

# PCB 3044 - Principles of Ecology – Spring 2019

## Section 0001

University of Central Florida, College of Sciences, Department of Biology

**Instructor:** Dr. Gregg Klowden (pronounced "Cloud - in")

**Office:** Room 202A, Biological Sciences

**Office Hours:** Tuesdays 4:30-5:30 and Wednesdays 2:30-4:30 pm, or by appointment.

**E-mail:** gklowden@ucf.edu **(\*NOTE\* BEFORE emailing, read the email policies below).**

**Phone:** The best way to contact Dr. Klowden is via email or in person

**Undergraduate Teaching Assistants:** Alexandra

**E-mail:** [EcoTA@ucf.edu](mailto:EcoTA@ucf.edu)

**Office Hours:** Mondays 12:00-1:00, Tuesdays 10:30-11:30, Wednesdays 12:00-1:00, or by appointment

**Office:** Room 201, Biological Sciences

### Email Policies:

**\* PRIOR TO CONTACTING US, CONSULT THE SYLLABUS AND WEBCOURSES FOR ANSWERS TO YOUR QUESTIONS.**

**\* ALL questions regarding the class, should be sent to the TA at [EcoTA@ucf.edu](mailto:EcoTA@ucf.edu).**

If the TA cannot answer the question, it will be forwarded by the TA to the instructor.

\* Please include your (1) First and last names; (2) Course title (Ecology); (3) Section number.

The TA will try to respond within 48 hours however, response time may be greater. Please plan accordingly by not waiting to the last minute to contact us with questions or concerns.

\* Due to confidentiality, grades must be discussed in person with the instructor (not TA) and not via email.

\* Knight's E-Mail - We will only be able to send e-mail communications to Knight's E-mail addresses.

**Class Meeting Times:** Tuesdays and Thursdays, 3:00-4:20 pm, HPA1 125

**Intended Audience:** Biological Science majors & minors, Environmental Science majors, Science Education majors and Preprofessional students.

**Course Prerequisites:** C or better in BSC 2011C and CHM 2045C or CHM 2041C or corequisite CHM 2041C.

**Course Description:** This 3 credit course will examine the structure and function of ecological systems, including populations, communities, and ecosystems.

Objectives for students include

- gaining an understanding of:
  - basic ecological terminology;
  - the questions that ecologists study and the underlying theory;
  - the association between evolution and ecology;
  - the different temporal and spatial scales involved in ecological studies;
  - the scientific methods used by ecologists to collect, analyze, and interpret ecological data, including observation, experiments, and quantitative analyses;
  - the effects that humans have had and are having on ecological systems;
- and being able to:
  - critically evaluate ecological information presented in the news;
  - make informed decisions about ecological and environmental issues.

## Required Resources:

**Text:** Bowman, Hacker, and Cain. 2017. Ecology, **4<sup>th</sup> ed.** Sinauer Associates, Sunderland, MA.  
Available at Book Store or in digital format.

**iClicker2:** Available at book store. You must use version 2. You may not use Reef.

**Webcourses** - Ecology is a web-enhanced class. Assignments, announcements, lecture notes, grades, study tips, and relevant web links will be made available at this site. Before emailing us, please check Webcourse for answers to frequently asked questions!

## Readings:

Readings coincide with and supplement the lecture component of the course. Readings are listed in the schedule at the end of this syllabus.

## Lectures:

Cell phones should be turned OFF when entering the classroom. If you are late or must leave early, please sit towards the rear to avoid disrupting the class. Do not disrupt other students (or the instructor) by talking, texting, or using your computer for purposes unrelated to the lecture. People not adhering to these common courtesies will be asked to leave the class. Recording of lectures is permitted. Recorders may be placed at the front.

It is essential you are in class daily. iClickers will be used for quizzes, on-the fly assessments of lecture material, and practice questions. All non-quiz iClicker questions asked in a day must be answered to earn participation credit for the day. You may miss 2 classes and still receive full participation credit. If you are late for a quiz you will receive a zero.

