

Marine Biology: BSC 4312C-SL
Spring 2018

Lecture: Tuesday and Thursdays from noon to 1:20 PM in Biology Building, Room 209

Laboratory: Saturdays in Biology 209/410, Field Building (Building #92), or off-campus

Instructor: Dr. Linda Walters

Office: Biology 401C **Office Phone:** 407-823-2148 **E-mail:** linda.walters@ucf.edu

Family Cell Phone: 407-443-6943 (sometimes my husband Paul answers)

Web Site for Course: BSC 4312 on Webcourses. Site will house syllabus, course notes, grades, announcements, etc. Facebook (Coastal and Estuarine Ecology Lab) and/or Instagram (UCF_CEELAB) will house class photos.

Office Hours: Tuesdays 8 – 10 AM or by appointment. If University business requires me to miss office hours, please contact me and we can schedule to meet. Please make an appointment to meet with me via email, even during office hours if at all possible.

Graduate Teaching/Research Assistant: Christian Pilato

Office: Biology 410 **Email:** pilato.christian@knights.ucf.edu **Phone:** 407-780-4224

Assists with all class-related questions and grading; Lead for microplastics project

Research Coaches:

Lead for Living Shoreline Project: Suzanne Connor

Email: suzanneconnor@knights.ucf.edu **Phone:** 407-327-0395

Lead for Nemours Children's Hospital "Marine Biology is Cool" Project with Dr. Megan Nickels (megan.nickels@ucf.edu), College of Education: Bethany Fralish

Email: fralishb@knights.ucf.edu **Phone:** 850-240-2181

Course Objectives: Multitask High Impact Practices (HIP) to improve marine biology knowledge and career readiness/success

- 1) Enhance comprehension of important topics in marine biology (through all methods described below and class discussions)
- 2) Improve writing skills/career readiness by focused efforts on curriculum vita and grant proposal writing
- 3) Improve knowledge of marine biodiversity in Florida while learning ARC-GIS story mapping skills
- 4) Hands-on research experience from initiation of project idea through completion (includes poster presentation at SURE conference)
- 5) Hands-on practice of science communication skills and community engagement through Service-Learning (includes poster presentation at UCF Service-Learning Conference)

Required Materials:

- 1) *Let Them Eat Shrimp. The Tragic Disappearance of the Rainforests of the Sea.* Warne, K. 2011. Island Press. ISBN 978-1597266833.

- 2) *DDT Wars. Rescuing Our National Bird, Preventing Cancer and Creating the Environmental Defense Fund.* 2015. Wurster, Charles F. Oxford University Press. ISBN 978-0-19-021941-3.
- 3) *Houston, We Have a Narrative.* Olson, R. 2015. Island Press. ISBN 978-0-226-27084-5.
- 4) Access to a digital or phone camera.

Recommended Materials:

- 1) PowerPoint lecture notes will be available on Webcourses. Lectures will be available when they are completed.
- 2) *Seashore Animals of the Southeast.* Ruppert, EE, and Fox, RS. 1988. University of South Carolina Press, ISBN: 0-87249-535-3
- 3) *A Field Guide to the Southeast Coast and Gulf of Mexico.* Proctor, NS and Lynch, PJ. 2011. Yale University Press, ISBN: 978-030011328-0.
- 4) *Florida's Living Beaches.* Witherington, B. and Witherington, D. 2007. Pineapple Press, Inc. ISBN: 978-1-56164-386-8.

Classroom Conduct and Academic Honesty: Please understand that I expect you to completely abide by the UCF Golden Rule (<http://goldenrule.sdes.ucf.edu>). Breaking the Golden Rule in any way, including cheating or intent to cheat on quizzes, submitting assignments that are not entirely your own work or using materials borrowed from students from past classes, will result in an ZF in the course and your name will be immediately submitted to the UCF Disciplinary Action Committee. No plagiarizing, no copying on reports or other written/photo assignments, no exceptions. Turnitin.com or I-authenticate may be used at any time during the semester at my discretion.

