

COURSE CHANGE FORM

Signature Routing Log

General Information:

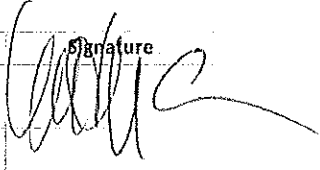
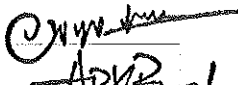

Course Prefix and Number: BIO 430G

Proposal Contact Person Name: Ruth E. Beattie Phone: 257-7647 Email: rebeat1@uky.edu

INSTRUCTIONS:

Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

Internal College Approvals and Course Cross-listing Approvals:

| Reviewing Group | Date Approved | Contact Person (name/phone/email) | Signature |
|-----------------|---------------|---|---|
| Biology Faculty | 04/10/09 | Dr. Vincent Cassone / 257-6766 / vincent.cassone@uky.edu |  |
| | | / / | |
| | | / / | |
| AVS EPC | 10/5/10 | Gandapaty Murtulu 7147791 gandapaty@uky.edu |  |
| AVS Dean | 10/5/10 | Conroy Bosch 7166891 bosch@uky.edu |  |

External-to-College Approvals:

| Council | Date Approved | Signature | Approval of Revision ⁶ |
|------------------------------|---------------|----------------------------|-----------------------------------|
| Undergraduate Council | 11/09/2010 | | |
| Graduate Council | | | |
| Health Care Colleges Council | | | |
| Senate Council Approval | | University Senate Approval | |

Comments:

⁶ Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.

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Complete 1a - 1f & 2a - 2c. Fill out the remainder of the form as applicable for items being changed.

1. General Information.

- a. Submitted by the College of: Arts and Science Today's Date: August 19, 2010
- b. Department/Division: Biology
- c. Is there a change in "ownership" of the course? YES NO
 If YES, what college/department will offer the course instead? _____
- d. What type of change is being proposed? Major Minor¹ (place cursor here for minor change definition)
- e. Contact Person Name: Ruth E Beattie Email: rebeat1@uky.edu Phone: 859-257-7647
- f. Requested Effective Date: Semester Following Approval OR Specific Term²: Fall 2011

2. Designation and Description of Proposed Course.

- a. Current Prefix and Number: BIO 430G Proposed Prefix & Number: same
- b. Full Title: Plant Physiology Proposed Title: same
- c. Current Transcript Title (if full title is more than 40 characters): Plant Physiology
 Proposed Transcript Title (if full title is more than 40 characters): _____
- d. Current Cross-listing: N/A OR Currently³ Cross-listed with (Prefix & Number): _____
 Proposed - ADD³ Cross-listing (Prefix & Number): _____
 Proposed - REMOVE^{3,4} Cross-listing (Prefix & Number): _____

- e. Courses must be described by at least one of the meeting patterns below. Include number of actual contact hours⁵ for each meeting pattern type.

Current: 3 Lecture _____ Laboratory⁵ _____ Recitation _____ Discussion _____ Indep. Study
 _____ Clinical _____ Colloquium _____ Practicum _____ Research _____ Residency
 _____ Seminar _____ Studio _____ Other - Please explain: _____

Proposed: 3 Lecture 3 Laboratory _____ Recitation _____ Discussion _____ Indep. Study
 _____ Clinical _____ Colloquium _____ Practicum _____ Research _____ Residency
 _____ Seminar _____ Studio _____ Other - Please explain: _____

- f. Current Grading System: Letter (A, B, C, etc.) Pass/Fail
 Proposed Grading System: Letter (A, B, C, etc.) Pass/Fail

- g. Current number of credit hours: 3 Proposed number of credit hours: 4

- h. Currently, is this course repeatable for additional credit? YES NO

¹ See comment description regarding minor course change. *Minor changes are sent directly from dean's office to Senate Council Chair.* If Chair deems the change as "not minor," the form will be sent to appropriate academic Council for normal processing and contact person is informed.

² Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.

³ Signature of the chair of the cross-listing department is required on the Signature Routing Log.

⁴ Removing a cross-listing does not drop the other course - it merely unlinks the two courses.

⁵ Generally, undergrad courses are developed such that one semester hr of credit represents 1 hr of classroom meeting per wk for a semester, exclusive of any lab meeting. Lab meeting generally represents at least two hrs per wk for a semester for 1 credit hour. (See SR 5.2.1.)

