Objectives and Description:

The objectives are to provide an upper level plant science class that addresses the structure, development, physiology and ecology of plants. In addition to the general catalog description, the following topics are covered in detail: energy relations, growth regulation/responses, water relations, evolution and ecology. Many of these topics are further analyzed in the laboratory. Biology I and II, or equivalents, are assumed background material.

Texts:


Lecture:

All reading assignments listed in the syllabus are to be completed prior to attending lecture thus enabling you to become an active and meaningful participant in the lecture process. Other readings from other sources may also be assigned.

Laboratory:

You are expected to attend all labs since make-ups are not possible. Reasons for missing a lab should be discussed prior to missing. Besides the laboratory topics provided you may be assigned other readings for lab.

Writing Standards:

Literate and effective English is required in speech and writing. If you find it difficult meeting this requirement, you will be requested to visit the writing center.

Academic Honesty: See the ACADEMIC HONESTY IN THE YORK COLLEGE DEPARTMENT OF BIOLOGICAL SCIENCES page iii of the syllabus.

Grading: Lecture and Laboratory will be given equal weight. 90-100 (4), 85-89 (3.5), 80-84 (3.0), 75-79 (2.5), 70-74 (2.0), and 60-69 (1.0).
**TUESDAY LECTURE**

August 26  
Chapter 31, Ecology  

Sept. 2  
Chapter 32 The Human Prospect  

Sept. 9  
Chapter 18, Gymnosperms  

Sept. 16  
Exam #1  
Chs. 31-32, 12, 18-19.  

Sept. 23  
Chapter 23, Cells and tissues of the Plant Body  

Sept. 30  
Chapter 26, Secondary growth in stems  

Oct. 7  
Chapter 27, Regulating Growth and development: The Plant Hormones  

**October 11-14 Fall Break**  

Oct. 21  
Chapter 30, the Movement of Water and Solute in Plants  

Oct. 28  
Chapter 5, The Flow of Energy  

Nov. 4  
Chapter 7 Photosynthesis  

Nov. 11  
Chapter 7 continued  

Nov. 18  
Chapter 6, Respiration  

Nov. 25  
Chapter 6, continued  

Dec. 2  
Chapter 6, continued  

Dec. 9  
Assigned Reading: Final covers Chs. 5-7=1/2, ½ from previous materials  

**WEDNESDAY LABORATORY**

Aug. 27  
Topic 1 Wetland Delineation  

Sept. 3  
Topic 2 Wetland Delineation  

Sept. 10  
Topic 3 Wetland Delineation  

Sept. 17  
Topic 4 Wetland Delineation  

Sept. 24  
Topic 5 Early Development and Tissue  

Oct. 1  
Topic 6 The Root Primary Structure and Stem  

Oct. 8  
Topic 7 The Leaf Woody Stem  

Oct. 15  
Topic 8 Growth Regulators  

Oct. 22  
Topic 9 External Factors  

Oct. 29  
Topic 10 Inorganic Nutrients Required by Plants  

Nov. 5  
Topic 11 Measurement & Characterization of Photosynthesis  

Nov. 12  
Topic 12 Measurement of the CO2 Dependence of Photosynthesis  

Nov. 19  
Topic 13 Response of Photosynthesis to CO2 Concentration in C3 and C4 Species  

Nov. 26  
**Thanksgiving Vacation, Nov. 26-30**  

Dec. 3  
Topic 14 Measurement of Light Dependence of Photosynthesis  

Dec. 10  
December 13 Reading Day  

**THURSDAY LECTURE**

Aug. 28  
Chapter, 32 Global Ecology  

Sept. 4  
Chapter 12, Systematics  

Sept. 11  
Chapter 19, Angiosperms  

Sept. 18  
Chapter 22, Early Development in Plant Body  

Sept. 25  
Chs. 24-25, The Root, the Shoot: Primary Structure and Development  

Oct. 2  
Exam #2  
Chs. 23-26  

Oct. 9  
Chapter 28, External Factors and Plant Growth  

Oct. 16  
Chapter 29 Plant Nutrition and Soils  

Oct. 23  
Exam #3, Chs. 27-30  

Oct. 30  
Chapter 5 continued  

Nov. 6  
Chapter 7 continued  

Nov. 13  
Chapter 7 continued  

Nov. 20  
Chapter 6, Respiration (Con’t)  