## Quizzes:

Most weeks (see schedule below) there will be an in-class quiz on the previous week's material. Quizzes will only include material since the previous quiz or exam (i.e. are not comprehensive). Quizzes will be in multiple choice format and will use your iClicker2. It is therefore essential that you bring your iClicker2 to quizzes or you will receive a zero for that quiz. ***Do not be late*** or you will receive a zero. Your lowest quiz grade will be dropped.

Prior to taking the quiz you must set your iClicker2 to the correct frequency listed at the top of your quiz. Instructions for changing iClicker2 frequency can be found below. Instructions for the use of your iClicker2 for quizzes can be found at the end of the syllabus or at:

<https://macmillan.force.com/iclicker/s/article/Participate-in-a-Quiz-Using-an-iClicker-Remote>

## Exams:

There will be four exams. The final exam (exam 4) is NOT comprehensive and will cover the material since the previous exam. The schedule for exams is listed in the table below. The questions will be primarily multiple choice but will also include some written short answer. All questions will pertain to material covered in lectures and relevant textbook readings. Portions of the text which are not covered in lecture or which are not specifically assigned will not be included on exams.

## Lecture Exam Policies:

1. **All exam grades count towards your semester grade. No exam grades will be dropped.**
2. You must bring:
  - a) a pencil
  - b) your UCF ID – **note:** failure to show your ID may result in a score of zero for the exam.
  - c) IF a calculator is needed it must be a nongraphing, nonprogrammable type of calculator capable of performing the type of calculations discussed in the text and lecture (e.g. Texas Instruments TI-30 or Casio fx-300MS). You may not use a cell phone.
3. Scantrons will be supplied. You do not need to bring your own.
4. ***Do not arrive late.*** A late student will be allowed access to the exam only at the discretion of the instructor/proctors. Under no circumstances will extra time be allowed.
5. Prior to exams, all books, notes and bags must be stowed under your seat.
6. Cell phones must be turned OFF and stowed during the exam period.

7. Go to the restroom before the exam. You will NOT be allowed to leave the exam.
8. Bring tissues if you have a runny nose. You will not be allowed to leave the exam.
9. You must print your **PID number (not NID)** on the scantron and question sheet. **Be sure you know it!**
10. Grades will be posted on WebCourses and we will inform the class when they are posted.
11. **REVIEW OF EXAMS** - Scantrons will not be returned to students. Instead, you may review your exam during the TA office hours or by appointment. Each exam must be reviewed prior to the next exam date (i.e. if you would like to review exam 1 this must be done before exam 2 is given).

### Missed Exam Policy:

1. Make-up exams will be provided *only* for students who must miss the exam due to major illness, serious family emergency, jury duty, military obligation, or special curricular requirements (e.g., field trips, professional conferences, a university-sponsored team event of which you are a member). You must contact the instructor (NOT TA) within 24 hours after missing the exam and provide **hard-copy (not email) documentation signed by a doctor, police officer, judge, coach, etc. within one week.**
2. Make up exams will be in essay format.
3. Unexcused absence from an exam will result in a failing grade for the missed exam.
4. All students are required to take the final exam and there will be **no make-up exams for the Final.**

### Clickers:



You will need to bring your iClicker2 to lecture each day. Clickers will be used for in-class quizzes, on-the-fly knowledge assessments, practice questions, opinion polls, and of course attendance. You must use the iClicker2 (with the LCD screen). You may **not** use the iClicker1 or iClicker Reef on your phone, laptop, or tablet. You can purchase or rent this from the UCF bookstore.

**The required use of clickers will begin on Thursday 1/10.** You must have registered your iClicker2 by this day or you will not receive credit.

#### iClicker2 registration:

The only valid way to register your iClicker2 for this class is through Webcourses. Even if you registered your iClicker2 in a previous semester you must reregister it this semester. Upon entering the class web page, you will find a tab on the left-hand side menu named "iclicker". Click on that tab and then click again on the "iclicker Registration" link. Follow the instructions provided.

**iClicker2 setup:** Prior to using your iClicker2 you must set the frequency so it is the same as the one used for this class. For general class questions everyone will use frequency CC. For quizzes, the correct frequency will be listed at the top of your quiz. Some will use CC and others DD. To change the frequency you must (1) push and hold the power button until the letters on the screen start blinking; (2) Press the C (or D) button 2 times. You should now see the letters CC (or DD) on your screen. Each time you turn on your iClicker you should confirm that it is set to the correct frequency. It should not change on its own but be sure to check just in case it does. If you are using it for another class you may need to change the frequency for each class.

