

ALLEGANY COLLEGE OF MARYLAND
Cumberland, Maryland
Biology 103
General Botany I
Fall 2007
COURSE SYLLABUS

(This is subject to modification by the Professor)

I. GENERAL INFORMATION

- A. Course: Biology 103 - General Botany I
- B. Textbooks and Manuals
 - 1. Introductory Plant Biology by Kingsley R. Stern, Shelley Jansky, James E. Bidlack and Gordon E. Uno, 10th edition, McGraw Hill Publishers, 2006.
 - 2. Laboratory Manual to accompany Introductory Plant Biology by Kingsley R. Stern, 10th edition, McGraw Hill Publishers, 2006.
- C. Lecture and Laboratory Professor: Dr. James A. Howell (Full-time faculty).
- D. Class lectures meet from 9 to 9:50 a.m. on Monday, Wednesday, and Friday in room S-26 and Laboratory meets Monday and Friday from 2 to 4:45 in room S-24.
- E. Faculty office: Room S-52, Science Building.
- F. Faculty Office Hours: Monday and Wednesday 12:00-1:00 p.m. And Thursday 11:00-12:00 p.m. Additional times may be arranged by contacting Ms. Roberta Mills, the Science Division Faculty Secretary, in Room S-50.
- G. Phone Numbers: Office.....301-784-5251
[E-mail.....jhowell@allegany.edu](mailto:jhowell@allegany.edu)

II. PURPOSE

- A. Purpose of Course

To present a study of the general characteristics and basic concepts of life as they apply specifically to plant forms. This is illustrated by primarily studying seed plants, conifers, and flowering plants, with specific emphasis on anatomy, morphology, taxonomy, evolution, genetics, ecology, and physiology.
- B. OBJECTIVES
 - 1. To present the general principles and basic vocabulary of Botanical science.
 - 2. To present the knowledge of vascular plant structure and physiology.
 - 3. To present the significance of botanical principles to life and to human living.
 - 4. To present the latest research discoveries in Basic Botanical Science.
 - 5. To give the necessary botanical foundation for further specialization in this field.

6. To present the general principles of heredity, taxonomy, evolution, and ecology.

C. MAIN AREAS OF CONCENTRATION

1. Anatomy and Morphology
2. Physiology
3. Reproduction and Genetics
4. Taxonomy, Ecology, and Evolution

III. COURSE POLICIES

A. Attendance

1. To attend lecture and laboratory classes regularly. Each unexcused absence may reduce the final grade by one letter grade.
2. To attend all classes on time. If you are late twice, it will count as one unexcused absence.
3. Academic Regulations Policy on Attendance
 - a. Students are required to attend every class session, except in cases of an emergency or illness.
 - b. Students usually cannot make up absences; however, permission to make up absences will be granted only at the instructor's discretion.
 - c. STUDENTS MUST NOTIFY THEIR INSTRUCTORS AS TO THE REASONS FOR AN ABSENCE from a class session. The instructor may require such evidence as he sees fit to justify an absence. Unexcused absences may adversely affect a student's grade in the course.
 - d. When a student's absences endanger his/her progress in a course in the judgment of the instructor, the instructor may drop the student from the class roster.
 - e. If an instructor does not appear in class within ten minutes after the scheduled starting time, representatives of the class should attempt to locate the instructor by visiting his/her office and the faculty secretary in room S-50. If students cannot locate the instructor by these means, students may consider the class session canceled.

4. Attendance policy as listed in the Allegany College of Maryland Catalog

When the number of student absences is such that the instructor believes that the student cannot successfully complete the course in the time remaining, the instructor may drop the student from the class roll. If the student is dropped after the tenth week of the

Biology 103
General Botany
Course Syllabus

3

course, a grade of "F" will be recorded. If the student has registered in an audit status, a grade of "W" will be recorded.

B. PARTICIPATION

1. To read all assignments in advance and be able to take part in classroom discussions.
2. To take legible notes.
3. To be able to use all scientific terms, laws, principles, and theories, both oral and written, with correct spelling.
4. To locate and read all outside assignments suggested during class.
5. To complete and record the required information for all laboratory exercises.
6. To satisfactorily obtain the assigned information and to apply it to everyday happenings.
7. Some labs may require the student to come in at times other than the regularly scheduled time.
8. Cell phones are to be turned OFF during class times. Infractions of this rule may lead to dismissal from the class.

C. Student Evaluation

1. Mid-semester grades will be computed on the following basis:
 - A. Lecture Average - 60%
 - B. Laboratory Average - 40%
2. Final grades will be computed on the following basis:
 - A. Lecture Average - 60%
 - B. Laboratory Average - 40%
3. The final lecture average will be based on five one hour tests.
4. The final laboratory average will be based on weekly quizzes (30%) and a sketchbook (10%).

D. Grading Scale

1. A = 90-100

2. B = 80-89
3. C = 70-79
4. D = 60-69
5. F = 59 and below

E. Extra Credit

Extra credit will be discussed during the first class.

F. Tutoring and/or Extra Help Sessions

1. The professor will aid the students in obtaining tutoring service. This may be initiated by either the professor or student. There is a \$10.00 application fee per semester.

Biology 103
General Botany
Course Syllabus

4

2. Tutoring services are provided free of charge (except for the \$10 application fee) to those students who are having difficulty with their coursework. Students who desire to be helped/tutored should go to the Coordinator of Testing and Tutoring in the Humanities Building, rooms H-22 and H-23 to make arrangements.
3. Special review sessions may be arranged at times, other than during formal classes, when either the professor or students feel that it would be helpful.

G. Acceptable Assignment Conditions

1. All outside written assignments are to be typed.
2. Answers to test questions are to be printed in black ink (except when computer score-sheets are employed and then a #2 pencil will be used).

