**Spring 2015 Syllabus**

**Course Number, Section Number, and Course Title:** Biology 3427: Plant Science

**Time and Place of Lecture:** TTh 11:00 a.m. – 12:20 a.m., Life Sciences 124

**Time and Place of Lab**: M, T, W, Th 2 - 4:50 p.m., Life Sciences 140

**Instructor:** Gretchen Gann

**Office Number:** Life Sciences 349 **Office Telephone Number:** 817-272-2639

**Email Address:** ggann@uta.edu **Office Hours:** W 3:00-5:00, Th 12:30-1:30, by appointment

**Course Webpage:** The Blackboard course webpage will contain lectures and other course material. Go to <http://elearn.uta.edu> to log on.

**Laboratory Instructors**:

Michelle Green, mlgreen@uta.edu, Office: LS 139, Office Hours: TBA

Sarah Mahon, mahon@uta.edu Office: LS 139, Office Hours: TBA

**Undergraduate TAs:**

Amsal Roy, Sonu Ranjit, Karis Beekman, and Ross Grounds

**Description of Course Content:** A survey of plant science including the importance of plants to people and the human side of botany; the structure, reproduction, physiology, ecology and classification of plants. The laboratory is designed to support and expand the course content of the lecture.

**Student Learning Outcomes:** For students to understand the importance of plants to humans and all other organisms on Earth, to review key concepts including photosynthesis and evolution of plants, and to distinguish groups of plants based on key characteristics. In lab students will conduct experiments with plants to learn about plant growth, reproduction, ecology and other relevant topics. Students will write lab reports summarizing their experiments to further their understanding of the scientific process.

**Prerequisites**: BIOL 1441, 1442, or equivalent.

**Lecture Requirements**: Students will be evaluated by three exams during the semester and a comprehensive final exam. There will be no extra credit opportunities.

**Laboratory Requirements**: Students will be evaluated through a combination of quizzes, lab reports, a lab notebook and a final practical exam.

1. Quizzes will be given at the beginning of each lab session. If you are late for lab, you will receive a zero for that quiz. The lowest two quiz grades will be dropped; there are no make-up quizzes. Quizzes may include material from lecture and lab.
2. Three lab reports will be completed throughout the semester, noted with asterisks in the lab schedule. Lab reports are to be written individually, although you will be working in groups to complete the experiments; additional instructions are included in the lab manual. Identical portions of lab reports will be handled as incidents of plagiarism following university policy.
3. Students must maintain a lab notebook that contains drawings, data, and notes taken during labs. The TA will request to see the notebook twice during the semester (dates will not be announced; 5 pts. each), and will collect and grade the notebook at the end of the course (15 pts.).
4. The final exam will be in the format of a lab practical and will include material from the entire semester. The final exam will be closed book.

**Required Textbooks and Other Course Materials:** *Biology of Plants*, 7th or 8th Edition, by Raven et al., 2012, W.H. Freeman and Co., and the Plant Science Laboratory Manual (sold by Phi Sigma). Laboratory manuals ($20) and goggles ($5) are available for purchase from Phi Sigma, the Biology Graduate Student Society. Phi Sigma accepts cash or credit/debit cards. You can purchase your manual following days and times TBA.