**How to use your iClicker:** Power on your iClicker by pushing the power button. In class you will see the word "Eco\_CC" appear on your screen if your frequency is properly set to frequency CC (or Eco\_DD for some quizzes)(see above). When an iClicker question is asked simply press your desired answer (A-E). You do not need to press "send". If you change your mind, simply press your new answer prior to the instructor ending the polling. After pressing your answer you will receive a check mark on the screen indicating that your answer has been received by the instructor. Rest assured that if you see a check mark your answer has been received. If you do not see a check mark then your frequency may be incorrectly set or your iClicker may have malfunctioned and a new one should be obtained. For more information on how to use your iClicker see:

<https://macmillan.force.com/iclicker/s/article/How-to-Use-the-iClicker-2-Remote>

## How the iClicker will be used in class:

(A) Quizzes – See above for more information

(B) Participation:

Clickers will be used to assess your overall attendance and participation. Your final participation grade is worth 5% of your overall grade. The responses do not need to be correct for you to receive credit for participation but ALL questions asked that day must be answered. So, if you arrive late or leave early and a question is asked to which you were unable to respond due to your absence, then you will not receive participation credit for that day even if you answered a question in the middle of class.

**\*\*\*NOTE\*\*\* You may miss class two times and still receive 100% participation.** So if your batteries run low (bring extras just in case), you forget your clicker, you overslept, your car did not start, etc., there is no need to contact the instructor. More than two missed participation days will however result in reduction unless these absences are for authorized and documented reasons as described in the missed exam policy above.

(C) Extra Credit:

It is not necessary to respond correctly to clicker questions to receive participation credit for a particular day, but correct responses will benefit your grade via extra credit added to your midterm exam average. The maximum possible extra credit is 2%. Extra credit points missed for any reason cannot be made up under any circumstance.

Calculating your extra credit grade: There are 3 midterm exams, each worth 100 pts, for a maximum of 300 points possible without extra credit. The maximum possible clicker extra credit is 2% which is 6 points ( $300 * 0.02 = 6$ ). To calculate your points, multiply your clicker average by 6. For example, if you correctly answered 91% of the questions asked, you will receive  $0.91 * 6 = 5.46$  extra credit points added to your midterm exam average.

### **\*\*\*NOTE\*\*\***

- **Unless specifically told otherwise, clicker responses must be done on your own. Discussing answers with neighbors prior to clicking is considered cheating and will be dealt with as such (see ETHICS section). For some questions you will be asked to discuss the answer with your neighbors. Again, unless specifically told to do so, you should answer on your own.**
- **Bringing a fellow student's clicker to class is cheating and will be dealt with as such.**

**Extra Credit:** There are two ways to earn extra credit in this course.

- 1) iClicker responses: Max possible = 2% added to your midterm exam average (see “Clickers” section for details)
- 2) You-Tube Video: Max possible = Up to 2% added to your final exam grade. Additionally, the top 2 videos, as voted on by your classmates during the last day of class, will also receive an additional 0.5% or 1%.

### Instructions:

You have the opportunity to make a 2-3 minute video on any ecological topic covered in this course. The video may be done individually or in a group of up to 4 students (you select your own group, all group members must appear and/or speak in the video, and all will receive the same grade).

- \* **Due date:** No later than **April 15<sup>th</sup>** at 11:59 pm. No late submissions accepted for any reason.
- \* The content of the video must be factually correct and may not be plagiarized.
- \* Only one video can be submitted per student for credit.
- \* Videos should be submitted to YouTube and the correct link and all group member first and last names emailed to the TA at [EcoTA@ucf.edu](mailto:EcoTA@ucf.edu).