Grading: There will be a total of 365 points available. There will be no traditional exams in this class – there will, however, be in-class quizzes/assignments, 2 individual writing assignments, group research project, group service-learning project, plus in-class participation. Grades for the semester will be awarded using the following +/- scale: A+ (100% or higher), A (92-99%), A- (90-91%), B+ (88-89%), B (82-87%), B- (80-81%), C+ (78-79%), C (72-77%), C- (70-71%), D+ (68-69%), D (62-67%), D- (60-61%), < 60% = F. If your point total rounds out to 0.5 or higher, you will receive the next higher grade. For example, an 89.45 = A-. There will be multiple extra credit opportunities, but no additional curving of grades. If you decide to drop this course, please remember to officially withdrawal from the class before 11:59 PM on Wednesday, March 21, 2018. There are no NC or WP grades in this class. Assignments in class can only be made up if the absence is excused (written documentation required from medical, police, university activity). Grades will be available in class, on webcourses and/or from instructor as soon as possible after assignments submitted. Late assignments will be graded as follows (Saturdays included, Sundays excluded): deduct 50% for up to 24 hours late from the start of the class in which the assignment was due, and deduct 75% if 24-48 hr late. There will be no credit if submitted more than 48 hr late.

Class Participation and Attitude:

It is expected that everyone will regularly participate in this class in a positive way. To promote dialogue, approximately 10% of your grade is based on participation. A subset of this grade (10 pts) will be simply showing up for all classes on time and signing the attendance roster (unless

you have an excused absence). The remaining 25 points will be subjective. If you show up to class, participate each day in a meaningful way, then you will receive all these points. If you occasionally participate, you will receive partial credit for participation.

Additionally, disrupting the class, unexcused lecture absences (see policy on unexcused lab absences below), arriving late to class, rude behavior to the instructor or colleagues, sleeping in class or during labs, cell phones ringing during class or speaking on a phone/texting/working on non-class materials on any electronic device during lecture/lab, or disobeying any class rules will cause you to lose points at my discretion. If the disruption is excessive, the Biology Department Chair will be brought in to assist with the situation. Offering to drive vans, help load trucks, etc. will enable you to gain points.

Extra Credit:

Extra credit opportunities will occur both in lecture and outside of instruction hours. These points will be added on to your point total before calculating the final percentage grade. In lecture, interesting and unexpected extra credit opportunities may arise (point values to be determined). Helping with field research or marine-oriented community events outside of class time will earn you up to 5 points each time (maximum extra points for semester = 30 points). Going to marine-oriented scheduled seminars in Biology or other related events on campus will get you 2 points on each occurrence. Incorporating extra correct organisms in your photo-organism collection is another way to receive extra credit (up to 30 organisms for 30 extra points). There will be additional unique opportunities that will be announced during class.

Service-Learning in BSC 4312:

BSC 4312 is a UCF sanctioned service-learning class. Students will spend a minimum of fifteen hours on our service-learning project – discussing your group research project with public school classes in Seminole/Orange Counties, Tomoka State Park, and/or the teaching classroom at Nemours Children’s Hospital. This activity will address a need in our community, support our course objectives, involve a connection between the campus and the world around it, challenge students to be civically engaged, and involve structured student reflection. We will spend time reflecting on our service-learning experience through class conversations and written summaries. If any student has a valid objection to this service-learning project, he or she must state this to prior to the drop/add deadline so we can discuss options. Everyone going to a public school needs to register with school through their Dividends/Additions programs. If you have a non-stellar police record, we need to discuss this very soon.

Point Values for All Assignments (due dates):

Please note that all assignments are due at the start of class/lab on the date listed. Late assignments will be graded as described above.

In-Class Participation

35 points

Described above; 10 points = attendance; 25 points = meaningful participation in all class activities.

In-Class Quizzes

40 points

Expect there to be short in-class quizzes associated with many of the book and paper discussions.

Resume/Curriculum Vita **10 points**
Everyone needs to have and to continuously update your cv (scientific resume). Through peer review and instructor feed-back, we will strive to improve everyone's cv to make you all more marketable post-UCF.
January 18: Draft due for review.
January 25: Final due for grade.
April 26: Submit updated cv for extra credit (up to 2 pts).

