Plant Sciences 240

PLANT BIOLOGY

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Course description:

This course deals with plant form and function from an evolutionary point of view and is intended for majors in all fields of biology. Emphasis is placed on understanding basic processes of metabolism, evolution, reproduction, growth, development, and physiology of nonvascular and vascular plants. These processes are considered within the context of the environments plants inhabit and human activities that affect or depend upon plants.

Students completing PL S 240 will:

1. Understand the basic structures and processes involved in plant growth and development;
2. Appreciate the diversity found among plants and understand the basis for and significance of this diversity;
3. Understand how plants interact with their environment and the critical roles that plants play in all ecosystems;
4. Use scientific terminology to communicate effectively about plants;
5. Develop critical thinking skills by evaluating information from multiple perspectives, drawing reasonable conclusions, and defending them rationally; and
6. Have assumed complete responsibility for their performance in the course and actively worked to improve their organizational and time management skills.

Major Topics:

I. Cells: Structure and Energy
II. Form and Function
III. Genetics and evolution
IV. Regulation of Growth and Development
V. Evolution of Diversity
VI. Ecology and the Human Prospect

Texts: *Biology of Plants*. Peter Raven, Ray Evert and Susan Eichhorn, 2005 (7th edition).

Student Evaluation:*

Midterm examinations (50 min.)	3 @ 100	=	200 points**
Final examination (2 hr.)	1 @ 200	=	200
Laboratory exercises	≤ 14 @ 15	=	≤ 210
Citizenship/participation	40	=	40

			≤ 650 ***

* *Changes may be made to this list of graded activities during the semester.*

** ***Best two*** scores of the ***three*** midterm exams count. No make-up exams are given so a missed exam (score=0) will represent the omitted score.

*** Final total points depends on the number of laboratory exercises assigned.

Assignment of final grades is not based on any preconceived thresholds for letter grades, but roughly follows: >90% = A; 80-89% = B; 70-79% = C; 60-69% = D; <60% = E.

SOME SUGGESTIONS ON HOW TO BE A BETTER STUDENT

1. Plan how you want to use your time. Use daily, weekly, and semester calendars to keep track of appointments and assignments. Write down important dates and times. Brains are for important tasks -- like thinking.
2. Review lecture and notes within 24 hours.
3. Keep your class materials in a 3-ring binder. Do it as you go.
4. Form a study group.
5. Establish a regular study routine. Study at the same time for the same duration at the same place.
6. Prepare for exams from the first day of class. Everything you do is exam preparation. Watch and listen for potential exam questions. Use the week before the exam to review NOT to learn.
7. Seek help when you need it (everyone does from time to time).

The University Learning Center (http://www.ulc.arizona.edu/) has lots of resources available to help you learn. Take a look.

May your trails be crooked, winding, lonesome, dangerous, leading to the most amazing view. May your mountains rise into and above the clouds. May your rivers flow without end, meandering through pastoral valleys tinkling with bells, past temples and castles and poets towers into a dark primeval forest where tigers belch and monkeys howl, through miasmal and mysterious swamps and down into a desert of red rock, blue mesas, domes and pinnacles and grottos of endless stone, and down again into a deep vast ancient unknown chasm where bars of sunlight blaze on profiled cliffs, where deer walk across the white sand beaches, where storms come and go as lightning clangs upon the high crags, where something strange and more beautiful and more full of wonder than your deepest dreams waits for you—beyond that next turning of the canyon walls

Edward Abbey