### Performance Evaluation:

Exam with highest grade	23%
Exam with 2 <sup>nd</sup> highest grade	22%
Exam with 3 <sup>rd</sup> highest grade	20%
Exam with lowest grade	15%
Quizzes (8 x 2%)	16%
Clicker participation	4%
	<hr/>
	100%

### Grading Scale

A	90.0 - 100%	B+	87.0 - 89.9%	C+	77.0 - 79.9%	D+	67.0 - 69.9%	F	0 - 59.9%
		B	83.0 - 86.9%	C	70.0 - 76.9%	D	63.0 - 66.9		
		B-	80.0 - 82.9%			D-	60.0 - 62.9%		

If you would like assistance in calculating your grade please search for “The Amazing Grade Calculator” on the web (<http://www.conquercollege.com/gradecalc/>). This will give you a rough idea of your grade, based on your exam scores. However, it may not predict your exact score due to rounding errors, dropped quizzes, and extra credit.

### Final Course Grade Rounding Policy:

If your final total across all grading components is less than or equal to one percent below a higher grade, rounding up to the higher grade will occur only if you scored at the higher grade on 3 of the 4 exams. For example, if your overall course grade was an 89% and your exam scores were 84, 91, 92, and 93, your final grade will be rounded up to an A because three of the tests scored at 90 or above. If however your exam grades were 85, 88, 92, and 94, the grade would remain a B+ because only 2 of your 4 exam grades were 90 or above. As there are many students in this class I strive for consistency and fairness. For this reason, there will be no exceptions to this policy and no other adjustments will be made. In other words, unless the above criteria are met, a 79.99 is still a ‘C+’ and no additional curving or extra credit will be offered.

### Study suggestions:

This is a fast paced class covering 21 chapters in the semester. To succeed it is essential that you stay caught up by reading, attending lectures, and studying the material. Students who prepare for the exams by simply attending lectures and reading their notes several times are unlikely to succeed on the exams. To succeed it is best to make your learning more active and focused. Active learning involves practicing the same skills you must perform on exams. In other words, quick recall of the appropriate information and applying it. To do this you should:

- Treat studying like it's a job. Set a schedule, show up for work, pay attention (i.e. no multitasking) while on the job. A general rule of thumb is 2-3 hours for every hour spent in class.
- Keep up with the weekly readings and assignments. Students who keep up with the weekly reading and assignments tend to do much better in an online course than those who do not.
- Practice by Self-Testing. Use the study questions supplied on Webcourses or make your own. If you are like most people, you do not remember what you read/hear in sufficient detail to then be tested. However, it may be unclear which details you remember/understand and which you do not. The point in study questions is to figure out prior to an exam what you don't understand or have trouble remembering and work on that material. You do not want to realize during an exam that you don't understand something as well as you thought you did as it is now too late! For methods on how to most effectively write questions and use these questions, be sure to consult the study tips section on Webcourses.

## **Academic Integrity and Ethics:**

UCF faculty supports the UCF Creed. Integrity - practicing and defending academic and personal honesty is the first tenet of the UCF Creed. This is in part a reflection of the second tenet, Scholarship: -I will cherish and honor learning as a fundamental purpose of membership in the UCF community. Course assignments and tests are designed to have educational value; the process of preparing for and completing these exercises will help improve your skills and knowledge. Material presented to satisfy course requirements is therefore expected to be the result of your own original scholarly efforts.

Students should familiarize themselves with [UCF's Rules of Conduct](#). According to Section 1, "Academic Misconduct," students are prohibited from engaging in:

- *Unauthorized assistance*: Using or attempting to use unauthorized materials, information or study aids in any academic exercise unless specifically authorized by the instructor of record. The unauthorized possession of examination or course-related material also constitutes cheating.
- *Communication to another through written, visual, electronic, or oral means*: The presentation of material which has not been studied or learned, but rather was obtained through someone else's efforts and used as part of an examination, course assignment, or project.
- *Commercial Use of Academic Material*: Selling of course material to another person, student, and/or uploading course material to a third-party vendor without authorization or without the express written permission of the university and the instructor. Course materials include but are not limited to class notes, Instructor's PowerPoints, course syllabi, tests, quizzes, labs, instruction sheets, homework, study guides, handouts, etc.
- *Falsifying or misrepresenting* the student's own academic work.
- *Plagiarism*: Using or appropriating another's work without any indication of the source, thereby attempting to convey the impression that such work is the student's own.
- *Multiple Submissions*: Submitting the same academic work for credit more than once without the express written permission of the instructor.
- *Helping another violate* academic behavior standards.