Draft Grant Proposal **40 points**
Your own twist on group project research with Literature Citations and Budget section (individual grade) using grant format for UCF Office of Undergraduate Research.
February 15: Draft due for review.
March 1: Final due for grade.
March 30: OPTIONAL official submission date for proposals.

Individual Florida Flora/Fauna Photo Collection (need digital camera) **40 points**
Provide 40 organisms on ARC-GIS story mapping platform (minimum of 5 flora, 5 vertebrates, 5 invertebrates – the remaining 25 photos can be from any of these 3 taxa). Submit up to 30 correctly identified organisms for extra credit.
March 10: Submit first 10 correctly identified species by noon on story mapping platform by noon.
April 26: Submit remaining 30 identified species plus corrected submissions from first submission plus any extra credit organisms by noon.

Group Research Project (presented at SURE on April 5 from noon – 5 PM) **100 points**
Abstract due to me and to Office of Undergraduate Research on February 9 by 1 PM (group grade)
Poster due to me and for showcase on April 5 (group grade)
Individual Participation Evaluation from you, the professor, TA and your peers (individual grade)

Group Service-Learning Project (presented at Service-Learning Showcase on April 12) **100 points**
Abstract due to me and to Office of Service-Learning on March 24 by 11:59 PM (group grade)
Engagement materials activities for school, hospital or park - multiple deadlines throughout the semester (group grade)
Poster due to me and for Showcase on April 12 (group grade)
Reflection (individual grade)
Individual Participation Evaluation from you, the professor, TA and your peers (individual grade)

Tentative Lecture Schedule (subject to change):
January 9: Syllabus, Introduction to course and research projects
January 11: Discussion of how to improve your curriculum vita, Oyster Storytelling Yoga (bring yoga mat if you have one)

January 16: Initial project discussions; Bring in your draft cv for peer review
January 18: Book Discussion: *Let Them Eat Shrimp* (pages 1- 43)
January 23: Project discussion; Book Discussion: *Let Them Eat Shrimp* (pages 44 - 93)
January 25: Paper discussion; Submit final cv to Dr. Walters for grade
January 30: Project discussion; Book Discussion: *Let Them Eat Shrimp* (pages 94 – 160)

February 1: Book Discussion: *DDT* (read Chapters 1 – 4)
February 6: Project discussion; Paper discussion
February 8: Indian River Lagoon Conference – all day, no class meeting
February 13: Presentation by Annie Roddenberry, FWC Biologist on her job and career
February 15: Book Discussion: *DDT* (read Chapters 5 - 8)
February 20: Project discussion; Paper discussion
February 22: Book Discussion: *DDT* (pages Chapter 9 – 13)
February 27: Project Discussion; Paper discussion

March 1: Book Discussion: *Houston, We Have a Narrative* (pages 1 – 126);
March 6: Project discussion, Paper discussion
March 8: Book Discussion: *Houston, We Have a Narrative* (pages 127 – 237)
March 12 – 17: Spring Break! No class!
March 20: Withdrawal deadline is Wed., March 21 at 11:59 PM
March 22: Practice for Service-Learning public school presentations, Service-Learning Abstracts due by 11:59 PM on March 24
March 27: Prepare for presentations
March 29: Paper Discussion, conference preparations

April 3: Final preparations for SURE Showcase
April 5: SURE showcase – set-up in AM, showcase from 1 – 5 PM in Pegasus Ballroom
April 10: Final preparations for Service-Learning Showcase
April 12: Service-Learning Showcase, set up in early AM, 10:30 AM – 3:30 PM in Pegasus Ballroom
April 17: Paper discussion
April 19: Last class! Paper discussion.

