

CATALOG INFORMATION

Dept and Nbr: AGRI 10

Title: INTRO AG SCIENCES

Full Title: Introduction to Agricultural Sciences

Last Reviewed: 3/9/2015

| Units | | Course Hours per Week | | Nbr of Weeks | Course Hours Total | |
|---------|------|-----------------------|------|--------------|--------------------|-------|
| Maximum | 3.00 | Lecture Scheduled | 3.00 | 17.5 | Lecture Scheduled | 52.50 |
| Minimum | 3.00 | Lab Scheduled | 0 | 6 | Lab Scheduled | 0 |
| | | Contact DHR | 0 | | Contact DHR | 0 |
| | | Contact Total | 3.00 | | Contact Total | 52.50 |
| | | Non-contact DHR | 0 | | Non-contact DHR | 0 |

Total Out of Class Hours: 105.00

Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly: AG 10

Catalog Description:
A course designed to acquaint students with basic scientific principles through applied experiences of an agricultural nature. Specific topics include taxonomy, physiology, reproduction, biochemistry, genetics, economics, and consumerism as they relate to plant science, animal science, soil science and viticulture/enology.

Prerequisites/Corequisites:

Recommended Preparation:
Eligibility for ENGL 1A or equivalent

Limits on Enrollment:

Schedule of Classes Information:
Description: A course designed to acquaint students with basic scientific principles through applied experiences of an agricultural nature. Specific topics include taxonomy, physiology, reproduction, biochemistry, genetics, economics, and consumerism as they relate to plant science, animal science, soil science and viticulture/enology. (Grade or P/NP)
Prerequisites/Corequisites:

Recommended: Eligibility for ENGL 1A or equivalent
 Limits on Enrollment:
 Transfer Credit: CSU;UC.
 Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

| | | | | | |
|----------------------|----------------------|-------------------|-----------|-------------------|------------------|
| AS Degree: | Area | | | Effective: | Inactive: |
| | C | Natural Sciences | | Fall 1981 | Fall 2020 |
| CSU GE: | Transfer Area | | | Effective: | Inactive: |
| | B2 | Life Science | | Fall 1981 | Fall 2020 |
| IGETC: | Transfer Area | | | Effective: | Inactive: |
| CSU Transfer: | Transferable | Effective: | Fall 1981 | Inactive: | Fall 2020 |
| UC Transfer: | Transferable | Effective: | Fall 1981 | Inactive: | Fall 2020 |

CID:

Certificate/Major Applicable:
 Major Applicable Course

COURSE CONTENT

Student Learning Outcomes:

At the conclusion of this course, the student should be able to:

1. Demonstrate a general understanding of plant science, animal science, soil science, and viticulture/enology.
2. Recognize consumer trends with agricultural products and by-products.

Objectives:

Upon completion of this course, students will be able to:

1. Describe the key principles within the sub-disciplines of plant science, animal science, soil science, and viticulture/enology.
2. Analyze the most significant scientific principles for each of the sub-disciplines of plant science, animal science, soil science, and viticulture/enology.
3. Identify current problems/challenges in plant science, animal science, soil science, and viticulture.
4. Apply an understanding of the scientific principles in each sub-discipline to current problems facing practitioners of plant science, animal science, soil science, and viticulture/enology.
5. Analyze and synthesize current research on a specific topic in agriculture and write a coherent research paper.
6. Recognize and analyze consumer trends within agriculture involving agricultural products and by-products.

Topics and Scope:

1. Agricultural History and Classification Systems
 - A. Ancient culture and history
 - B. Agriculture in America

1. agricultural revolution
2. milestone inventions
3. modern agricultural advances
4. state and local agricultural
- C. Plant taxonomy
2. Biochemical Reactions in Agriculture
 - A. Photosynthesis
 - B. Respiration
 - C. Transpiration
 - D. Nutrient uptake
3. Reproduction in Plants
 - A. Vegetative
 - B. Sexual
 - C. Genetics and plant improvement
4. Soil and Plant Nutrition
 - A. Geology
 - B. Physical properties of soil
 - C. Chemical properties of soil
 - D. Plant nutrition and soil fertilization
5. Application of Scientific Principles to the Fields of Viticulture and Enology
 - A. Wine making principles
 1. fermentation
 2. yeast and malolactic
 3. brix, pH and total acidity (T.A.)
 - B. Viticulture
 1. vocabulary/definitions
 2. geographical distribution
 3. wine structure and cycle of growth
 4. integrated pest and disease management
 5. berry sampling and harvest
6. Application of Scientific and Economic Principles to the Field of Animal Husbandry
 - A. Components of the livestock products
 - B. Changes in consumer preference for livestock products
 - C. Dairy and dairy products
 1. physiology of production
 2. preservation of dairy products
 - D. the meat animal
 1. environmental controls
 2. nutrition and growth
 3. taxonomy
 4. consumption trends

Assignment:

1. Four major unit exams.
2. Weekly quizzes.
3. Reading of instructor prepared material (10 - 20 pages per week)
4. Term paper of 6 to 8 pages.
5. Reports on books, other readings, or online research

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Reports on books, other readings, or internet research; term paper

Writing
20 - 30%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

None

Problem solving
0 - 0%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None

Skill Demonstrations
0 - 0%

Exams: All forms of formal testing, other than skill performance exams.

Quizzes and final exam: multiple choice, true false, matching, completion

Exams
70 - 70%

Other: Includes any assessment tools that do not logically fit into the above categories.

Attendance and participation

Other Category
0 - 10%

Representative Textbooks and Materials:

Instructor prepared materials