Southern Illinois University Carbondale

Course Syllabus

PLB 200

Instructor Information

Instructor: Dr. Karen Renzaglia Office hours: Wednesday, 9-11:00 am, or appointment
Office Location: Room 459 LS II Phone: 618-453-3229
Teaching Assistants: Jason Henry and TJ Adams (see lab syllabus for more information)

Course Identification

Course Number:	PLB 200
Course Name:	General Plant Biology
Prerequisites:	None
Credit Hours:	Four credit hours
Lecture Location:	Lawson 0131
Lab Location:	Life Science II, Room 480

Lab Times are specific to sections (see Laboratory Schedule)

Catalogue Course Description

200-4, General Plant Biology. (Advanced University Core Curriculum course) [IAI Course: L1 901L] An Introduction to Plant Biology. Emphasis is placed on structure and reproduction, embryo development, and vital developmental processes needed for plant survival, such as photosynthesis, respiration, water transport and nutrient assimilation. Other topics include cell division, basic genetics, DNA, RNA, protein synthesis, taxonomy, evolution, ecology, and conservation. The course also includes a brief overview of medicinal plants and their biologically active compounds. Lab fee: $15.

Course Goals

The goals of PLB 200 provide students with the foundation of knowledge and inquiry skills to understand and explore plants as living, growing and reproducing organisms. The diversity and role plants play in the ecosystem are presented. Students learn the terminology and fundamental concepts in plant biology, many of which are universal in living organisms. The course provides the foundation for biological literacy and for continued studies in agricultural crops and commercial plant production. Communication skills and critical-thinking skills are developed through assignments and presentations.

Course Resources

Course Website

SIUC Online (Desire 2 Learn)

Required Course Text and Lab Manual

1. Bidlack and Janskey. 2014. *Introductory Plant Biology*, 13th Edition.
2. Bidlack. 2014. *Introductory Plant Biology, Laboratory Manual*, 13th Edition.

Methods of Presentation

Lectures: Face-to-face, 50 min lecture*s three times a week.* ***Includes*** Powerpoint presentations, oral lectures in which students are active participants. Online materials such as lectures, readings, study guides, and sample tests are made available through *D2L*.

Labs: A 2 hour (120 min) lab meets once a week. Each laboratory section has up to 24 students. Labs are exploratory and inquiry-based using prepared material and living plants. Experimentation is incorporated through guided inquiry and open inquiry experiences are facilitated by teaching assistants. Microscope use and hypothesis-driven experimental design are integral to lab experiences. The PLB greenhouses and natural areas are explored on field trips that demonstrate taxonomic and ecological principles.

LECTURE TOPIC	**WEEK**	**DATE**
Introduction, Plant biology basics, Ch. 1	**1**	Jan. 20
Organic molecules, Ch. 2		Jan.22
Cells, Ch. 3	**2**	Jan.25
Mitosis, Ch. 3		Jan. 27
Tissues, Ch. 4		Jan. 29
Roots, Ch. 5	**3**	Feb. 1
HOLIDAY		Feb. 3
Roots, Ch. 5		Feb. 5
Stems, Ch. 6	**4**	Feb. 8
Stems, Ch. 6		Feb. 10
Review		Feb. 12
EXAM 1	**5**	Feb. 15
Leaves, Ch. 7		Feb. 17
Leaves, Ch. 7		Feb. 19
Water, Ch. 9	**6**	Feb. 22
Metabolism, Ch. 10		Feb. 24
Metabolism, Ch. 10		Feb. 26
Meiosis, Ch. 12	**7**	Feb. 29
DNA, RNA, & proteins, Ch. 13		Mar. 2
Basic inheritance, Ch. 13		Mar. 4
Breeding, Ch. 14	**8**	Mar. 7
HOLIDAY		Mar. 9
Review		Mar. 11
SPRING BREAK	**9**	Mar. 14
SPRING BREAK		Mar. 16
SPRING BREAK		Mar. 18
EXAM 2	**10**	Mar. 21
Evolution, Ch. 15		Mar. 23
Evolution, Ch. 15		Mar. 25

Classification, Ch. 16	**11**	Mar. 28
Major groups of life, Ch. 17 & 19		Mar. 30
Bryophytes, Ch. 20		Apr. 1
Lycophytes and ferns, Ch. 21	**12**	Apr. 4
Lycophytes and ferns, Ch. 21		Apr. 6
Gymnosperms, Ch. 22		Apr. 8
Review	**13**	Apr. 11
HOLIDAY		Apr. 13
EXAM 3		Apr. 15
Angiosperms - flowers, Ch. 8	**14**	Apr. 18
Angiosperms - fruits, Ch. 8		Apr. 20
Angiosperms, Ch. 23		Apr. 22
Angiosperms, Ch. 23	**15**	Apr. 25
Angiosperms, Ch. 24		Apr. 27
Edible and poisonous plants, Appendix 3		Apr. 29
Ecology, Ch. 25	**16**	May 2
Ecology, Ch. 25		May 4
Biomes, Ch. 26		May 6
Final 2:45-4:45		May 9

FINAL Monday May 9 at 2:45-4:45 in lecture room

Student Outcomes

Learning objectives

1. Describe the structure of the vegetative plant body as it relates to function
2. Understand the biological processes of growth and development as they relate to plants
3. Learn the general biochemical process of photosynthesis and how it is regulated by the environment
4. Describe how plants transport nutrients throughout their bodies
5. Understand the plant life cycle and variations on the life cycle in plant groups
6. Describe the genetic basis of life and the concept of genetic engineering in plants
7. Demonstrate working knowledge of the scientific process using plant systems
8. Gain an awareness of reliable sources of botanical information online and in scientific journals
9. Articulate the process of identification and classification of plant species and groups
10. Learn how plants reproduce and survive in diverse habitats
11. Describe the concept of an ecosystem and demonstrate a basic understanding of ecology
12. Develop communication, scientific process and critical thinking skills

Grading Scheme

Grading Policy

Grades are based on the following:

Lecture Exams 3@100 points, drop 1	200
Final (cannot be dropped)	100
Quizzes and assignments	100
Total lecture	**400**

Lab weekly assignments	60
Fern life cycle drawings	20
Plant Question presentations	20
Quizzes 11 @ 10 points each – lowest 1 dropped	100
Total Lab Points	**200**

There will be no make-up exams because one exam will be dropped.

Grading System

Letter Grade	***Percentage***	***Total Course Points***	***Grade points/credit***	***Rating***
A	90% & above	540-600	4.00	Excellent
B	80% – 89%	480-539	3.00	Good
C	70% – 79%	420-479	2.00	Average
D	60% - 69%	360-419	1.00	Inferior
F	59% and below	Below 360	0.00	Failure
I	Incomplete; given only when a student is unable to complete a segment of the course because of circumstances beyond the student's control.			

Classroom Rules

Cell phones or any other electronic devices are not to be used in the classroom, unless for prescribed activities.

Academic regulations and procedures are governed by University policy. Academic dishonesty cases will be handled in accordance the University's policies (see Student Regulations and Policies, http://policies.siu.edu/other_policies/chapter3/)