H. Completion of Assignments

1. In order to receive full credit, assignments must be completed on time as announced in class or in this syllabus.
2. An "X" grade will be given only, when in the opinion of the professor, a student fails to satisfactorily complete all assignments even though they have worked to the maximum of their potential. An "X" grade will not be given to allow a student to simply avoid a "D" or "F" grade. A student must present a written request to the instructor in order for an X grade to be considered. This request must state the reason why the student feels that an X grade is justified.

I. The Makeup of Missed Tests

1. A student is required to make arrangements

for making up all missed tests the day upon returning from an absence in order to avoid a zero on the tests. All tests must be completed within two days upon return to classes. A doctor's excuse may be required before the student will be allowed to take a makeup test.

2. A student is required to notify the professor prior to an exam or quiz (lecture or laboratory), that it will be impossible for him/her to take the test as scheduled. Without this notification a zero will be recorded for the exam or quiz and the student will not be permitted to take a makeup.
3. If a student is ill when a test is to be given, he/she must inform the instructor of

Biology 103
General Botany
Course Syllabus

5

his/her condition prior to receiving a copy of the test. Once the student has received and/or taken the test no allowance will be made for illness.

4. Makeup tests are generally composed of essay and/or short-answer questions.

J. Cheating and/or Plagiarism

1. Cheating, in any form, will not be tolerated in this class.
2. Students observed, or otherwise determined to be cheating, will be dealt with severely and immediately according to the Policy regarding Student Cheating as stated in the Allegany College Student Handbook.

K. Laboratory Safety

1. Expectant mothers should confer with their physician prior to engaging in the laboratory phase of this course. This policy also applies to those students who become pregnant during the semester.
2. Students are required to report all accidents, regardless of how minor they may appear to be, to the professor immediately.
3. Students are required to purchase safety glasses and gloves and use these items with all laboratory exercises that use chemicals.
4. MSDS data sheets are available to students.

L. Laboratory Breakage

1. Students are required to pay for all damage that they incur on laboratory materials and

equipment, such as slides, glassware, microscopes, etc.

IV. BIBLIOGRAPHY

- A. Required texts and laboratory manuals:
 1. Introductory Plant Biology by Kingsley R. Stern, Shelley Jansky, and James E. Bidlack, Wm. C. Brown Publishers, 9th edition, 2000.
 2. Laboratory Manual to accompany Introductory Plant Biology by Kingsley R. Stern, Wm. C. Brown Publishers, 9th edition, 2000.
- B. Supplemental books for reference
 1. Botany: A Brief Introduction to Plant Biology, Rost, Barbour, Thornton, Weier, and Stocking, John Wiley & Sons, 2nd edition, 1984.
 2. Biology of Plants, Raven, Evert, & Eichhorn, Worth Publishers, Inc., 4th edition, 1986.
- C. Supplemental Journals for reference
 1. American Journal of Botany
 2. Science
 3. Scientific American

TENTATIVE LECTURE SCHEDULE
BIOLOGY 103

6

<u>Week</u>	<u>Date</u>	<u>Topic</u>	<u>Chapter Reading Assignments</u>
1	8/27-9/1	Introduction & Leaves	Preface, 1, 2, & 7
2	9/4-9/8	Leaves & Tissues	7 & 4
	9/4	LABOR DAY: COLLEGE CLOSED	
3	9/11-9/15	Stems	6
4	9/18-9/22	Roots, TEST #1	5
5	9/25-9/29	Flowers, Fruits, & Seeds	8
6	10/2-10/6	Cells	3
7	10/9-10/13	Cells and Meiosis and Alternation of Generations, TEST #2	12
8	10/16-10/20	Meiosis, Alternation of Generations, Gametogenesis	12
9	10/23-10/27	The Nature of Life	2
10	10/30-11/3	Water in Plants: Soils	2 & 9

TEST #3

	11/8	<u>LAST DAY TO DROP A COURSE WITH A "W" REGARDLESS OF GRADE</u>	
11	11/6-11/10	Metabolism In Plants (Photosynthesis)	10
12	11/13-11/17	Metabolism In Plants; Respiration & Growth	10 & 11
13	1/20-11/22	Growth; and Genetics & Plant Breeding TEST #4	11 & 13
	11/23 & 11/24	THANKSGIVING HOLIDAY	
14	11/27-11/29	Genetics and Plant Breeding & Evolution	13, 14, & 15
15	12/4-12/8	Evolution	15
16	12/11-12/15	TEST #5	15

TENTATIVE LABORATORY SCHEDULE
BIOLOGY 103

7

<u>Week</u>	<u>Topic</u>	<u>Reading Assignments</u> 1
1	The Microscope, Equipment, and introduction to the laboratory	Preface, Introduction, & 1
2	Internal and External Structure of Leaves	6, Handout
3	External Features of Woody Stems and Internal Structure of Herbaceous Stems	5, Handout
4	Internal Structure of Coniferous and Woody (dicot) Stems	5, Handout
5	Internal and External Structure of Roots	4, Handout
6	Types, Internal and External Structure of Flowers, Flowering Plant Life Cycle	18, Handout

7	Seeds, Fruit Types and Structure	18, 19, Handout
8	Cell	2
9	Mitosis	3
10	Cell Components and Products	8
11	Diffusion, Growth, and Hormones (If needed finish previous lab)	9
12	Photosynthesis	10
13	Water in Plants; Respiration; Digestion	11
14	Genetics	21
15	LAST QUIZ AND CLEANUP	

¹ Chapters listed are from the laboratory manual, but students should always bring their lecture text to laboratory. Safety goggles and gloves should be brought to every laboratory.