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Proposed to be repeatable for additional credit?

YES NO

If YES: Maximum number of credit hours: _____

If YES: Will this course allow multiple registrations during the same semester?

YES NO

i. Current Course Description for Bulletin:

Basic principles of plant physiology; the physiological processes of green plants and the effect of the environment on these processes. Prereq: BIO 150, 151, 152, 153 (or equivalent); CHE 230/231 (or equivalent); BIO 315 (or equivalent) or consent of instructor.

Proposed Course Description for Bulletin:

Basic principles of plant physiology; the physiological processes of green plants and the effect of the environment on these processes. Lecture (3 hours) and laboratory (3 hours) Prereq: BIO 148 152, 155 (or equivalent); CHE 230/231 (or equivalent); BIO 315 (or equivalent) or consent of instructor.

j. Current Prerequisites, if any:

Prereq: BIO 150, 151, 152, 153 (or equivalent); CHE 230/231 (or equivalent); BIO 315 (or equivalent) or consent of instructor.

Proposed Prerequisites, if any:

Prereq: BIO 148 152, 155 (or equivalent); CHE 230/231 (or equivalent); BIO 315 (or equivalent) or consent of instructor.

k. Current Distance Learning(DL) Status: N/A Already approved for DL* Please Add⁶ Please Drop

*If already approved for DL, the Distance Learning Form must also be submitted unless the department affirms (by checking this box) that the proposed changes do not affect DL delivery.

l. Current Supplementary Teaching Component, if any:

Community-Based Experience Service Learning Both

Proposed Supplementary Teaching Component:

Community-Based Experience Service Learning Both

3. Currently, is this course taught off campus?

YES NO

Proposed to be taught off campus?

YES NO

4. Are significant changes in content/teaching objectives of the course being proposed?

YES NO

If YES, explain and offer brief rationale:

The course will include an embedded laboratory experience. This revision was made as a result of a comprehensive review and revision of the current biology undergraduate program and also in response to feedback on the most recent Departmental review. The inclusion of the laboratory component will enhance the current course. Students will develop practical laboratory skills and will apply those skills to knowledge learned in the classroom to address a biological problem.

5. Course Relationship to Program(s).

a. Are there other depts and/or pgms that could be affected by the proposed change?

YES NO

If YES, identify the depts. and/or pgms: Biology BS and BA - Change of Program forms submitted with this application

BS in Agricultural Biotechnology - BIO 430G is one option is a list of specialty support courses required by the

⁶ You must also submit the Distance Learning Form in order for the course to be considered for DL delivery.

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major . This program has been consulted and this change does not impact the program.

Hi Ruth and Larry,

Dan, Michael and I don't see any problems or concerns from ABT with BIO430G becoming a 4 credit course. Some students I've worked with actually seek out courses with labs or lab-based courses. Thanks Ruth for checking with us.

Take care,
Sharyn

BS in Secondary Education (Biology optioion). BIO 430G is one option from a two course list of options. This program has been consulted. This change does not impact the program.

- b. Will modifying this course result in a new requirement⁷ for ANY program? YES NO

If YES⁷, list the program(s) here: _____

6. Information to be Placed on Syllabus.

- a. Check box if changed to 400G or 500. If changed to 400G- or 500-level course you must send in a syllabus and you must include the *differentiation* between undergraduate and graduate students by: (i) requiring additional assignments by the graduate students; and/or (ii) establishing different grading criteria in the course for graduate students. (See SR 3.1.4.)

⁷ In order to change a program, a program change form must also be submitted.

University Senate Syllabi Guidelines

BIO 430G

General Course Information

- Full and accurate title of the course.
- Departmental and college prefix.
- Course prefix, number and section number.
- Scheduled meeting day(s), time and place.

Instructor Contact Information (If specific details are unknown, "TBA" is acceptable for one or more fields)

- Instructor name.
- Contact Information for teaching/graduate assistant, etc.
- Preferred method for reaching instructor.
- Office phone number.
- Office address.
- UK email address.
- Times of regularly scheduled office hours and if prior appointment is required.

