

# PLANT LIFE HISTORIES BOT 3014 FALL 2016

Dr. JOHN GEIGER ([geigerj@fiu.edu](mailto:geigerj@fiu.edu))

Fall 2016: Tu & Th: 2:00-3:15pm GL100B

Office: OE 224

Office Hours: M 1-3pm, Tu 4-6pm, or by appt.

## SCHEDULE \*\*\*:

Tu 23 Aug	Introduction – Review of Syllabus & Personal Introductions
Th 25 Aug	Ch. 1: Botany: An Introduction
Tu 30 Aug	Chs. 3 & 4: The Plant Cell and Cell Cycle & The Movement of Substances
Th 1 Sep	Ch. 5: The Flow of Energy & <b>QUIZ #1</b> at the end of class
Tu 6 Sep	Ch. 6: Respiration & <b>QUIZ #2</b> at the end of class
Th 8 Sep	Ch. 7: Photosynthesis, Light, and Life & <b>QUIZ #3</b> at the end of class
Tu 13 Sep	<b>EXAM # 1:</b> Chs. 1, 3, 4, 5, 6, and 7
Th 15 Sep	Guest Lecturer # 1 TBD
Tu 20 Sep	Ch. 8: Sexual Reproduction and Heredity
Th 22 Sep	Ch. 9: The Chemistry of Heredity/Gene Ex. & <b>QUIZ #4</b> at the end of class
Tu 27 Sep	Ch. 10: Recombinant DNA Tech., Plant Biotechnology, and Genomics
Th 29 Sep	Ch. 11: The Process of Evolution [Part 1 (pgs. 209-220)] & <b>QUIZ #5</b>
Tu 4 Oct	Ch. 11: The Process of Evolution [Part 1 (pgs. 209-220)] & <b>QUIZ #6</b> at the end of class (covering ALL of Ch. 11)
Th 6 Oct	Guest Lecturer # 2 TBD
Tu 11 Oct	<b>EXAM # 2:</b> Chs. 8, 9, 10, and 11
Th 13 Oct	Ch. 17: Seedless Vascular Plants
Tu 18 Oct	Ch. 18: Gymnosperms, Pt. 1
Th 20 Oct	Ch. 18: Gymnosperms, Pt. 2
Tu 25 Oct	Guest Lecturer # 3 TBD
Th 27 Oct	Ch. 19: Intro. to Angiosperms, Pt. 1 (pgs. 457-465) & <b>QUIZ #7</b> at the end of class (covering Ch. 18 & Ch. 19: Pt. 1. (pgs. 457-465))
Tu 1 Nov	Ch. 19: Intro. to Angiosperms, Pt. 2 (pgs. 465-475)
Th 3 Nov	Ch. 20: Evolution of the Angiosperms, Pt. 1
Tu 8 Nov	Ch. 20: Evolution of the Angiosperms, Pt. 2
Th 10 Nov	Ch. 21: Plants/People & <b>QUIZ #8</b> at the end of class (covering Chs. 20 & 21)
Tu 15 Nov	<b>EXAM # 3:</b> Chs. 17, 18, 19, 20, and 21
Th 17 Nov	Ch. 27: Regulating Growth and Development: The Plant Hormones & Guest Lecturer # 4 TBD
Tu 22 Nov	Ch. 28: External Factors and Plant Growth
Th 24 Nov	Thanksgiving Holiday – NO class
Tu 29 Nov	Ch. 29: Plant Nutrition and Soils & <b>QUIZ #9</b> at the end of class (covering Ch.