April 26 (Thursday): Submit final photo-organism collection by 10 AM; Submit final deliverables (reflection, etc.) by 10 AM

Laboratory: Your laboratory grade is integrated into your final course grade; it is not a separate grade. Lab starting times and locations are listed for each week. You must arrive on time or it will be considered an unexcused absence. If you miss lab, any assignments are still due on the scheduled date at the scheduled time. Closed-toe shoes are required for all wet labs. Please expect to get wet and muddy in the field. Additional materials needed for field labs will be discussed as appropriate. Note that many field trips last longer than the scheduled time on Saturdays. You are encouraged to attend all of these labs. If you cannot, then alternative assignments will be provided.

Tentative Laboratory Schedule (subject to change):

January 13: Entire class. Tour of new Nemours' Children's Hospital Learning Center with Dr. Megan Nickels. 9 AM – noon OR campus discussion by Dr. Nickels. Must have proof of recent flu shot if going to hospital.

January 20: Entire class. 9 AM - noon: Shell bagging and *Spartina* collections at New Smyrna Beach Marine Discovery Center for Tomoka State Park living shoreline project.

January 27: Project time.

February 3: Project time.

February 10: Entire class. Research cruise on R/V Bellows. Depart UCF at 6:00 AM and return by 6 PM.

February 17: Project time.

February 24: Seminole Rest Living Shoreline Stabilization (required for living shoreline project group). Others welcome.

March 3: Tomoka State Park project – pre-monitoring (required for living shoreline project group). Others welcome.

March 10: Project time. First 10 photo-organisms due by noon.

March 17: Spring Break

March 24: Entire class. Assist with Tomoka Living Shoreline Stabilization Community Event. Depart UCF at 7 AM and return by 2 PM.

March 31: Tomoka State Park project – post-monitoring data collection (required for living shoreline project group). Others welcome.

April 7: Entire class. Critique of all group's poster drafts for Service-Learning Showcase. 9 AM in Biology 209.

April 14: Time to work on photo-organism collections.

Local Marine Conferences for Spring 2018

Indian River Lagoon Conference, Thursday, February 11 in Fort Pierce, Florida (6 AM – 8 PM). I will pay the registration fee of \$10 and cover transport for anyone interested in attending this all-day conference. If you cannot attend, I will find an alternative assignment for you. You must

register yourself and if you decide not to attend, you will be responsible for your own registration cost.

SEERS 2018 will occur in Jacksonville, FL at Flagler College from March 8-10. More details to come.

Extra Credit Opportunities Currently Scheduled: You must hand in the signed form or check in with Dr. Walters at seminar to receive credit. Points available are listed by each event. Students who are paid to work in my lab cannot receive extra credit and salary for same event – you must select one or the other.

Marine-themed seminars (2 pts of extra credit, occur Mondays from 3 – 4 PM in Biology 209):
January 29: Dr. Susan Bell, USF. Optional dinner party at my house in honor of Dr. Bell from USF (2 points)

February 19: Dr. Giovanna McClenaghan, UCF Biology

March 26: Dr. Joseph Donoghue, UCF Geosciences

April 16: Dr. Carlton Hall, Kennedy Space Center

April 23: Dr. Roland Kays, turtles

Research, Outreach, Community Extra Credit:

Wednesday, January 10, 3pm - 5 pm: Mangrove work day at UCF Biology Field Research Building (Building 92) – 2 points

Wednesday, January 17, 3:30 PM-5:30 PM: Mangrove work day at UCF Biology Field Research Center (Building 92) – 2 points

Friday, January 19, 11:30 – 3:30 PM – Outreach for 4th graders at Chisholm Elementary in NSB (outreach event is 1-2 PM) – 5 points

Sunday, January 21, 7:30 AM - noon: Oyster reef monitoring from Fellers House – 2 spaces available – 5 points

Wednesday, January 24, 3pm - 5 pm: Mangrove work day – 2 points

Monday, January 29 from 6 – 8 PM, dinner party at my house for distinguished speaker Dr. Susan Bell from USF – 2 points

Wednesday, January 31, 3:30 PM-5:30 PM: Mangrove work day at UCF Biology Field Research Center – 2 points

Thursday, March 1: Millennia Gardens Elementary School Eco Club – late afternoon/evening – 5 points

Saturday, March 10, 9 AM – noon: Titusville Living Shoreline event – 5 points