BIO 128: PLANT ANATOMY AND PHYSIOLOGY

In Workflow

1. BIO Committee Chair (ballerini@csus.edu)
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9. Catalog Editor (catalog@csus.edu)
10. Registrar's Office (k.mcfarland@csus.edu)
11. PeopleSoft (PeopleSoft@csus.edu)

Approval Path

1. Tue, 18 Mar 2025 19:45:28 GMT
   Susanne Lindgren (lindgren): Approved for BIO Committee Chair
2. Tue, 18 Mar 2025 20:37:33 GMT
   Susanne Lindgren (lindgren): Approved for BIO Chair
3. Wed, 19 Mar 2025 23:30:30 GMT
   Mikkel Jensen (mikkel.jensen): Approved for NSM College Committee Chair
4. Fri, 21 Mar 2025 16:08:38 GMT
   Chris Taylor (ctaylor): Approved for NSM Dean

Date Submitted: Tue, 18 Mar 2025 01:22:34 GMT

Viewing: BIO 128 : Plant Anatomy and Physiology

Last edit: Tue, 18 Mar 2025 20:25:58 GMT

Changes proposed by: Jonathan Gilkerson (223010359)

Contact(s):

Name (First Last)	Email	Phone 999-999-9999
Jonathan Gilkerson	gilkerson@csus.edu	916-278-4452

Catalog Title:
Plant Anatomy and Physiology

Class Schedule Title:
Plant Anatomy & Physiology

Academic Group: (College)
NSM - Natural Sciences & Mathematics

Academic Organization: (Department)
Biological Sciences

Will this course be offered through the College of Continuing Education (CCE)?
No

Catalog Year Effective:
Spring 2026 (2026/2027 Catalog)

Subject Area: (prefix)
BIO - Biological Sciences

Catalog Number: (course number)
128

Course ID: (For administrative use only.)
201501

Units:
4

Is the ONLY purpose of this change to update the term typically offered or the enforcement of existing requisites at registration?
No

In what term(s) will this course typically be offered?
Spring term only

Does this course require a room for its final exam?
Yes, final exam requires a room

This course complies with the credit hour policy:
Yes

Justification for course proposal:
This course proposal is adding CHEM 1A as a prerequisite to the course. CHEM 1A was an embedded prerequisite prior to the elimination of the BioSci pre-major. BIO 128 uses many concepts from CHEM 1A including nomenclature and acid-base chemistry. The BioSci department is working to add the CHEM 1A prerequisite back to courses affected by the elimination of the pre-major and voted to approve this change.

Additionally, there is an error in the system regarding WTU allocations for the course. The current catalog description (which has been used for many years and will stay the same) states: lecture three hours, laboratory three hours. That equates to 3 WTU for lecture and 2 WTU for lab for a total of 5 WTU. The settings in the current Form A for this course equate to 6 WTU. No one who has taught the course in at least the last 7 years has received 6 WTU for the course; therefore we are updating the Form A to match how the corresponding WTU credit should be correctly allocated to faculty in the system, to match the course description already in the catalog, and to match how we have been teaching the course for years. The student unit allocation of 4 total units is not impacted by this correction.

Course Description: (Not to exceed 90 words and language should conform to catalog copy.)
An integrative examination of our current understanding of plant structure and function. Students will apply fundamental principles of cell and molecular biology, evolution, and ecology to understand the relationships between plant anatomy and plant physiology that have enabled plants to achieve such a high level of success as primary producers on our planet. Lecture three hours, laboratory three hours.

Are one or more field trips required with this course?
No

Fee Course?
Yes

Is this course designated as Service Learning?
No

Is this course designated as Curricular Community Engaged Learning?
No

Does this course require safety training?
Yes

Does this course require personal protective equipment (PPE)?
Yes

Course Note: (Note must be a single sentence; do not include field trip or fee course notations.)
This course requires personal protective equipment which is provided (use of a lab coat is not required).

Does this course have prerequisites?
Yes

Prerequisite:
BIO 1, BIO 2, and CHEM 1A.

Prerequisites Enforced at Registration?
No

Does this course have corequisites?
No

Graded:
Letter

Approval required for enrollment?
No Approval Required

Course Component(s) and Classification(s):
Laboratory
Lecture

Laboratory Classification
CS#16 - Science Laboratory (K-factor=2 WTU per unit)
Laboratory Units
2

Lecture Classification
CS#02 - Lecture/Discussion (K-factor=1WTU per unit)
Lecture Units
3

Is this a paired course?
No

Is this course crosslisted?
No

Can this course be repeated for credit?
No

Can the course be taken for credit more than once during the same term?
No

Description of the Expected Learning Outcomes and Assessment Strategies:

List the Expected Learning Outcomes and their accompanying Assessment Strategies (e.g., portfolios, examinations, performances, pre-and post-tests, conferences with students, student papers). Click the plus sign to add a new row.

	Expected Learning Outcome	Assessment Strategies
1	Think critically about advanced concepts concerning plant evolution, anatomy, growth, development, reproduction, hormone biology, pathology, photobiology, and abiotic stresses.	Lecture exams, lecture quizzes, lab quizzes, lab presentation, online discussions, and lab notebook.
2	Model plant physiology mechanisms with drawings.	Lecture exams and lecture quizzes
3	Formulate new hypotheses and synthesize new ideas about topics in plant physiology.	Lecture exams, lecture quizzes, lab quizzes, lab presentation, online discussions, and lab notebook.
4	Solve common laboratory calculations and dimensional analysis used in the cell, molecular, and plant physiology disciplines.	Lab quizzes and lab notebook.
5	Collaborate with classmates to work calculations, discuss results, and present data.	Lab notebook and lab presentation.
6	Conduct experiments using molecular/cell/plant biology techniques to test hypotheses regarding plant physiology.	Lab quizzes and lab notebook.
7	Orally present and explain data from scientific papers while making connections to topics covered in class.	Lab presentation

Attach a list of the required/recommended course readings and activities:
Biology 128 Syllabus Gilkerson new LOs.pdf

Is this course required in a degree program (major, minor, graduate degree, certificate?)

No

Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer)?

No

Will there be any departments affected by this proposed course?

No

I/we as the author(s) of this course proposal agree to provide a new or updated accessibility checklist to the Dean's office prior to the semester when this course is taught utilizing the changes proposed here.

I/we agree

University Learning Goals

Undergraduate Learning Goals:

Competence in the disciplines
Knowledge of human cultures and the physical and natural world
Intellectual and practical skills
Integrative learning

Is this course required as part of a teaching credential program, a single subject, or multiple subject waiver program (e.g., Liberal Studies, Biology) or other school personnel preparation program (e.g., School of Nursing)?

No

GE Course and GE Goal(s)

Is this a General Education (GE) course or is it being considered for GE?

No

Please attach any additional files not requested above:

review of changes in CHEM prereq for 3 BioSci courses.pdf

Key: 432