	24	25	26
5	29 Nutrition Project Due	30	Oct 1	2	3
6	6 Midterm #1	7	8	9	10 Microscopes
7	13 Thanksgiving Holiday	14	15	16	17
8	20	21	22	23	24 Lab #2
9	27	28	29	30	31
10	Nov 3 Immunity Ass't Due	4	5	6	7 Lab #3
11	10	11 Remembrance Day Holiday	12 Midterm #2	13	14
12	17	18	19	20	21 Lab #4

13	24	25	26	27	28
14	Dec 1 Senses Ass't Due	2	3	4	5 Lab Exam--Room TBA
15	8	9	10 Last day of Biol 030!	11	12
16	15 EXAMS	16 EXAMS	17 EXAMS	18	19

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**Authorization**

This course outline has been reviewed and approved by the Program Chairperson.

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Patricia Collins (Instructor)

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Lisa Turner (Chair) Date Authorized

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A. Guy C. Harmer (Dean) Date Authorized

**Signed copies to be delivered to:** Instructor, Registrar's Office