		28 & Ch. 29)
Th	1 Dec	Ch. 31: The Dynamics of Comms. and Ecosystems & <b>QUIZ #10</b> at the end of class (covering Ch. 31)
Th	8 Dec	<b>FINAL EXAM / EXAM # 4:</b> Chs. 27, 28, 29, and 31; <u>12:00-2:00pm</u>

**\*\*\*Syllabus and/or schedule is subject to change at professor's discretion.\*\*\***

**TEXTBOOK:** *Raven Biology of Plants*, 8<sup>th</sup> edition. Ray F. Evert and Susan Eichhorn, 2012. W. H. Freeman and Company Publishers. ISBN-13: 978-1-4292-1961-7

**Syllabus Document:** This syllabus serves as a legally binding contract between the professor and students. Every aspect of the course is outlined within this document. If there are any questions or problems (e.g., schedule conflict with a holiday or personal issue), these need to be brought to my attention THE FIRST WEEK OF CLASS. Otherwise, all dates, class formats, etc. are set within this document. Any changes to the syllabus will be immediately shared with students in class and via electronic postings (i.e. emails, BlackBoard).

**BlackBoard:** The entire course will be administered through BlackBoard. The BlackBoard login can be found here: [FIU BlackBoard login](#). The syllabus, and other class updates will be posted here (considering posting lecture slides???). Students are responsible for checking the site and keeping up with all posted materials and information. Please contact me if you have questions about using this site.

**Email:** Please get an FIU student email address and check it daily. Any bulk emails I send to the class will be sent to this address only, and you will be responsible for all bulk emails I send.

**Course Learning Objectives:** By the end of this course, you should be able to describe the basic biology of a plant cell as well as plant energetics, describe the basic genetics and evolution of plants; describe the diversity found within the plant kingdom, and understand the physiology of seed plants, including the larger ecology of plant communities and ecosystems. During my lectures, I will use active-learning approaches to help reinforce the learning experience. These activities are designed to draw you into the educational process. While this approach reduces lecture time, it does reinforce learning of key concepts and will help you develop critical thinking skills.

During my lectures, I will use active-learning approaches (i.e. **iClicker**) to help reinforce the learning experience. These activities are designed to draw you into the educational process. While this approach reduces lecture time, it does reinforce learning of key concepts and will help you develop critical thinking skills. Exposure to a variety of research scientists and their work will help you grasp the importance of the research process.

**Lecture Structure:**

—Lecture slides are produced to be an excellent learning tool for students. The core course material will be a part of the presentations, but additional material will be covered in lecture.

Therefore, attendance and engagement during the presentations will be critical, but not totally sufficient, to ultimate success (i.e. an A).

—We will be taking breaks during the presentations so that all students have a chance to actively engage in learning the material rather than simply listening to the sound of my voice. These breaks will be used for active learning experiences, such as **iClicker** questions. Extra paper (i.e. loose leaf, torn from your notebook) will be required so that students may jot down short pieces of information from these active learning breaks over the course of the lecture period. These daily lecture activities will constitute your ‘Class Participation/Attendance’ grade component.

—I may often begin class with a quick synopsis of a current local or global events story that relates to the lecture of the day. Students will be responsible for the material in these opening discussions.

***Grade Components and Proportions:***

<b>Exams</b> – 4 Exams (15% each)	<b>60%</b>
<b>Class Participation</b> (i.e. lecture break activities/ <b>iClicker</b> ?’s) & <b>Attendance</b>	<b>20%</b>
<b>Homework</b> – from Guest Lecturer papers (4 X 2% each)	<b>8%</b>
<b>Quizzes</b>	<b>12%</b>

**Exams:** There will be 4 Exams. All exam scores will count towards your final grade. There will be **NO** make-up exam alternatives, except with: 1) a document verified death in immediate family, or 2) a document verified hospitalization of student during scheduled exam day and time. There will be absolutely **NO** deviation from this policy under any circumstances.

Each of the tests is partially cumulative. Each primarily will include the material covered within that section of the course (80-90%). The remainder of the exam will be drawn from the information on previous tests. Exams will include material from the lectures, research lectures, and the book. Test format may include short answer, multiple choice, true / false, graphic interpretation, and essays. Your grade will be based, without exception, on the following scale:

- A 90 – 100%
- B 80 – 89
- C 70 – 79
- D 60 – 69
- F < 60

***Class Participation & Attendance:*** This portion of your overall grade will incorporate ALL of the daily lecture break activities that we will perform each lecture. Therefore class attendance and engagement are necessary to fulfill this component. I will require the use of the iClicker1 or 2 device for this course. They can be purchased at the bookstore or online sources. I will post information on how to register your device for this course. ‘Official’ points will start being collected on **Tuesday, 30 August.**

***Homework (#1-4):*** For each research paper review, read the assigned paper and answer the following questions: Be sure to answer all questions. Grading of these is primarily based on questions 1, 5, and 6.

