Syllabus for SCI103 1E Biology I at Roxbury Community College

1 Course Information

1.1 Course Schedule

Location	Time	Dates
Online and offline	Anytime in accordance with the suggested weekly deadlines	5/26/2020 - 8/7/2020

1.2 Instructor Information

Instructor: Dr. Nikolaus Sucher

Office: Building 3, room 501J

Online Office Hours: Please make an appointment by email. We can then talk on the telephone or online.

E-mail: nsucher@rcc.mass.edu[1]

Phone: (857) 701-1525

1.3 Course Description

This course provides an introduction to the biology and classification of plants, fungi, and animals, their tissues, organ systems, development and reproduction. The course consists of online study and a two-hour laboratory session.

Due to the Coronavirus Disease 2019 (COVID-19)[2] induced special circumstances, this course will be offered entirely in an online format. Face-to-face laboratory sessions will be replaced by self-directed study of the online laboratory manual and selected do-it-yourself activities as listed in the weekly course schedule.

Prerequisite

Placement

[1] mailto:nsucher@rcc.mass.edu
[2] https://www.cdc.gov/coronavirus/2019-ncov/index.html

Number of credits:

This is a four (4)-credit course.

The federal requirement[3] is that the amount of student work for a credit hour reasonably approximates not less than one hour of class and two hours of out-of-class student work per week over a semester for a semester hour. In this course, students will spend a total of 12 hours per week on the course (2 hours in the laboratory and 10 hours on self-directed study including online activities on MyRCC LMS and reading the required textbook chapters).

1.4 Textbook & Course Materials

Required Books:

Textbook: Biology by Sylvia Mader and Michael Windelspecht, 13th Edition, McGraw Hill, ISBN#: 125982490X[4] (10^{th}, 11^{th} or 12^{th} editions may also be used)

Laboratory Manual: Free SCI103 Laboratory manual[5]. You can use your phone, tablet or computer to access the manual online. You can download a PDF version for printing or an eBook for offline use on your phone, tablet or computer.

1.5 Teaching Procedures and Course Structure

This course will be delivered entirely online. Instead of coming to hear a lecture and perform experiments in the laboratory, you will learn through self-directed study using the textbook and the materials provided online through the course learning management system on MyRCC[6].

All due dates for assignments and quizzes are posted in the Topic Outline and Proposed Study Schedule section below. Upcoming due dates are also listed in the Calendar on MyRCC[7].

The laboratory portion of the course will also be conducted entirely online using the online laboratory manual.

1.6 Technical Course Requirements

Internet connection (High speed DSL, LAN, cable or LTE desirable)

Access to the MyRCC[8] Learning Management System (MyRCC LMS)

1.7 Technical Assistance

If you need technical assistance at any time during the course or to report a problem with MyRCC you can contact the Help Desk at (617) 427-0060 ex. 5555 during normal business hours.

[3] http://www2.ed.gov/policy/highered/reg/hearulemaking/2009/credit.html

[4] https://www.amazon.com/Biology-Sylvia-Mader-ebook-dp-B078SV2MH5/dp/B078SV2MH5/ref=mt_kindle?_encoding=UTF8&me=&qid=

[5] https://nikolaussucher.github.io/bio-one-all-online

[6] https://myrcc.rcc.mass.edu/ICS/

[7] https://myrcc.rcc.mass.edu/ICS/

[8] https://myrcc.rcc.mass.edu/ICS/

The Help Desk hours are:

Monday through Friday from 7:45 am - 7:30 pm

Saturdays from 9:00 am - 2:00 pm

2 Student Learning Outcomes

1. Identify the basic characteristics of life and outline the theories that attempt to explain the origin of life, as we know it and define it, on the planet Earth.
2. Identify some basic chemical concepts and apply them to the structure and biological processes that occur in living cells.
3. Identify cell parts and demonstrate understanding of their related functions. Identify similarities and differences in the structure of viruses, prokaryotic cells, and eukaryotic cells.
4. Explain the significance of enzymes, coenzymes, and ATP, and to identify the main events, products and significance of the processes of cell respiration, fermentation, and photosynthesis.
5. Understand, explain, and contrast the processes of mitosis, meiosis, and binary fission in terms of their physical differences and their genetic and evolutionary significance. Explain the process of viral replication.
6. Identify the structural parts of DNA and RNA and understand how DNA directs the activities of a cell through protein synthesis, including some examples of how this process is regulated.
7. Demonstrate understanding of how genes are passed from one generation to the next by completing representative genetic problems and explaining/applying genetic concepts.
8. Demonstrate understanding of the three Domains of Life (Archaea, Bacteria and Eukarya) and viruses. Identify some of the distinguishing characteristics of each domain and the viruses.
9. Learn and apply the laboratory skills associated with the objectives listed above.
10. Explain the basic concepts of biology in written and oral form.
11. Apply the concepts learned to better understand the biological world, and the problems that affect human society.