Students who engage in academic misconduct contradict the educational value of your courses and undermine the value of the UCF degrees earned by their more honest peers. For more information about Academic Integrity, students may consult [The Center for Academic Integrity](#). For more information about plagiarism and misuse of sources, see "[Defining and Avoiding Plagiarism: The WPA Statement on Best Practices](#)".

## **Responses to Academic Dishonesty, Plagiarism, or Cheating**

Students should also familiarize themselves with the procedures for academic misconduct in UCF's student handbook, [The Golden Rule](#). UCF faculty members have a responsibility for students' education and the value of a UCF degree, and so seek to prevent unethical behavior and when necessary respond to academic misconduct. Penalties can include a failing grade in an assignment or in the course, suspension or expulsion from the university, and/or a "Z Designation" on a student's official transcript indicating academic dishonesty, where the final grade for this course will be preceded by the letter Z. For more information about the Z Designation, see <http://goldenrule.sdes.ucf.edu/zgrade>.

## **Course Accessibility Statement**

The University of Central Florida is committed to providing access and inclusion for all persons with disabilities. Students with disabilities who need disability-related access in this course should contact the professor as soon as possible. Students should also connect with [Student Accessibility Services](#) (Ferrell Commons 185, [sas@ucf.edu](mailto:sas@ucf.edu), phone (407) 823-2371). Through Student Accessibility Services, a Course Accessibility Letter may be created and sent to professors, which informs faculty of potential access and accommodations that might be reasonable. Determining reasonable access and accommodations requires consideration of the course design, course learning objectives and the individual academic and course barriers experienced by the student.

## **Campus Safety Statement**

Emergencies on campus are rare, but if one should arise in our class, everyone needs to work together. Students should be aware of the surroundings and familiar with some basic safety and security concepts.

- In case of an emergency, dial 911 for assistance.
- Every UCF classroom contains an emergency procedure guide posted on a wall near the door. Please make a note of the guide's physical location and consider reviewing the online version at [http://emergency.ucf.edu/emergency\\_guide.html](http://emergency.ucf.edu/emergency_guide.html).
- Students should know the evacuation routes from each of their classrooms and have a plan for finding safety in case of an emergency.
- If there is a medical emergency during class, we may need to access a first aid kit or AED (Automated External Defibrillator). To learn where those items are located in this building, see <http://www.ehs.ucf.edu/workplacesafety.html> (click on link from menu on left).
- To stay informed about emergency situations, sign up to receive UCF text alerts by going to [my.ucf.edu](http://my.ucf.edu) and logging in. Click on "Student Self Service" located on the left side of the screen in the tool bar, scroll down to the blue "Personal Information" heading on your Student Center screen, click on "UCF Alert," fill out the information, including your e-mail address, cell phone number, and cell phone provider, click "Apply" to save the changes, and then click "OK."
- If you have special needs related to emergency situations, speak with your instructor outside of class.
- To learn about how to manage an active-shooter situation on campus or elsewhere, consider viewing this video. [You CAN Survive an Active Shooter](#)

## **Deployed Active Duty Military Students**

If you are a deployed active duty military student and feel that you may need a special accommodation due to that unique status, please contact your instructor to discuss your circumstances.

## **Copyright**

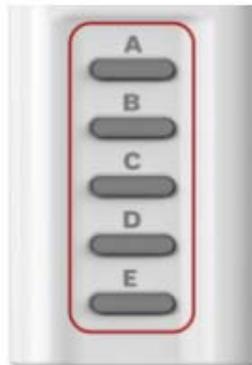
This course may contain copyright protected materials such as audio or video clips, images, text materials, etc. These items are being used with regard to the Fair Use doctrine in order to enhance the learning environment. Please do not copy, duplicate, download or distribute these items. The use of these materials is strictly reserved for this online classroom environment and your use only. All copyright materials are credited to the copyright holder.

