FRANKLIN
UNIVERSITY SWITZERLAND

BIO 310W, Ecology Department of Environmental Sciences, Fall 2018

I. COURSE INFORMATION

Instructor:	Patrick Della Croce	
Instructor's e-mail	pdellacroce@fus.edu	
Office hours:	Thu	14:30 - 17:30 (first come first serve)
	Tue / Fri	11:30 – 13:00 (by appointment only)
Class location	SCI LAB	(North Campus)
Class meeting times	Tue	16:00 - 18:45

II. COURSE DESCRIPTION

This course examines the interactions of organisms with their environment and each other, the dynamics of populations, the structure and functions of ecosystems, the role of biogeochemical cycles, and biodiversity. Required laboratory sessions. MAT 201 and BIO 102 are strongly recommended prior to taking this course. (from Franklin Course Catalog)

III. RATIONALE

This course satisfies the Environmental Sciences and Studies upper-level Science Courses requirements (for ESS major, ESS minor, and combined major). With its W designation, this course also helps satisfy the Academic Literacies Program requirements.

IV. COURSE GOALS

The broad goal of this course is to make students familiar with basic concepts of ecology and to enable students to design and plan an ecological study.

V. SPECIFIC LEARNING OUTCOMES

Students who successfully pass this course are able to:

- Explain the influence of environmental factors on organisms, populations, communities, and ecosystems.
- Describe the way energy and nutrients flow through ecosystems.
- Describe the different ways in which species interact.
- Explain what populations are and what factors influence their growth.
- Differentiate between communities and ecosystems and explain how biodiversity affects their functioning.
- Describe the processes of succession.
- Employ the scientific method to develop and investigate an ecological question.
- Use the primary scientific literature to produce a scientific review.
- Describe the role of basic statistics in ecological science and be able to interpret data presented in published figures accurately.
- Create graphs and figures and perform basic statistical analyses.
- Correctly formulate (and distinguish between) hypotheses and predictions for ecological studies.
- Prepare clear and concise study proposals

VI. REQUIRED TEXTS AND MATERIALS

McGraw-Hill Education: *Ecology: Concepts and Applications*, 7th International Edition
Authors: M. C. Molles
(e-text available on-line for the course duration. Instructions on Moodle)

VII. ASSESSMENT OVERVIEW

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

Homework assignments and participation	10%
Exams	40%
Final written project	30%
Reviews of final projects	15%
Response to feedbacks	5%

Nonattendance may lower your final score as described below.

VIII. ASSESSMENT DETAILS

Homework assignments and participation:
This score reflects (a) your participation during lectures and class discussions and (b) the quality of your homework assignments. Note that failure to turn in homework assignments or give presentations by the due date or in incorrect format will result in a zero grade for that assignment/presentation. In general, all homework assignments and presentations contribute equally to this grade.

Exams:
This score reflects your performance in the midterm, the final exam, and any unannounced quiz that I give you during the semester. The midterm and the final exam contribute equally to this score. Unannounced quizzes contribute only half as much. Note that missed exams and quizzes will receive an F grade and that, in general, there will be no make-up for missed exams/quizzes.

Final written project:
This score reflects the quality of your final project. The form of the final project (paper, research proposal…) will be discussed in class during the semester. Formatting guidelines will be provided on Moodle and in class.

Reviews of final projects:
This score reflects the quality of your reviews of final projects. Details on the review process and the review format will be provided on Moodle and in class.

Response to feedbacks:
This score reflects how well you addressed to feedbacks I provided on your project draft. Details will be provided on Moodle and in class.

Attendance:
Class attendance is required. You may miss 1 weekly meeting (equivalent of 2 classes) without penalty (including justified absences). In general, I will reduce your final score by 5% for each further missed class. Note that attendance is mandatory also for off-class activities and fieldtrips.

IX. GRADING POLICIES AND EXPECTATIONS

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 for a more detailed explanation of grades.

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

Course material:

This course follows a seminar approach to class learning and instruction. Therefore, attendance and active class participation are essential. To participate effectively, you must complete reading and homework assignments before class. Note that you should expect significant homework and readings for every class period. This course covers quite a bit of material, so it is important that you keep up from the very beginning of the course and that you make sure you contact me (or ask questions during class) in case something is unclear. 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. Note that class presentations will not be made available to students, and therefore you take notes during class and regularly review your notes and the reading assignments.

Final project and reviews:

Being a writing intensive course, a large portion of your grade is determined by your final written project and by your reviews of other projects. It is therefore crucial that you work at your project throughout the entire semester. Remember that regardless of how well you write (or you think you write), all papers benefit greatly from multiple drafts and external reviews (by peers, writing center, or myself).

XI. ACADEMIC INTEGRITY: STATEMENT ON CHEATING AND PLAGIARISM

Please refer to Franklin's Statement on Cheating and Plagiarism in the Academic Catalog for the full version (p. 42, http://www.fus.edu/images/pdf/Catalog_2014-2016.pdf) but to summarize here: you are to do your own work. Behaviors such as copying the work of others, using third-party services, or any other circumvention of doing your own work are dishonest and not acceptable in this class or at this institution.

- For papers and presentations, this includes proper use of references and citations. Copying text without the use of quotations or paraphrasing the ideas of others without proper citations are both examples of plagiarism and thus unacceptable.
- For testing situations, this includes the use of notes, cell phones, talking to others, or copying off of the exam of others. The first case of academic dishonesty will result in an automatic grade of a zero on the assignment and a report to the Dean. The second case will result in expulsion from the university.

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XII. COURSE SCHEDULE (subject to changes. All changes will be posted on Moodle)

Week of	*Class Topic*	*Textbook Ch.*	*Notes*
Aug. 27th	Introduction and Natural History	1, 2, 3	
Sep. 3rd	Population genetics	4	
Sep. 9th	Environmental adaptations	5, 6	
Sep. 17th	Environmental adaptations	7, 8	*Sat-Sun Sep. 22nd-23rd* *Possible w-e field trip*
Sep. 24th	Population Ecology	9, 10	*Proposal idea due*
Oct. 1st	Population Ecology	11	
Oct. 8th	Life histories	12	*Proposal draft due*
Oct. 15th	Interspecific interactions	13, 14, 15	Midterm
	Oct. 22nd to Nov. 5th - Academic travel - no classes		
Nov. 5th	Community ecology	16, 17	
Nov. 12th	Ecosystem ecology	18	
Nov. 19th	Ecosystem ecology	19	*Project reviews due*
Nov. 26th	Succession	20	
Dec. 3th	Landscape and large-scale ecology	21, 22, 23	
	Final exam - Dec. 11th 16:00 - 18:00 (SCI LAB)		*Final proposal due* *Response to feedbacks*