

Spring 2014
Botany 101 Laboratory—
W Sections 1, 3, 4, 6----non-W sections 7 & 8
 (St. John 157)

<u>Schedule and Due Dates</u>			
Week	Date	Topic	Assignment Due
1	1/14-17	Introduction /Mysteries of Botany	
2	1/20-24	Quiz 1, Library	Library assignment (all labs)
3	1/27-30	Quiz 2, Roots	Library Assignment Due (all labs)
4	2/3-7	Quiz 3, Stems	Term Paper Topic Due- <u>W only</u>
5	2/10-14	Quiz 4, Leaves	
6	2/17-21	Quiz 5, Transpiration	
7	2/24-28	Quiz 6, Photosynthesis and Respiration	
8	3/3-7	Quiz 7, Prokaryotes and Fungi	First Draft of Paper Due-<u>W only</u>
9	3/10-14	Quiz 8, Algae	
10	3/17-21	TEST, Practicum I	
***	3/24-28	<i>Spring Break</i>	
11	3/31-4/4	Quiz 8, Bryophytes	
12	4/7-11	Quiz 9, Lower Vascular Plants	
13	4/14-18	Quiz 10, Gymnosperms	
14	4/21-25	Quiz 11, Angiosperms	Final Term Paper Due- <u>W only</u>
15	4/28-5/2	TEST, Practicum II	
		NO LAB	

- **Grades:**
 Will be based on pre-lab quizzes, hand-in sheets located at the end of each lab, Library Assignment, and 2 Practical exams. And Term paper for W sections
- **Pre-lab Quizzes—all lab sections**
 Will consist of 5-10 questions covering information from the previous week's lab. Approximately ten minutes at the beginning of each lab will be set aside for this quiz. Be on time or you will miss the quiz, no make-ups. Each quiz is worth 10 pts.

- **Hand-in Sheets—all lab sections**

Located at the end of each lab exercise, these should be filled out and handed in before leaving lab. Answer the questions during the lab as you go through the exercises. Do not expect to have them answered for you at the end of class. Each hand-in sheet is worth 20 points.

- **Library Assignment—all lab sections**

The library assignment will be handed out by your TA the second week. Complete and hand-in at the next lab (50 pts)

- ****Writing Assignments (40% grade) W Sections only****

These are designed to familiarize you with scientific resources and scientific writing. Pay attention to instructions and due dates. **All writing assignments must be satisfactorily completed in order to receive W credit and a final grade in this course.**

- **Practical Exams—all lab sections**

There will be two 1 hour practical exams (each a Practicum) during the semester. In this type of exam you will be required to identify organisms, tissues, equipment and other features used during the labs. Drawings help memory, so do the ones in your lab book and label them clearly so that you may have a good device from which to study. Do not try to learn all this material at the last minute before the exam. If you have questions in lab, ask them and note the answers then. Each exam will be worth 100 points.

- **Point Breakdown and Grading**

<i>Individual Categories</i>		<u>Total Points and Grades</u>	
		<u>Sections 7 & 8</u>	<u>**W Sections 1,3,4,6**</u>
Quizzes	120 pts	610-549 = A	909-1010 = A
Practical Exams	200 pts	548-488 = B	908-808 = B
Library Assign	50 pts	487-427 = C	807-707 = C
Lab sheets	<u>240 pts</u>	426-366 = D	706-606 = D
<i>total (Sec 7,8)</i>	610	365 and below = F	605 and below = F

W Paper	<u>400 pts</u>	<u>** All W assignments must be completed to receive credit for the course**</u>	
Total (1,3,4,6)	1010		

- **Late Assignments**

Assignments turned in late will have 10% deducted each day until they are turned in. All assignments are due at the beginning of lab.

- **Missed labs**

If you know of a conflict in your schedule, please make arrangements in advance. It is sometimes possible to attend another lab section, but this is not guaranteed.

If you are sick, please bring a note from the doctor. If possible notify the T.A. or Dr. Keeley when you are ill. Make-ups may not be possible. Points missed are points missed.

- **Academic Expectations**

Cheating is not tolerated at any level. You will do best by using your own efforts to learn the material and to demonstrate your own independent level of knowledge and performance. Do not expect special consideration or leniency in the event of the appearance that credit belongs to the efforts of another whether in writing assignments, hand-ins, lab work or practical exams.

Student Learning Objectives Bot 101 L

To be able to:

- Identify roots, stems, leaves and reproductive organs at macro- and microscopic levels and the cell and tissue types of which they are composed
- Know the equation for photosynthesis, be able to name the pigments involved and the process used visualize them, and how to demonstrate that light and CO₂ are essential
- Describe the environmental conditions that best suit C3, C4 and CAM plants and the anatomical differences between them
- Know the equation for respiration and the conditions under which it is increased and decreased
- Explain the process of transpiration and the environmental conditions that increase and decrease its rate, and why this is important for plants
- List the essential features of each Kingdom, distinguishing Plants from Fungi, Protista and bacteria
- Name the key structural features of fungi, their cell wall composition and manner of feeding and reproducing
- Be able to describe the important structural differences between aquatic and terrestrial plants and why these are important
- Explain the structural, anatomical and functional differences in the plant body between algae, bryophytes, lower vascular plants, gymnosperms and angiosperms
- Be able to correctly identify on sight fungi, algae, bryophytes, lower vascular plants, gymnosperms and angiosperms
- Know the groups that constitute the seed plants and their major structural, physiological and reproductive differences
- Know and name the parts of the flower, and give the function of each part
- Know the structure and function of the parts of a seed and the basic requirements for germination
- Give at least one commercial use for algae, bryophytes, lower vascular plants, gymnosperms and angiosperms
- Know and describe why plants are absolutely essential to life on earth as we know it
- For W sections- In addition to the above, know the sections of a scientific paper, be able to organize and write in this style including proper citations, figures and tables. Understand the difference between scientific articles and those from web sites and popular media and why these are not equally accurate sources.