1. What was the purpose of the paper, that is, what was the paper testing or what was its real objective?
2. What aspect of the paper did you find to be most interesting?
3. What aspect of the paper was most confusing?
4. Which graphical presentation was most helpful and which was most confusing and Why?
5. What was the most important point of the paper, that is, what is the message the paper is trying to convey?
6. What question would you like to ask the speaker to increase your understanding of his/her subject area.

These homework assignments are due at the start of class (i.e. **2:00pm**) on the dates indicated, submit them as printed out/hardcopy.

***Quizzes:*** The quizzes will cover the material from the previous lecture as well as material from that day’s lecture. Therefore, you will need to have read the material before lecture to do well on the quizzes. The format will include: multiple-choice, fill-in-the-blank, matching, true/false, graphic interpretation, and short-answer essay.

### ***Grading Policy Addendums:***

—My first priority is the success of my students. Please feel free to come and see me in my office at any time. I will work extraordinarily hard to help you do well. Do not hesitate to take advantage of that.

—Students will be graded on their performance in the above areas ONLY. Any extra-curriculum activities (work, sports, army, applying for jobs) or special needs (you have to get an A to graduate, scholarship requirements) will not have ANY influence concerning the final grade. Future career plans will have ZERO influence on the grade you receive in this class. Incomplete grades will be considered only under extraordinary circumstances.

—I will record attendance, and attending lectures will be essential to do well on the tests. We will frequently cover information in lecture that will not be covered in the lecture slides. The slides provide core information, but we will go beyond these basics with more advanced

discussion/information in lectures. Specifically, success on the analytical questions will be dependent on class attendance.

—Plan to come earlier than usual for the day of the exam - it is your responsibility to be sure that the day of the exam you will not face any conflict with other activities. If you arrive to an exam more than 30 minutes late, or after the first person finishes the test (whichever comes first), you will not be allowed to take the exam and will receive a score of 0 (zero). I will not approve excuses that are within a student's control (e.g., not enough time to study, headache, car wouldn't start, I had to go for a job interview, I did not wake up early, traffic was terrible, etc.). You well know that Miami traffic is awful – that is NOT an excuse for being late.

—In order to qualify for a makeup exam alternative (either from absence or tardiness), there must be a valid university-approved excuse. Students who simply do not show up for the exam will not be allowed to take a makeup exam and will receive a score of 0. No makeup exams will be given in the absence of a university-approved excuse. Examples of university-approved excuses include: documented medical emergencies, death of members of immediate family, and jury duty. A car accident will be accepted as an excuse only if the student provides a police report.

—Exam dates are set, and will not be changed. Make note of these immediately and plan accordingly. If you have a conflict, meet with me during the first week of class.

—Cheating will not be tolerated, and will be actively rooted out of this course. All personal items on test day must be left at the front of the room; only pencils will be allowed at the students' seats. I will give one warning for cases of expected cheating. The second warning will result on a zero for that exam – no questions asked. This will be strictly enforced, and I will not be lenient.

### **FIU Policies**

***Honor Code:*** More generally, I expect every student to maintain the highest standards of academic integrity. You are expected to follow the FIU Student Code of Conduct:

<http://www2.fiu.edu/~oabp/misconductweb/1acmisconductproc.htm>

***Sexual Harassment Policy:*** FIU's sexual harassment policy is available at:

[http://bot.fiu.edu/files/Reg%20104.%20Sexual%20Harassment%209-12-08%20\(Final\).pdf](http://bot.fiu.edu/files/Reg%20104.%20Sexual%20Harassment%209-12-08%20(Final).pdf)

***Other FIU Policies:*** <http://compliance.fiu.edu/ethics.htm>