Course Description

- Reasonably detailed overview of the course.
- Student learning outcomes.
- Course goals/objectives.
- Required materials (textbook, lab materials, etc.).
- Outline of the content, which must conform to the Bulletin description.
- Summary description of the components that contribute to the determination of course grade.
- Tentative course schedule that clarifies topics, specifies assignment due dates, examination date(s).
- Final examination information: date, time, duration and location.
- For 100-, 200-, 300-, 400-, 400G- and 500-level courses, numerical grading scale and relationship to letter grades for *undergraduate* students.
- For 400G-, 500-, 600- and 700-level courses, numerical grading scale and relationship to letter grades for *graduate* students. (Graduate students cannot receive a "D" grade.)
- Relative value given to each activity in the calculation of course grades (Midterm=30%; Term Project=20%, etc.).
- Note that undergraduate students will be provided with a Midterm Evaluation (by the midterm date) of course performance based on criteria in syllabus.
- Policy on academic accommodations due to disability. Standard language is below:
If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

Course Policies

- Attendance.
- Excused absences.
- Make-up opportunities.
- Verification of absences.
- Submission of assignments.
- Academic integrity, cheating & plagiarism.
- Classroom behavior, decorum and civility.
- Professional preparations.
- Group work & student collaboration.

Course Syllabus
BIO 430G-Plant Physiology

Time: Lecture-MWF, 11:00-11:50 AM; Lab-W, 2:00-5:00 PM
Place: 109 Morgan Building
Instructor: Dr. William S. Cohen
Office: 216A Morgan Building, Dept of Biology
College of Arts and Sciences
Phone: 257 1030 (preferred method)
E-mail: wscohen@email.uky.edu
Office Hours: M-F, 12:00-1:00 PM
Web Sites: <http://www.plantphys.net>
Web.as.uky.edu/Biology/faculty/cohen/

Pre-Requisites: BIO 148, 152, 155(or equivalent); BIO 315(or equivalent); CHE 230/231(or equivalent)

Textbook: Lecture Plant Physiology, Fourth Ed. (2006)-Taiz and Zeiger
Lab Experiments in Plant Physiology, First Ed.-Reiss

Course Description: The physiological processes of green plants and the effect of the environment on these processes.

Course Objectives / overview: Fundamental principles of plant physiology (photosynthesis, respiration, transpiration, nutrition, translocation and development) will be integrated with: abiotic (water, nutrient, salinity temperature, light, mechanical and air pollutant stresses) and biotic (plant pathogens, herbivores, parasitic plants, weeds) environmental factors relative to their effects on plant physiological processes. In general, physiology seeks physical-chemical explanations for how living systems work.

Students will become acquainted with plant structure-function relationships at a number of different levels of organization: cell, tissue, organ and organism.

Grading: Lecture (80%) The lecture grades will be determined by performance on written examinations. Examinations will contain both subjective and objective questions. Four regularly scheduled exams will be given. Exams 1, 2 and 3 will be scheduled outside class time.

Lab (20%) The lab grade will be based on lab reports and other written assignments. Details will be given in class

Final grades will be assigned according to the following scale:

A=90-100%
B=80-89%
C=70-79%
D=60-69%
E=<60%

The instructor reserves the right to make adjustments to the listed scale. Any such adjustments will be made after the final examination in the course.

Extra credit will not be given under any circumstance!

Note: "Our accreditation association and policy of the Graduate School require that there be different assignments and grading criteria for undergraduate and graduate students in

400G and 500-level courses.” Therefore, graduate students(including post baccalaureates) will be required to write a critical analysis of an original report in the current literature(2005-2009) with a value of 10% of the final grade, in addition to the four regularly scheduled examinations and the lab work (90% of the final grade).

Calculation of final grades for graduate students:

The scores earned on the exams and lab reports will be prorated to 90%. (Example if you earned a total of 80 points on the exams and labs combined – this score is then prorated to 90% ($80 \times 0.9 = 72$)). The score from the original report makes up the rest of the grade and is added to the prorated points. Grades are assigned according to the scale above EXCEPT there are no D grades for graduate students - any graduate student earning less than 70% will earn a grade of E for the course.

Withdrawal: The last day to officially withdraw from a course is XXXX
Midterm Grades will be available by XXXX and are based on the above criteria.

Examination Dates:

| | | |
|---------------------|----|-----|
| Exam 1 | on | XXX |
| Exam 2 | | XXX |
| Exam 3 | | XXX |
| Exam 4 (Final Exam) | | XXX |

Each examination is one hour in length and will consist of short answer questions.

Lab assignments are due on the first class day immediately following the completion of each laboratory module.

Attendance at all classes and laboratory meetings is required.

Make up examinations or assignments: Make up exams and assignments will be administered at a mutually convenient time for instructor and student for those students that present a bona fide excuse.