3 Topic Outline and Proposed Study Schedule

I recommend that each week, you plan to spend at least 2 hours per chapter on reading the textbook, 2 hours on reviewing the slides for each chapter posted on the MyRCC course site after you have read that chapter in the textbook, 1 hour on viewing the animations and videos for each topic posted on the MyRCC course site, 2 hours for reading the lab manual and answering the lab review questions and between 1 and 2 hours for taking the quizzes. Some of you may need more time to get through everything; some of you may have time to spare that you can use to browse the web for interesting web sites, videos and podcasts related to the course material.

The quizzes will be open from the first day to the last day of the semester. Each quiz consists of multiple-choice questions. On average, you will have 1.5 minutes to answer each question. The quizzes are to be taken by yourself without the help of notes, books, online resources or help by third parties. You have to attempts for each quiz. Please, do not wait for the last minute to take the quizzes (bad things can (and will) happen... computers crash, internet is down, kids get sick, etc.).

Every missed quiz or lab assignemnt will be entered as 0% in the calculation and lower your final grade accordingly.

Important Note: Extensions to assignments or tests will only be given with a valid written medical excuse; it is up to the instructor to decide if the documentation presented is appropriate.

No documentation = No extension.

3.1 Online and Self-study Schedule

Week	Date	Textbook Reading Assignment	Online Quiz	Lab Manual Reading Assignment	Lab Review Question Online File Submission (lab manual chapter #)
1	5/26/20	A view of Life; Basic Chemistry	1, 2	Lab safety; The microscope	4
2	6/1/20	The Chemistry of Organic Molecules	3	Chemical aspects of Life	5
3	6/8/20	Cell Structure and Function	4	Cell structure	6
4	6/15/20	Membrane Structure and Function	5	Exchange between cells and their environments	7
5	6/22/20	Enzymes; Photosynthesis and Cellular Respiration	6, 7, 8	Enzymes; photosynthesis	8, 9
6	6/29/20	Happy 4th of July			
7	7/6/20	Cell cycle and Cellular reproduction; Mitosis and Meiosis; Mendelian Patterns of Inheritance	9, 10, 11	Mitosis and meiosis	10
8	7/13/20	Molecular Biology of the Gene; Regulation of Gene Expression	12, 13	Mendelian Genetics	11
9	7/20/20	Biotechnology and Genomics	14	Molecular biology	12
10	7/27/20	Diversity of Microscopic Organisms (Viruses, Bacteria, Archaea, and Protists)	20, 21	Archaea and Bacteria	13
11	8/3/20	Darwin and Evolution	15	Protista	14

4 Grading Policy

4.1 Graded Course Activities

Multiple-choice style quizzes and free form essay style assignments are graded course activities. To take the quiz for each chapter, just click on the quiz link and a new web page will open. Follow the instructions given to take the quiz. You have three (3) attempts for each quiz. Each question counts for 1 point. You need to answer every question. To enter the text for the assignments, just click on the assignment link and a new web page will open, where you can enter your essay online.

Your final grade will be based to 2.5% on your submission in the forum “Introduce yourself”, 70% on the quizzes and 25% on the your answers to the lab review questions.

Every missed quiz or lab exam will be entered as 0% in the calculation and lower your final grade accordingly.

4.2 Late Work Policy

Please pay close attention to deadlines—there will be no make up assignments or quizzes, or late work accepted without a serious and compelling reason and instructor approval.

4.3 Viewing Grades Online

Points you receive for graded activities will be posted to the Gradebook. Click on the "Gradebook" link on the left side of the web page to view your points.

4.4 Letter Grade Assignment

Final grades assigned for this course will be based on the percentage of total points earned and are assigned as follows:

Grade	Percentage	Performance
A	93-100%	Excellent Work
A-	90-92%	Nearly Excellent Work
B+	87-89%	Very Good Work
B	83-86%	Good Work
B-	80-82%	Mostly Good Work
C+	77-79%	Above Average Work
C	73-76%	Average Work
C-	70-72%	Mostly Average Work
D+	67-69%	Below Average Work
D	60-66%	Poor Work
F	0-59%	Failing Work

5 Course Policies

5.1 Participation

Students are expected to participate in all online activities consisting of contributions to the online forums ("Introduce yourself to your classmates"; "Discuss topic..."), assignments, quizzes and laboratory sessions as listed above in part 3 of this syllabus. Your participation in these activities will be taken as evidence of attendance.