## **Third-Party Software and FERPA**

During this course you might have the opportunity to use public online services and/or software applications sometimes called third-party software such as a blog or wiki. While some of these could be required assignments, you need not make any personally identifying information on a public site. Do not post or provide any private information about yourself or your classmates. If appropriate you may use a pseudonym or nickname. Some written assignments posted publicly may require personal reflection/comments, but the assignments will not require you to disclose any personally identity-sensitive information. If you have concerns, please contact your instructor.

## How to Participate in a Quiz with an iClicker2 Remote

1. Press and HOLD the **orange power button** until the letters on the screen start blinking.
2. At the top of your quiz locate the frequency (either CC or DD) and enter it into the iClicker. You should now see the letters CC or DD on your screen.
3. Press the **light blue mode/refresh** button to ensure that you are in self-paced polling mode.
4. A large "1" appears with a frame around it, indicating the question number. The self-paced polling icon also appears.
5. Respond to each question using the answer buttons **A-E**, then press **Send** to confirm your answer. Next to the number of the question you should see a checkmark and underneath it you should see the answer you selected.
6. Press the **UP** button on the cross-navigation to advance to the next question.
7. Continue responding to each question until you have reached the end of the quiz.
8. Use the **UP** and **DOWN** buttons to review your answers. Confirm that you see a checkmark next to the number of the question. You may change or re-send your answer to any question as long as polling is active.



## Lecture, Reading, Exam, and Quiz Schedule (Subject to change):

Week	Date		Lecture Topic <sup>1</sup>	Chapter <sup>1</sup>	Quiz/Exam Dates
1	January 8, 10	Tu Th	Introduction; The Web of Life; Evolution and Ecology;	1, 6	Webcourses Syllabus quiz (Due 1/11, 5pm)
2	January 15, 17	Tu Th	Temperature and Water Energy	4 5	1/15 - Quiz 2 (Ch 1, 6)
3	January 22, 24	Tu Th	Life History Population Distribution and Abundance	7 9	1/22 - Quiz 3 (Ch 4, 5)
4	January 29, 31	Tu Th	<b>Tue Jan 29 = EXAM 1;</b> Population Distribution and Abundance	<b>1, 4-7</b> 9 (cont)	<b>1/29 - Exam 1</b>
5	February 5, 7	Tu Th	Population Growth and Regulation Population Growth and Regulation (cont.)	10 10	
6	February 12, 14	Tu Th	Population Dynamics; Predation and Herbivory	11 12	2/12 - Quiz 4 (Ch 9, 10)
7	February 19, 21	Tu Th	Parasitism; Competition	13 14	2/19 - Quiz 5 (Ch 11, 12)
8	February 26, 28	Tu Th	<b>Tue Feb 26 = EXAM 2</b> The Biosphere (+ bits of chapter 2)	<b>9-13</b> 3	<b>2/26 - Exam 2</b>
9	March 5, 7	Tu Th	The Biosphere (cont) The Nature of Communities;	3 (cont) 16	3/7 - Quiz 6 (14, 3)
Break	March 11-15	-	-No Class-	-	
10	March 19, 21	Tu Th	Change in Communities Biogeography	17 18	3/21 - Quiz 7 (Ch 16, 17)
11	March 26, 28	Tu Th	<b>Tue Mar 26 = EXAM 3;</b> Species Diversity in Communities	<b>3, 14, 16-18</b> 19	<b>3/26 - Exam 3</b>
12	April 2, 4	Tu Th	Production; Energy Flow and Food Webs	20 21	4/4 - Quiz 8 (Ch 19, 20)
13	April 9, 11	Tu Th	Energy Flow and Food Webs (cont) Conservation Biology	21 (cont) 23	
14	April 16, 18	Tu Th	Landscape Ecology & Ecosystem Mngmnt Global Ecology;	24 25	4/16 - Quiz 9 (Ch 21, 23)
Final Exam	Thursday April 25	Th	<b>FINAL EXAM:</b> <b>Thurs April 25, 1:00 - 3:50 pm***</b>	<b>19-21, 23-25</b>	<b>4/25 - Final Exam</b>

<sup>1</sup>The dates of these topics serve as a guideline and are subject to change.

**\*\*\*NOTE\*\*\* The final exam occurs earlier than your normal lecture. Don't be late!**