

**FLORIDA ATLANTIC UNIVERSITY
DAVIE, FL – SUMMER 2016**

**COURSE SYLLABUS
FRESHWATER ECOLOGY LAB
PCB 4301L
Summer Term 2, 2016**

INSTRUCTOR: Nathan Dorn, Ph.D.

Office: DW # 436

Telephone: (954) 236 -1315

E-mail: ndorn1@fau.edu

Office Hours: W 10:30-11:30 am, 3:15-4:15 pm, by appt.

TA: Daniel Hagood

Email: dhagood2014@fau.edu

Office: DW # 431

Office Hours: W 10-11:30 am

1 Credit: ES # 317. F 9-11:50 am.

Labs include four field trips away from campus and most days the meeting place will be on site away from campus. Lab time may be combined with lecture time so that lectures happen in the field. The trips may require some time beyond scheduled class time due to travel distances and weather conditions (so plan accordingly).

Text:

Freshwater Ecology 2nd edition, Dodds, W. and Whiles M., Academic press.

Pond Life. 2001. (A Golden Guide) St. Martin's Press by Reid, Kaicher and Dolan. *(can be purchased for < \$10 online)*

Other required readings (*e.g., research papers, book chapters*) will be posted to Blackboard.

Co-requisites: PCB 4301 Freshwater Ecology, PCB 4301L Freshwater Ecology Lab

Pre-requisites: BSC 1010, BSC 1010L, BSC 1011, BSC 1011L, CHM 2045, CHM 2045L, CHM 2046, CHM 2046L (C- minimum)

DESCRIPTION:

This lab is a hands-on field course focused on the ecology and biodiversity of various freshwater ecosystems. Field trips emphasize functions of ecosystems, species identification, and quantitative differences between environments.

You will be exposed to a diversity of freshwater ecosystems and the communities of organisms that live there with a series of field trips and sampling studies. You will also learn about restoration science and methods for quantitative analysis of

freshwater animals and plants. The lab is integrated with the lecture and you must take them both simultaneously. You are expected to ask questions during lab. You are expected to read assigned readings before lab.

OBJECTIVES: This lab is intended provide exposure to the diversity and functioning of freshwater ecosystems as well as the diversity of organisms inhabiting those ecosystems. When you leave this course, you should have 1) a general understanding of freshwater ecology, 2) the ability to recognize and identify common freshwater plants and animals and 3) extensive knowledge about the ecology (and restoration of) of Florida's freshwater ecosystems. Finally, you should improve your ability to identify and quantify ecological patterns and provide hypotheses about the causes of observed patterns in freshwater ecosystems.

1. COURSE POLICIES AND PROCEDURES

This course will be taught with a series of field trips, including comparative and observational exercises.

Attendance: This is an intellectually challenging and time-demanding course. Students with other time-consuming responsibilities (heavy course loads, jobs > 20 hr/wk, athletics, music groups, etc.) should seriously consider their ability to meet these demands. You are expected to attend and actively participate in every lab. You will not be able to make up missed lab or field activities.

Work and Time Outside of Class: It is expected that the weekly reading, report writing and work on your lab notebooks will require another 5-6 hours per week outside of class.

Field Trips: There will be four field trips away from campus during this course and they are all mandatory. Field trips will be on Fridays and, given travel time, several may extend beyond the listed class hours. You will not be able to make up missed field trips. If you have conflicts that will prevent you from participating in any of these field trips, please talk to me as soon as possible. The field trips are designed to introduce you to a diversity of freshwater ecosystems and organisms, make observations and quantify ecological relationships. Attendance is mandatory because classroom study is insufficient for learning and understanding these topics. Come prepared for field trips. You are being trained as field ecologists and as such, you must be prepared to get cold, hot, wet, or muddy, depending on what we are doing. Old sneakers or water shoes plus lightweight pants (quick-dry) are suggested for wading in wetlands and canoeing. For the first field day, on campus, it would be a good idea to have a change of clothes as well because we will spend part of the day indoors after getting wet/dirty in the morning.

A note about field activities: The field activities that are part of this class can be physically taxing, and may place you some distance from help if you have a medical problem. PARTICIPATION is an important part of the grade. If you have

concerns about your ability to participate in the field activities, or other health concerns (e.g., serious allergies) please talk with me as soon as possible.

Classroom Etiquette: Behavior that is responsible and considerate of others is expected at all times. A student engaging in persistent (i.e., repeated within or across meeting times) and deliberately disruptive or antagonistic behavior will be asked to leave the class, and will receive an F in the course. Persons engaging in threats or bullying will be reported to the University Police Department.

Grade: The grade for the *lab* will be determined by total points obtained on two written (individual) reports (70 total), participation (60 total), an flora and fauna identification test (60 points) and the lab notebook (60 points).

Lab Point Distribution:

Reports (2 reports)	70 points
Participation	60 points
Identification Exam	60 points
<u>Lab Notebook</u>	<u>60 points</u>
Total:	250 points

There will be NO individualized extra credit in the course.

