

Bergen Community College
Division of Mathematics, Science & Technology
Department of Biology and Horticulture

General Botany (BIO-131)
General Course Syllabus
SPRING 2016

Course Title:	General Botany (BIO-131)
Course Description:	This course is an introduction to the biology of plants. The course includes an analysis of plant structure and function, an explanation of the principles of plant genetics, an exploration of plant evolution, and an examination of plant ecology. The importance of plants to people will be illustrated through discussions of people's ecological and economic dependence upon plants. The course content will be presented through lectures, demonstrations and laboratory exercises.
Prerequisites:	None
General Education Course:	Yes
Course Credits:	4.0
Hours per week:	6.0: 3 hour lecture and 3 hours lab
Course Coordinator:	Linda Wiles
Required Text:	None; all materials will be provided in print or as online links.
Supplementary Text:	None
Required Laboratory Manual:	None; all materials will be provided in print or as online links.

Supplementary Materials: You will need to provide: a class binder for handouts and notes, estimate a 2.5"-3.0" binder; this will include lab notebook, which will later be submitted separately for grading. Also, you will need a set of 12-36 colored pencils.

Student Learning Objectives

The student will be able to:

1. Define science and Botany and describe their impact on society. Assessment will be based on performance on exam questions.
2. Use the scientific method of inquiry, through the acquisition of scientific knowledge to analyze a problem and draw conclusions from the data. Students will be evaluated by performance in the laboratory.
3. Distinguish between scientific theory and scientific discovery. Assessment will be based on performance on exam questions.

4. Explain the importance of plants to humans and all life on Earth. Assessment will be based on performance on exam questions.
5. Recognize the evolution, diversity and classification of the plant kingdom. Assessment will be based on performance on exam questions.
6. Identify the structure and function of plant cells, tissues, roots, stems, leaves, and reproductive organs. Assessment will be based on performance on exam questions and laboratory observation.
7. Explain the structure and function of nucleic acids (DNA, RNA) and their importance in life processes, and their role in cellular activities and reproduction. Students will be evaluated by their performance on exam questions and laboratory observation.
8. Describe and demonstrate how plants reproduce asexually and sexually and identify the role of pollinators. Students will be evaluated by their performance on exam questions and in the laboratory.
9. Identify the importance of processes such as photosynthesis, respiration and the movement of water in plants. Students will be evaluated by their performance on exam questions and in the laboratory.
10. Recall the mechanisms of growth and development and the effects of hormones and growth regulating substances. Students will be evaluated by their performance on exam questions and in the laboratory.
11. Recognize the adaptations and responses of plants to their environment, the dynamics of plant ecology and the various biomes of the world. Assessment will be based on performance on exam questions and in the laboratory.
12. Research a plant biology related topic of specific interest to the individual student, using computer systems or other appropriate forms of technology and written material to achieve educational and personal goals. Demonstrate a command of the information, ability to think critically and evaluate the importance to society. Assessment will be based on a written paper, oral presentation or creation of an equivalent project.

Student Assessment Tools:

The above student learning objectives will be generally assessed or evaluated by instructors using a variety of **assessment instruments** including **lecture exams, laboratory exams, quizzes, laboratory reports, written reports, presentations, projects, etc.** The decisions concerning the type or types and number of instruments that are used in a specific section of the course will be left to the instructor of that section. This information, when given by the instructor should be recorded by the student in the **Student Assessment Section** of this document.

**Course Content:
Lecture Topics:**

LECTURE #

LECTURE SCHEDULE

1	Importance of Plants, The History of Life
2	Chemistry of Life, Chromosomes and DNA, Mitosis
3	The Plant Cell, Tissues
4	Leaves
5	Stems, Water in Plants, Transpiration, Review
6	Exam 1 (Introduction through and including Transpiration)
7	Roots
8	Reproduction (Sexual and Asexual) Flowers, Pollination Ecology
9	Fruits, Seed Dispersal, Seed Germination, Seedling Anatomy
10	Hormones, Plant Growth, Metabolism, Review
11	Exam 2 (Roots through and including Metabolism)
12	Plant Classification, Non-Vascular Plants (Green Algae, Lichens, Liverworts, Mosses)
13	Vascular Plants (Ferns, Gymnosperms, Angiosperms)
14	Introduction to Plant Ecology, Biomes, Review
15	Exam 3 (Classification through and including Biomes)

LAB #

LAB SCHEDULE

1	Introduction to Course, The Microscope, The Plant Cell
2	Mitosis, DNA
3	Propagation
4	Leaves
5	Stems
6	Lab Practical
7	Roots
8	Flowers
9	Fruits

10	Seeds
11	Lab Practical
12	Non-vascular Plants: Algae, Lichens, Mosses
13	Vascular Plants: Ferns, Gymnosperms, Angiosperms
14	Biomes
15	Lab Practical

Faculty Addenda: As per individual faculty member

Lecture Attendance: As per instructor

Lab Attendance: As per instructor

Policy Concerning Late Assignments: As per instructor

Policy Concerning Make-Up Testing: As per instructor

Safety Information: As per instructor

Student Assessment:	Lecture Examinations _____	_____ %
	Laboratory Component _____	_____ %
	Student Project/Report _____	_____ %
	Class Participation _____	_____ %
	Other _____	_____ %
	Total	100%

If you have a medical condition or develop a medical condition during this semester, which prevents you from fulfilling the requirements of this course, you must notify your physician. You and your physician must decide whether or not it is appropriate for you to remain in this course. If the decision is to remain in this course, please obtain a letter from your physician indicating that your continued participation in this course is appropriate and present it to the Department Chair.