Nov. 27  
**Thanksgiving Vacation**  

Dec. 4  
Assigned Reading  

Dec. 11  
Finals Begin
ACADEMIC INTEGRITY IN THE YORK COLLEGE
DEPARTMENT OF BIOLOGICAL SCIENCES

Science and the teaching of science represent a search for truth and they rest on ethical behavior and intellectual honesty. As such, both the Department of Biological Sciences and York College of Pennsylvania unequivocally condemn academic dishonesty. Academic dishonesty is defined in the York College Student Handbook as cheating, plagiarism, fabricating research, falsifying academic documents, etc. and includes all situations where students make use of the work of others and claim such work as their own. Because the Department of Biological Sciences maintains high expectations for all students and is committed to stringent standards of academic integrity, we contend that all published information, in any form, must not be used unless rigorously paraphrased and properly cited. Moreover, all tests, projects, assignments, and lab reports require a solo effort unless specifically noted otherwise by the instructor. This means that the sharing of text, images, tables, figures, or data analyses with classmates is a breach of academic integrity. Furthermore, providing such information to others will be considered as dishonest as accepting or taking the information.

Work done in lab may involve partners, but the formal partnerships end when the laboratory period ends. At the end of a lab, each partner should leave with his or her group’s protocols, hypotheses, data, and any information about procedural problems. Once the in-lab work is completed, the work shifts from a group effort to a solo effort. This does not mean that students shouldn’t discuss lab concepts, problems, and general strategies and broad interpretations. Talking about science is healthy and is encouraged. And, it is understood that lab groups may obtain similar or identical quantitative data for a given project. In the end, however, data analyses and report writing as well as the overall presentation and interpretation of these data are to be done independently by the individual and not by the group.

If work submitted by two or more students appears unexplainably and unreasonably similar, or if credit for previously published information or ideas is not given through literature citation, academic dishonesty will be assumed. In this event, the instructor will provide written notification to the student, the Department Chair, and the Dean of Academic Affairs of the charge and the sanction. Documentation related to instances of academic dishonesty will be kept on file in the student’s permanent record. If the academic dishonesty is the student’s first offense, the instructor will have the discretion to decide on a suitable sanction up to a grade of 0 for the course. The faculty member may request that the Student Welfare Committee conduct a hearing and decide on the sanction, which can involve academic suspension or dismissal from the
College, if the faculty member believes the offense to be of an extremely egregious nature.

If the Dean of Academic Affairs determines that the breach of academic integrity is the student’s second offense, the Dean will provide written notification to the student, the instructor, and the Department Chair. The Student Welfare Committee will automatically conduct a hearing to review the charge and decide on an appropriate sanction, which will involve academic suspension or dismissal from the College. Students are not permitted to withdraw from a course in which they have been accused of academic dishonesty.

If questions about academic integrity arise, see the course instructor before completing and submitting your work. In addition, specific information about the York College of Pennsylvania Academic Integrity Policy can be found in the most recent edition of the Student Handbook.

Sign below:

I, __________________________, have read this statement and the syllabus for this course and I understand and accept departmental and college expectations of academic integrity and ethical conduct.

Updated Fall 2008

Technological Devices: While York College recognizes students’ need for educational and emergency related technological devices such as laptops, PDA’s, cellular phones, etc., using them unethically or recreationally during class time is never appropriate. The college recognizes and supports faculty members’ authority to regulate in their classrooms student use of all electronic devices.

Biology Lab Rules on next page
BIO LAB RULES:

- No eating, drinking, gum/to tobacco chewing
- No open toed shoes, sandals, flip flops
- Wear appropriate personal protection
- Clean up spills and broken glass immediately
- Know the location of safety equipment
- Label all chemicals
- Report unsafe situations to your instructor
- Wash hands when you leave the lab
- If you're not sure, ASK!

STAY SAFE!