Grading Scale:

A = 93 - 100%	C+ = 76 - 79%
A- = 90 - 92%	C = 70 - 75%
B+ = 86 - 89%	D = 60 - 70 %
B = 83 - 85%	F = < 60%
B- = 80 - 82%	

Assignment grade policy: If no other late policy is in place then the default is that late assignments (late means after the **due date at the start of class**) receive a ZERO. Assignments that are not handed in according to the specified format or otherwise according to the instructions for that assignment will be considered late and also receive a ZERO. Reports that are handed in late receive a 10% initial deduction and a ZERO if they are more than 24 hours late.

MAKE-UP EXAMS: A make-up examination must be taken if the student misses the final identification examination for a reason considered appropriate in the undergraduate catalog. It is up to the instructor to decide if a make-up examination will be given if a student misses an exam for any other reason and will only be given after an automatic penalty of 10%. Only ONE makeup examination per student will be allowed. **Advanced – schedule conflicts (e.g., athletic competitions, religious observance) must be discussed with the instructor in the first week of class** to be eligible for a make-up exam. Make-up examination will only be allowed if the student brings in appropriate medical documentation (with the Doctors name and office number) or documentation of legal obligations for missing the exam.

Disability Policy: *In compliance with the Americans with Disabilities Act (ADA), students who require special accommodation due to a disability to properly execute coursework must register with the Office for Students with Disabilities (OSD) and follow all OSD procedures. Phone for Davie campus OSD: 954-236-1236.*

Academic Integrity: FAU students are expected to maintain the highest standard of academic integrity as outlined in the Undergraduate Catalog. Academic dishonesty, including copying the work of someone else (i.e., *plagiarism*) whether that someone is a classmate or an internet source, is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage. Academic dishonesty is destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information see University Regulation 4.001 at http://www.fau.edu/ctl/4.001_Code_of_Academic_Integrity.pdf

Plagiarism in this course includes aiding the person who plagiarized and the penalty for letting someone copy your work will result in *a zero*. More than one instance of plagiarism will result in course failure and an official write up to the chair of the Biology department and the Dean of Student Services.

5. Incomplete Grade: A grade of Incomplete ("I") is reserved for students who are passing a course but have not completed all the required work because of exceptional circumstances. A grade of "I" will only be given under certain conditions and in accordance with the academic policies and regulations put forward in FAU's University Catalog. The student must show exceptional circumstances why requirements cannot be met. A request for an incomplete grade has to be made in writing with supporting documentation, where appropriate. As per university policy, an incomplete grade will only be given to a student who fulfills all of the following criteria:

- a. misses multiple exams or the final examination due to a legitimately documented emergency as defined by the FAU Academic Policies and Regulations (http://www.fau.edu/academic/registrar/09-10_catalog/academics.html)
- b. has a grade of C or better
- c. submits evidence of the emergency and signs an incomplete agreement.

Additional Policies

Disability Policy

In compliance with the Americans with Disabilities Act (ADA), students who require special accommodation due to a disability to properly execute coursework must register with the Office for Students with Disabilities (OSD) and follow all OSD procedures. Phone for Davie campus OSD: 954-236-1236.

Religious Accommodations:

Students who wish to be excused from course work, class activities or examinations must notify the instructor in advance of their intention to participate in religious observation and request an excused absence, but field trips cannot be made up for credit.

Course Schedule

DATE	TOPIC/QUIZ	Reading (chapter or pages) ¹	Assigned Work
May 15	FIELD and LAB DAY: (Davie Campus) Introduction to aquatic life and sampling; Freshwater Survey(s) of local ponds/wetlands. (9am-3:15pm)	PL (pp 4-37, 74-75, 120-128)	<u>Report 1</u> : Pond catch rate comparisons, report due at start of class (8 pp). Due on May 20
May 22	FIELD DAY: Wetland water depths, flora and faunal responses. (9 am – 3:15 pm)	PL (pp 42-72, 114-115, 136-150) <i>*note lab species lists</i> Lodge ch. 3	Update Notebook
May 29	FIELD DAY: Freshwater biota and river restoration. Kissimmee River (all day field trip 6 am – 4:30 pm)	Cheek et al. 2014	Update Notebook <u>Hand in notebook</u> on June 3 .
June 5	FIELD DAY: Animal community patterns in ponds and wetlands. (Jonathan Dickinson State Park wetlands) (8 am – 4 pm)	PL (pp 74-119), DW 238-251	<u>Report 2</u> : JDSP invertebrate contrasts (9-12 pp incl. 3-4 pp with tables/ figures) Due on June 10 Update Notebook
June 12	FIELD DAY: Loxahatchee River (Riverbend Park, 8:45 am-3:30 pm) Lotic ecosystems. Flow, river habitats, species distribution and	Lodge pp 168-172 Paper on Invasive Molluscs (TBA)	Update Notebook <u>Hand in notebook</u> on June 19 . Final draft of <u>Report 2</u> (Due June 19)

	abundance.		Study for ID exam.
June 19	Flora and Fauna Identification Test		
June 22	END OF SESSION		

¹ DW = Dodds and Whiles, PL = Pond Life booklet, Lodge = Everglades Handbook
(Lodge chapters and discussion papers will be made available on Blackboard)

Important Dates

June 15: Last day to drop without receiving an F.

For other important dates see <http://www.fau.edu/registrar/pdf/Docs/acadcal1011.pdf>