

BIO-102 – Introduction to Biology: Cells and Organisms

I. COURSE INFORMATION

Instructor:	Prof. Patrick Della Croce
Instructor's Email:	pdellacroce@fus.edu
Office Hours:	Tue/Fri 10:00 – 11:30 (by appointment only) Thu 10:30 – 12:30 (first come – first serve)
Class location:	SCI LAB (North Campus)
Class meeting times:	Tue/Fri 11:30 – 12:45

II. COURSE DESCRIPTION

This course provides students with an introduction to the biological sciences focused on the structure and functioning of animal cells and organs. Topics include basic biochemistry, cell structure and function, cellular respiration, and animal physiology. This course will emphasize human anatomy and physiology as model systems for understanding and contrasting key principles of animal biology. The course has integrated lab exercises (from Franklin Course Catalog).

III. RATIONALE

This course satisfies the Environmental Sciences and Studies core requirements (for ESS major, ESS minor, and combined major).

IV. COURSE GOALS

The broad goal of this course is to make students familiar with the biology of animal cells and the functioning of organisms.

V. SPECIFIC LEARNING OUTCOMES

Students who successfully pass this course will be able to demonstrate that they are able to:

- Explain basic concepts in cell biology, including the structure and function of cells, the function of cells' organelles, and cellular respiration.
- Explain the biological importance of homeostasis and feedback loops.
- Explain the functioning of animal respiratory, cardiovascular, nervous, immune, digestive, endocrine, and reproductive systems.
- Critically analyze, present (both orally as well as written), and debate information collected from peer-reviewed and non-peer-reviewed sources.

VI. COURSE TEXTS AND MATERIALS

The majority of the course follows the structure of the book listed below. The text is not mandatory, but is highly suggested. Other readings and material may be posted on Moodle.

Course text book:

- *Campbell Biology: Concepts & Connections*. Eight Edition, Global Edition. Pearson.
Authors: Jane B. Reece, Martha R. Taylor, Eric J. Simon, Jean L. Dicke.

VII. ASSESSMENT OVERVIEW

At the end of the semester you will receive a score between 0 and 100%, based on the following:

In-class participation	5%
Quizzes	20%
Exams	35%
Final exam	40%

Nonattendance may lower your final score as described below.

VIII. ASSESSMENT DETAILS

In-class participation:

This score will reflect: a) your participation during lectures and b) the quality of your presentations and homework assignments.

Quizzes:

These are short-answer questions about recent course material that will regularly be asked at the beginning of classes. You should expect one quiz per week. Quizzes are normally graded as "right" or "wrong" (no percentage). Missed quizzes will count as "wrong" and there will be no make-up for missed quizzes. I will count only the best 80% of all the quizzes.

Exams:

During the semester you will take 3 exams. These exams will cover only selected parts of course material (i.e., they are not cumulative). This grade reflects your average score in the best two exams. Missed exams will receive a 0% score. Note that, in principle, there will be no make-up for missed exams.

Final exam:

This grade reflects your performance in the final exam. The final exam will cover all the course material (i.e., is cumulative).

Attendance:

Class attendance is required. You may miss 2 classes without penalty (including justified absences). In general, I will reduce your final score by 5% for each further missed class.

IX. GRADING POLICIES AND EXPECTATIONS

Based on your overall score, your final grade will be determined as follows:

Excellent		A = 100% - 93%	A- = 92.9% - 90%
Good	B+ = 89.9% - 87%	B = 86.9% - 83%	B- = 82.9% - 80%
Adequate	C+ = 79.9% - 77%	C = 76.9% - 73%	C- = 72.9% - 70%
Inadequate	D+ = 69.9% - 67%	D = 66.9% - 63%	D- = 62.9% - 60%
Poor	F = below 60%		

Refer to Moodle (or the FUS Catalog) for a more detailed explanation of grades.