College Policies:

Student Responsibility

Students will be held responsible for reading all pertinent information in college publications regarding withdrawals, course drops, college deadlines, and tuition refunds. Students are responsible for compliance with the rules and regulations as stated in college publications.

Absence of Instructor

Students are expected to wait twenty minutes for a faculty member to come to class. If at the end of twenty minutes, the faculty member does not come, the students should sign an attendance sheet, which indicates the course, date, and time. A student should deliver the attendance sheet to the divisional office (A304) if between 9:00 a.m. and 5:00 p.m. or to the Evening Office (C107) if before 9:00 a.m. or after 5:00 p.m. Students cannot be penalized by faculty for not waiting longer than twenty minutes.

Academic Dishonesty and Plagiarism

Bergen Community College is committed to academic integrity – the honest, fair and continuing pursuit of knowledge, free from fraud or deception. Students are responsible for their own work. Faculty and academic support services staff will take appropriate measures to discourage academic dishonesty.

Plagiarism is a form of academic dishonesty and may be a violation of U.S. Copyright laws. Plagiarism is defined as the act of taking someone else's words, opinions, or ideas and claiming them as one's own.

Consequences of Violations Academic Integrity

A. Instructor's Sanctions for a Violation

The faculty member will determine the course of action to be followed. This may include:

- Assigning a failing grade on the assignment;
- Assigning a lower final course grade;
- Failing the student in the course
- Other penalties appropriate to the violation;

In all cases, the instructor shall notify the Vice President of Student Services of the violation and the penalty imposed. The student has the right to appeal the decision of the instructor to the appropriate department head.

B. Institutional Sanctions for Violations

When a violation of academic integrity has been reported regarding a student, the Vice President of Student Services may impose disciplinary penalties beyond those imposed by the course instructor, which may include suspension or dismissal from the College. The student shall have the right to a hearing before the Vice President of Student Services or a designated judicial affairs committee. Judicial procedures governing violations of academic integrity are contained in the student handbook.

Class Attendance

All students are expected to attend punctually every scheduled meeting of each course in which they are registered. Attendance and lateness policies and sanctions are to be determined by the instructor for each section of each course. These will be established in writing on the individual course outline. Attendance will be kept by the instructor for administrative and counseling purposes.

Eating and Drinking

Eating or drinking in classrooms, lecture rooms, laboratories, gymnasium, swimming pool, or passageways is forbidden. Covered beverages only are permitted in the library. Eating and drinking are permitted in cafeteria and vending areas only.

Learning Assistance

Henry and Edith Cerullo Learning Assistance Center

The Tutoring Center, English Language Resource Center, Math Walk-In Center and Writing Center are collectively known as the Henry and Edith Cerullo Learning Assistance Center. The Cerullo Learning Assistance Center is located in the Pitkin Education Building, in Room L-125. The telephone number is (201) 447-7489. The Learning Assistance Center, staffed with peer and professional tutors, offers free individual and group tutoring, supplemental instruction, and online tutoring for subjects offered at the College. The Center provides alternative approaches to problem solving and organizational skills. Tutors help clarify classroom lectures and textbooks and help students prepare for exams. These services build student self-confidence and reduce fear of failure. The Center is equipped with the latest technology and software, including tapes, books, review sheets, exercises and software.

Services for Students with Disabilities

Bergen Community College aims to create inclusive learning environments where all students have maximum opportunities for success. Any student who feels he or she may need an accommodation based on the impact of a disability should contact the Office of Specialized Services at 201-612-5269 or via email at ossinfo@bergen.edu for assistance.

Sidney Silverman Library

Main Building, Pitkin Education Center, L-wing, 2nd Floor.

Paramus Library Hours: (201) 447-7131 or visit <http://www.bergen.edu/library/calendar/gcal.htm>

Paramus Service Desk: (201) 447-7970

Meadowlands Location: 1280 Wall Street, Lyndhurst 2nd Floor

Meadowlands Library Hours: <http://www.bergen.edu/library/calendar/gcal.htm>

Meadowlands Service Desk: (201) 301-9692

www.bergen.edu/library

Testing Services

The Bergen Community College Office of Testing Services (OTS) is located in Room S-127. OTS serves the college community by identifying, developing, procuring, administering, processing, and/or evaluating examinations, which meet a variety of administrative and instructional needs. To contact the OTS, please call (201) 447-7202. The Office of Testing Services administers makeup tests as a service for students who, for compelling and exceptional reasons, have missed a scheduled classroom examination. Students must receive prior permission from and make arrangements with their course instructors to take these examinations, under specific conditions, in the Office of Testing Services, Room S-127.

WebAdvisor

WebAdvisor is a web interface that allows students to access information contained in Datatel's Colleague, the administrative database used by Bergen Community College. Students may use WebAdvisor to register for classes, to pay tuition and fees, to view their class schedules, to check grades, to check on progress toward degree requirements, etc. WebAdvisor accounts are available for all students enrolled in credit programs. New students are strongly encouraged to attend an in-person registration or advisement session before using a WebAdvisor account. Eligible students without WebAdvisor user names and passwords may access their WebAdvisor account by going to go.bergen.edu and selecting "I'm new to WebAdvisor." Then, follow the on-screen directions. Check the WebAdvisor FAQ for answers to common questions, such as how to reset your password. Students must have a valid e-mail address on file with the College to use WebAdvisor.