Attendance will be taken in each lab session.

- Students are expected to be on time and to attend all laboratory sessions.
- Being late for more than 15 minutes or leaving before completion of the required work will count as absence.
- Three (3) or more absences for any reason will result in a grade of "F".

Connect With Your Instructor

If you find that you have any trouble keeping up with assignments or other aspects of the course, make sure you let your instructor know as early as possible. As you will find, building effective relationships is an important part of becoming an effective professional. Make sure that you are proactive in informing your instructor when difficulties arise during the semester so that he can help you find a solution.

Complete Assignments

All assignments for this course must be submitted electronically through MyRCC LMS. Assignments must be submitted by the given deadline or special permission must be requested from instructor before the due date. Extensions will not be given beyond the next assignment except under extreme circumstances.

All discussion assignments must be completed by the assignment due date and time. Late or missing discussion assignments will affect the student's grade.

Understand When You May Drop This Course

It is the student's responsibility to understand when to consider dropping this course. Refer to the RCC Schedule for dates and deadlines for registration.

5.2 Incomplete Policy

A grade of incomplete (I) can only given if a specific, small amount of work cannot be completed by the student due to unavoidable circumstances, by the time final grades are due. The student must have a passing grade at the time of receipt of the incomplete grade.

6 Academic Integrity

As a student in this course (and at this college) you are expected to maintain high degrees of professionalism, commitment to active learning and participation in this class and also integrity in your behavior in and out of the classroom.

All exams (online and in class) are to be taken by yourself without the help of notes, books, online resources or help by third parties.

Any student who plagiarizes ("takes and uses another author's thoughts...as one's own") without citing the document will be given a grade of zero for the work in question and the zero grade will be averaged into the student's final course grade.

Any student cheating on an examination by any means, will be given a grade of zero for the examination and that zero will be averaged into the student's final course grade.

7 Diversity & Accessibility

Get Help With Any Accommodations Needed

Roxbury Community College (RCC) values diversity and is committed to providing all qualified college students equal access to all programs and facilities. RCC strives to create inclusive and

welcoming academic environments. Your professor and Accessibility Services should be notified as soon as possible if there are aspects of the instruction or design of this course that present barriers to your success in this course.

Students with known or suspected physical, medical, sensory, psychological, and or learning disabilities are encouraged to contact Accessibility Services in order to assess learning needs and take advantage of available academic accommodations. Accessibility Services is located in Building 3, Room 201. Accessibility Services can be contacted directly by email[9] or telephone at 857-701-1410.

8 References

What is a credit hour according to the federal government?[10]

Where is that written?[11]

9 Acknowledgment

The format of this syllabus is based on an Online Course Syllabus Template from the State University of California, Sacramento.

[9] mailto:jcrary@rcc.mass.edu

[10] http://www2.ed.gov/policy/highered/reg/hearulemaking/2009/credit.html

[11] http://www.gpo.gov/fdsys/pkg/FR-2010-10-29/pdf/2010-26531.pdf

10 Online Teaching/Learning Honor Code

All students participating in this class **must** agree to abide by the following code of conduct:

- I have read and understood the syllabus; this includes my responsibilities as a student and the grading scheme.
- I am aware that this is an online course. Lectures and/or lecture notes are posted in a learning management system, I am responsible for looking, reviewing and studying the lectures on my own time.
- I will register for only one account at the college or for publisher/supplemental material.
- I will personally login to the course site.
- My answers to homework/assignments, quizzes and exams will be my own work except for assignments that explicitly permit collaboration.
- I will not use notes, books, online resources or help by third parties while I am taking timed online quizzes.
- I will not make solutions/answers to homework/assignments, quizzes or exams available to anyone else. This includes both solutions written by me, as well as any official solutions provided by the course or the staff involved in the course.
- I will not engage in any other activities that will dishonestly improve/hurt result of others.
- I will not give access to my work, the course site, and its contents to others.
- I will not disseminate or sell any material given/shown to me in this course.

Print your name:

Signature:

Date:

Please print your name, sign and date this Online Teaching/Learning Honor Code, save it as a portable document file (PDF) and then upload the PDF on MyRCC (Coursework -> Week 1 -> Online Teaching/Learning Honor Code).