**Lecture Schedule:**

**Date Subject Chapter in Text**

20 Jan Introduction, course overview 1

22 Jan Angiosperms 19

27 Jan Angiosperm Evolution 20

29 Jan The Plant body 22

3 Feb Plant Cells and Tissues 23

5 Feb Roots 24

10 Feb Shoots and Leaves 25

12 Feb End Shoots and Leaves, Start Secondary Growth 25,26

17 Feb Stem Secondary Growth, review 26

19 Feb **EXAM 1**

24 Feb Molecular Composition of Plant Cell & Cell Cycle 2,3

26 Feb Flow of Energy 5

3 Mar Respiration 6

5 Mar Photosynthesis 7

10 Mar *Spring Break—no class*

12 Mar *Spring Break—no class*

17 Mar Systematics: Science of Diversity, review12

19 Mar **EXAM 2**

24 Mar Prokaryotes, Viruses, Fungi 13, 14

26 Mar Protista 15

31 Mar Bryophytes 16

2 Apr Seedless Vascular Plants 17

7 Apr Gymnosperms 18

9 Apr Continue Gymnosperms , review 18

14 Apr **EXAM 3**

16 Apr Plant Hormones 27

21 Apr Plant Growth 28

23 Apr Plant Nutrition and Soils 29

28 Apr Movement of Water & Solutes in Plants 30

30 Apr Plant Ecology 21,31\* & 32\*

5 May Continue Plant Ecology 21,31\* & 32\*

7 May Course Wrap Up and Review

12 May **CUMULATIVE** **FINAL EXAM**, 11:00 a.m. – 1:30 p.m.

\*Chp. 31 & 32 are on the web at <www.whfreeman.com/raven>

**Lab Schedule:**

### Week of Subject Assignments

26 Jan 1. Course introduction (outside), Plant Growth\*

2 Feb 2. Plant Cells, Germination\*\*, Seedling Development,

Vegetative Propagation

9 Feb 3. Plant Tissues

16 Feb 4. Vascular System, Roots, Shoots (outside) \*\*Germination lab report due

23 Feb 5. Secondary Growth

2 Mar **Midterm Practical Exam**

9 Mar NO LAB – SPRING BREAK

16 Mar 6. Photosynthesis

23 Mar 7. Cyanobacteria, Algae, Lichens

20 Mar 8. Seedless Plants \*Plant Growth lab report due

6 Apr 9. Seed Plants: Gymnosperms \*Plant Growth oral presentations

13 Apr 10. Seed Plants: Angiosperms, Ecology

20 Apr **Final Practical Exam**

**Grading Policy**: You may earn up to 600 points in lecture and laboratory, as follows.

**Lecture:** Exam 1: 95 pts.

 Exam 2: 95 pts.

 Exam 3: 95 pts.

 Final Exam: 115 pts.

 Lecture Total 400 pts.

**Laboratory:** Quizzes: 35 pts. (5 pts. each, lowest 2 dropped)

 Germination Lab Report: 10 pts

Fast Plant Lab Report: 25 pts.

 Outside Activity 10 pts.

Oral Presentation: 10 pts. (group grade)

 Lab Notebook: 10 pts. (two 5 pt. spot checks)

 Midterm Practical: 50 pts.

Final Practical Exam: 50 pts.

 Lab Total 200 pts.

**Grading Scale:** Percentage based on 600 total possible points: 89.5-100 A; 79.5-89.4 B; 69.5-79.4 C; 59.5-69.4 D; <59.5 F

**Attendance and Drop Policy:** Attendance is required. If you must miss a laboratory for a legitimate, documented reason, contact your instructor before that day and time to make alternate arrangements. If the instructor does not hear from you prior to the lab session, you will not be able to make up the lab. University drop policy will be followed. The last day to drop this class is **3 April 2011**.

**Laptop Policy:** Laptops and other wireless internet devices will not be allowed during lecture or lab. If you use such a device you will be asked to leave class for the remainder of the session. If you need special accommodation, please see section below.

**Make-up Exam Policy**: The instructor must be notified prior to your missing an exam for a legitimate, documented reason. If we have not heard from you prior to the exam, you will not be able to make it up. All make-up exams will be in essay format and will be administered the week of 27 April 2011.

**Grade Grievance Policy**: I am always willing to discuss a question you may have about grading of a particular answer on a quiz or exam in either the lecture or lab section. However you must see me regarding a grading question within one week of the quiz or exam being returned; after that, no grades will be changed. If the dispute is regarding a laboratory grade, you must discuss it with your TA first. If you and your TA cannot solve the disagreement, please let me know within one week after the quiz, assignment or exam was returned. If after meeting with me you do not feel your grievance was adequately addressed, you should contact the Associate Chair of the Department of Biology.