X. HOW TO DO WELL IN THIS COURSE (POLICIES / REQUIREMENTS)

To be successful in this course you have to come prepared to class and be active during lectures. This means that you should: a) complete reading assignments before class; b) take notes during class; c) regularly review your notes and the reading assignments (important for the quizzes), and; d) contact me (or ask questions during class) in case something is unclear. This course covers quite a bit of material. It is therefore important to keep up from the very beginning of the course. Note that if you miss a class it is your responsibility to find out (from fellow students!) what material was covered and what announcements were made during the missed class. This is important for your *Quizzes grade*. Missing classes will not count as an excuse to not count a quiz.

XI. ACADEMIC INTEGRITY: STATEMENT ON CHEATING AND PLAGIARISM

A student whose actions are deemed by the University to be out of sympathy with the ideals, objectives or the spirit of good conduct as fostered by the University and Swiss community, may be placed on Disciplinary Probation or become subject to dismissal from the University. Cheating is a dishonest action out of sympathy with the ideals, objectives and spirit of the University. Furthermore, cheating reflects negatively on one's personal integrity and is unjust to those students who have studied. See the Academic Catalog for full statement.

XII. RESOURCES AVAILABLE

Franklin University Switzerland offers several resources that can help you succeed in this course, among which are:

- **Office hours:** these are dedicated times in the week during which the instructor is available to students for class or school business. Office hours are listed above. Office hours are on a first come first serve basis or by appointment. Note that outside of office hours the instructor cannot guarantee the same level of availability.
- **Writing and Learning Center (WLC):** the WLC is a great resource for students to use when working on papers, assignments, or studying schedule. Students are strongly encouraged to visit and take advantage of the WLC.
- **Libraries:** there are two libraries on campus where students can study, research papers, or seek help for class assignments.
- **Accessibility Services:** if you have a documented learning disability, or think you may need to be tested for it, contact Accessibility Services at: accessibility.services@fus.edu.

XIII. COURSE SCHEDULE (subject to change. See Moodle or class for changes)

Week	Day	Tuesday	Class Topic	Book ch. - Notes
1	Tue	Jan. 22nd	Introduction and course overview	1
	Fri	Jan. 25th	Basic chemistry	2, 3
2	Tue	Jan. 29th	Cell structure and organelles	4
	Fri	Feb. 1st	Membranes and Energy	5
3	Tue	Feb. 5th	Cellular respiration (part I)	6
	Fri	Feb. 8th	Cellular respiration (part II)	6
4	Tue	Feb. 12th	Exam #1	
	Fri	Feb. 15th	Exam #1 corrections and Photosynthesis	7
5	Tue	Feb. 19th	Vertebrates Evolution	19, 20, 25
	Fri	Feb. 22nd	February break - no class	
6	Tue	Feb. 26th	Animal organs and tissues	20 - Lab day
	Fri	Mar. 1st	Circulation and gas exchange (part I)	22, 23
7	Tue	Mar. 5th	Circulation and gas exchange (part II)	22, 23
	Fri	Mar. 8th	Nervous system (part I)	28
Mar 9th - Mar 24th : Academic Travel				
10	Tue	Mar. 26th	Nervous system (part II)	28
	Fri	Mar. 29th	Exam #2	
11	Tue	Apr. 2nd	Immune system (part I)	24
	Fri	Apr. 5th	Immune system (part II): vaccines	
12	Tue	Apr. 9th	Embriotic development (part I)	27
	Fri	Apr. 12th	Embriotic development (part II)	
13	Tue	Apr. 16th	Digestive system	21
	Fri	Apr. 19th	Thanksgiving break - no class	
14	Tue	Apr. 23rd	Hormones and endocrine system (part I)	26
	Fri	Apr. 26th	Hormones and endocrine system (part II)	
15	Tue	Apr. 30th	Exam #3	
	Fri	May 3rd	Q/A, Wrap-up	
16	Friday May 10th , 11:00 - 13:00 - Final Exam - SCI LAB			