UNIVERSITY POLICY ON EXCUSED AND UNEXCUSED ABSENCES

The following are acceptable reasons for excused absences:

1. serious illness of student (doctor's note required)
2. illness or death of family member (doctor's note required)
3. University - related trips (such as to a football game for a team member or band member, official note required)
4. Major religious holidays. Students MUST notify instructor IN WRITING of all such holidays to assure being excused.

Learning Outcomes

By the end of the course, the student will be able to demonstrate an understanding of the following plant processes from both the molecular and evolutionary perspective:

- 1) Water and solute movement
- 2) Photosynthesis, both light-dependent and light-independent reaction
- 3) Respiration and intermediary metabolism
- 4) Plant responses to both biotic and abiotic influences
- 5) Control of plant growth and development

Disabilities: If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address (jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

Electronic Devices: You are not permitted to use a cell phone or other electronic devices in class or during examinations.

Outlook Distribution List: Please send an email to Dr. Cohen ASAP, so that we can create a class list for easy email communication.

*****A Note Concerning Academic Offenses (READ THIS INFORMATION CAREFULLY)**

PLAGIARISM and CHEATING are serious academic offenses.

The following is an excerpt taken from the "*Students Rights and Responsibilities Handbook, University of Kentucky*" regarding cheating.

"Cheating is defined by its general usage. It includes, but is not limited to, the wrongful giving, taking, or presenting any information or material by a student with the intent of aiding himself/herself or another on any academic work which is considered in any way in the determination of the final grade."

The following is an excerpt taken from the "*Students Rights and Responsibilities Handbook, University of Kentucky*" regarding plagiarism.

"All academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgment of the fact, the students are guilty of plagiarism.

*Plagiarism includes reproducing someone else's work..... If the words of someone else are used, the student **MUST** put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic."*

Charges of an academic offense will be made against any student that cheats or commits plagiarism. Penalties for such an offense will be assessed according to University Regulations regarding Academic Offenses. The most severe penalties include suspension or dismissal from the University. **I have a zero-tolerance policy regarding academic offenses.**

NOTE* In addition to the circumstances listed above, the following activities are considered evidence of cheating:

- 1) **Any talking** to another student during an examination.
- 2) **Looking** at another students work during an examination, or **allowing** another student to look at your work.

- 3) **Use of a cell phone or any electronic device during an examination** (this includes receiving calls). All cell phones and electronic devices **MUST** be turned off and put away during an examination period. They must not be turned back on again until after exiting the examination room.
- 4) **Collaborating with another student on a homework assignment and/or submitting an assignment that is similar in wording or sentence construction to the work of another student**, even if you acknowledge the participation of the other student. **ALL SUBMITTED WORK MUST BE DONE BY YOU ALONE.**

Course Policy on Classroom civility and decorum:

The university, college and department has a commitment to respect the dignity of all and to value differences among members of our academic community. There exists the role of discussion and debate in academic discovery and the right of all to respectfully disagree from time-to-time. Students clearly have the right to take reasoned exception and to voice opinions contrary to those offered by the instructor and/or other students (S.R. 6.1.2). Equally, a faculty member has the right -- and the responsibility -- to ensure that all academic discourse occurs in a context characterized by respect and civility. Obviously, the accepted level of civility would not include attacks of a personal nature or statements denigrating another on the basis of race, sex, religion, sexual orientation, age, national/regional origin or other such irrelevant factors.

Lecture and Lab Content and Schedule

The lab component will provide the opportunity for students to work with live plants, make physiological measurements, collect and analyze data and make presentations to peers. The ultimate goal of the lab activities associated with the lecture will be enhance student understanding of complex physiological concepts and principles.

| | |
|--|--|
| Week 1) and 2) | Transpiration and Mechanism of Guard Cell Movement |
| Week 3) and 4) | Substrate-Dependent Respiration in Isolated Mitochondria |
| Week 5) and 6) | Photosynthetic Light Reactions in Isolated Thylakoids |
| Week 7) and 8) | Immunodetection of Leaf Proteins |
| Week 9) and 10) | Control of Nitrate Reductase Activity by Light/Nutrients |
| Week 11) and 12) | Alpha Amylase; Location and Timing in Seed Germination |
| Week 13) and 14) | Hormones and Leaf Abscission |
| Week 15 – review | |
| Week 16 – Final Exam on XXX at XXX in BS 109 | |