**Mandatory Online Safety Training**:

1.  Go to <http://www.uta.edu/training>.

2.  Log on using your network log-on ID and password (what you use to access email). If you do not know your NetID or need to reset your password, visit <https://webapps.uta.edu/oit/selfservice/> .

3.  The available courses for completion will be listed under “Training I’m Enrolled In”.  Complete the course entitled ‘Student Lab Safety Training – General.’ \*\*\*NOTE: If you completed Wet, Dry or Biology Lab Safety Training course last semester for another class, that training is still applicable until the end of this academic year. Please follow instructions in #4 to print the certification page for your TA.

4. Go to ‘Training I’ve Completed’ and print the displayed page for your TA. Verify that it shows clearly your name, and that ‘General, Wet, Dry or Biology’ training is completed/passed and the date when the training was completed. If you have just completed the training but it is not updated on the ‘Training I’ve Completed’ page, please log out of the system and log back in. If the training still does not show up on this page, call the Helpline at 817-272-5100.

5. If you were enrolled in a course with a lab last semester and did not complete the training or if you do not see training for this academic year listed, email compliance@uta.edu providing your name, a contact phone number, NetID and course and request the appropriate training for your course.

6. Students who have not completed the training by census date may be dropped from the lab (and consequently the lecture).

7. Lab Safety Training is required to be completed once every academic year. Training completed in the Fall semester is valid for the Fall, Spring and Summer sessions. It is your responsibility to print your training certification page and turn it in each semester to your TA for each course with a lab you are enrolled in.

*For training specific questions, contact the Environmental Health and Safety office at 817-272-2185.*

*For technical assistance with the training, please contact the Office of Institutional Compliance at 817-272-5100 or email* *compliance@uta.edu*

**Important University Policies:**

**Americans with Disabilities Act:** The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA)*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at [www.uta.edu/disability](http://www.uta.edu/disability) or by calling the Office for Students with Disabilities at (817) 272-3364.

**Academic Integrity:** Students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

*I pledge, on my honor, to uphold UT Arlington’s tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*

*I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents’ Rule* 50101, §2.2, suspected violations of university’s standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student’s suspension or expulsion from the University.

**Student Support Services Available:** The University of Texas at Arlington has established a variety of programs to help students meet the challenges of college life. Support to students includes advising, counseling, mentoring, tutoring, supplemental instruction, and writing assistance. For a complete list of academic support services, visit the Academic Assistance resource page of the Office of Student Success Programs, [www.uta.edu/uac/studentsuccess/academic-assistance](http://www.uta.edu/uac/studentsuccess/academic-assistance). To help students address personal, academic and career concerns, individual counseling is also available. For more information, students are encouraged to contact Counseling Services [www.counseling.uta.edu](http://www.counseling.uta.edu/) at (817) 272-3671 or visit a counselor in 216 Davis Hall.

**Electronic Communication Policy:** The University of Texas at Arlington has adopted the University “MavMail” address as the sole official means of communication with students. MavMail is used to remind students of important deadlines, advertise events and activities, and permit the University to conduct official transactions exclusively by electronic means. For example, important information concerning registration, financial aid, payment of bills, and graduation are now sent to students through the MavMail system. All students are assigned a MavMail account. ***Students are responsible for checking their MavMail regularly.*** Information about activating and using MavMail is available at <http://www.uta.edu/oit/email/>. There is no additional charge to students for using this account, and it remains active even after they graduate from UT Arlington.

**Student Feedback Survey:** At the end of each term, students enrolled in classes categorized as “lecture,” “seminar,” or “laboratory” shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student’s feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington’s effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <http://www.uta.edu/sfs>.

**Final Review Week:** A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week unless specified in the class syllabus. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. Classes are held as scheduled during this week and lectures and presentations may be given.

**Emergency Exit Procedures:** Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which is located to the left of LS 124 and immediately to the right of LS 140. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist handicapped individuals.

*This course outline is tentative and subject to change.*