SAMPLE SYLLABUS
This is a sample syllabus only. The instructor may make changes to the syllabus in future courses.

BY 451 Plant Biology

INSTRUCTOR: Dr. Karolina Mukhtar
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Office Hours: by appointment


ADDITIONAL MATERIALS: i-clicker 2

COURSE DESCRIPTION:
This course introduces the student to the basic concepts of plant biology including plant diversity, structure, physiology, metabolism, reproduction, genetics, molecular biology, evolution and ecology. This class brings together knowledge and methodologies from a number of different disciplines to provide students with an intensive and comprehensive plant curriculum from the molecular to the organismal level. In this course, students will be introduced not only to plant biology, but also to plant-specific concepts and techniques in molecular biology and genetics.

Goals of this course include:
- To provide an introduction to the distinctive features of plants
- To provide an understanding of how plants are constructed, photosynthesize and generate energy, regulate growth and development and fend off potential pathogens
- To provide a comprehensive overview of the various ways plants live and reproduce, how they maintain or promote variation, and ways they are adapted to particular environments
- To discuss aspects of structure and function that make up the diversity of plants present in the world
- To provide the necessary knowledge needed to recognize the major groups of plants and assess their relationships as well as how plants are used by people

FIRST EXAM: Tuesday, Feb. 05
SECOND EXAM: Tuesday, March 07
THIRD EXAM: Thursday, April 04
FOURTH (FINAL) EXAM: Tuesday, April 30

Evaluation for Final Grades:
Exam I - 15%
Exam II - 15%
Exam III – 15%
Paper (due May 05) – 15%
Clicker points – 15%
Participation – 10%
Final Exam (not comprehensive) - 15%
Total 100%

Final grades will be assessed based on a regular 10% increment scale.

Four (4) exams are scheduled for this course. Students will have only the lecture time to complete the in-class exam unless the Student has official UAB documentation through the office of Disability Support Services. All Students with such documentation are responsible to inform the instructor of arrangements prior to EACH exam. In order to register with the office of Disability Support Services you may go to 9th Ave. Office Building (1701 9th Ave. South) or call 934-4205.
Plant Biology – Tentative Topics

Why Study Plants
Plant Cells, Tissues and Cell-to-Cell Communication
Stages in Plant Growth; Primary and Secondary Growth
Leaf Structure and Development
Root & Stem
Plant Reproductive Structures & Sexual Reproduction
The End: Senescence and Cell Death

Exam 1
Introduction to Phytohormones
Auxin
Cytokinins
Gibberellins
Ethylene and Abscisic Acid
Plant Defense Hormones: Salicylic Acid and Jasmonic Acid
Brassinosteroids and Stringolactones

Exam 2
Plants Are Not Alone
Plants and Their Pathogens; Molecular Mechanisms of the Plant Immune System
Plants-Arthropods Interactions
Plants and Their Microsymbionts; Nitrogen Fixing Plants
Epigenetics in Plants
Plant Small RNA World

Exam 3
Flowering time, Photoperiodism and Phytochrome
Molecular Basis of Circadian Rhythms
Genetics Improvements in Agriculture, GM Crops
A Really Useful Pathogen, Agrobacterium tumefaciens
Plants, Food and Human Health: You are what you eat?
Medicinal Plants of Alabama – Guest Presentation

FINAL (4th) EXAM

The above schedule is tentative.
You are expected to read the syllabus and know its contents.

Make-up Exam Policy. Only individuals with written medical (Doctor) or legal excuses will be allowed to take the make-up exam. Individuals must contact my office within 24 hours of an exam (either before or after) to be considered for a make-up exam and schedule the make-up exam; otherwise, the grade will be assigned as a 0. The excuse must be submitted to me no later than seven (7) days after the missed exam; otherwise, the grade will be assigned as a 0. No more than 1 make-up exam for each Student is permitted unless extreme, extenuating circumstances prevail. Although covering the same material, the format of make-up exams may differ from that of the original exam and may include oral examination.

Lectures will primarily follow the textbook. However, there will be material presented in class that is not in the textbook, therefore, regular class attendance is recommended. PowerPoint slides will be made available to Students via Canvas. The Student will be responsible for any missed lecture material by reviewing the slides and referencing the text. Office hours will not be used as catch-up sessions for missed lectures.

i>clicker info: Please register your remote on Canvas before class. To do so, you will need to log on to Canvas, select BY210 course and click on the link on the left side menu. You will need to punch in the code (found on the remote under the bar code, a combination of letters and numbers). If you forget your remote, I can provide emergency loaners but let’s not make it a habit. You can earn up to 20 “big” points from the i>clicker that will count towards your final grade. Please feel free to ask me about the details if you need clarifications!