

I. CATALOG INFORMATIONA. Discipline: BOTANYB. Subject Code and Number: BOT M06C. Course Title: Plants and Society

D. Credit Course units:

Units: 4Lecture Hours per week: 3Lab Hours per week : 3Variable Units : No

E. Student Learning Hours:

Lecture Hours:

Classroom hours: 52.5 - 52.5

Laboratory/Activity Hours:

Laboratory/Activity Hours 52.5 - 52.5**Total Combined Hours** in a 17.5 week term: 105 - 105

F. Non-Credit Course hours per week _____

G. May be taken a total of: 1 2 3 4 time(s) for creditH. Is the course co-designated (same as) another course: No Yes

If YES, designate course Subject Code & Number: _____

I. Course Description:

Introduces basic concepts related to plant structure, function, genetics, evolution, and domestication. Examines the economic, aesthetic, and ecological roles of plants, and considers the role of plants as a force in shaping civilizations. Stresses the importance of plants and plant products in everyday life, as well as their ritualistic and pharmacological uses. Presents basic scientific principles and techniques using examples from plants and their products to gain an understanding of science and its value in today's society.

J. Entrance Skills

*Prerequisite: No Yes Course(s)
_____*Corequisite: No Yes Course(s)
_____Limitation on Enrollment: No Yes
_____Recommended Preparation: No Yes Course(s)

Other:

No Yes

K. Other Catalog Information:

Formerly BOT M06 and BOT M06L

II. COURSE OBJECTIVES

Upon successful completion of the course, a student will be able to:

		Methods of evaluation will be consistent with, but not limited by, the following types or examples.
1	appraise the importance of plants to human society from biological and social perspectives in historical and modern contexts.	Quiz, essay tests, lab practical or classroom discussion
2	demonstrate an understanding of the basic principles of plant biology including cell structure, morphology, anatomy, physiology, and diversity.	Quiz, essay tests, lab practical or classroom discussion
3	recognize the major groups of extant plants.	Quiz, essay tests, lab practical or classroom discussion
4	categorize the types of plant products utilized by different societies including foods, fibers, herbs, spices, dyes, and construction materials.	Quiz, essay tests, lab practical or classroom discussion
5	demonstrate how the principles of Mendelian genetics are used in plant breeding to develop plants with novel traits.	Quiz, essay tests, lab practical or classroom discussion
6	illustrate how evolutionary principles have lead to the diversification of the extant plant groups and influenced modern plant systematics.	Quiz, essay tests, lab practical or classroom discussion
7	assess the role agriculture has played in the development of human culture.	Quiz, essay tests, lab practical or classroom discussion
8	judge the role plants have played in human aesthetics.	Quiz, essay tests, lab practical or classroom discussion

9	contrast the importance of plants in natural versus human-maintained environments.	Quiz, essay tests, lab practical or classroom discussion
10	collect examples of plants that have been historically significant for economic, aesthetic or ritualistic purposes.	Quiz, essay tests, lab practical or classroom discussion
11	explain the basic botanical aspects of important food plants such as legumes, grains, herbs, spices, and fibers.	Quiz, essay tests, lab practical or classroom discussion
12	relate the origin and dissemination of cultivated plants to human activities.	Quiz, essay tests, lab practical or classroom discussion
13	list the steps utilized to conduct scientific inquiries, including both experimental and observation-based approaches.	Quiz, essay tests, lab practical or classroom discussion
14	appraise the possible consequences of current agricultural practices on native ecosystems and plant biodiversity.	Quiz, essay tests, lab practical or classroom discussion

III. COURSE CONTENT

Estimated %	Topic	Learning Outcomes
Lecture (must total 100%)		
3.00%	Plant Physiology	2
3.00%	Plant Reproduction	5, 6, 12
3.00%	Genetics	5
6.00%	Plant Systematics and Evolution	6
6.00%	Plant Diversity	3, 4, 10, 11
4.00%	Origins of Agriculture	7, 12, 14
3.00%	The Grasses	3, 4, 11
3.00%	Legumes	3, 4, 11
3.00%	Starchy Staples	1, 3, 4, 11, 12
6.00%	Herbs and Spices	1, 4, 7, 8, 10, 11, 12
4.00%	Psychoactive Plants	1, 10

4.00%	Poisonous and Allergy Plants	1, 4, 10
3.00%	Fungi in the Natural Environment	1, 2, 10
4.00%	Fungi that Affect Human Health	1, 10
3.00%	Introduction to Plants	1, 2, 13
4.00%	How Plants Function Plant Cells	2
6.00%	Plant Structures	2
4.00%	Plants as a Source of Food Human Nutrition	4, 7, 10, 11, 12
3.00%	Feeding a Hungry World	7, 10, 14
4.00%	Plant Products and Commerce Stimulating Beverages	4, 7, 8
4.00%	Cloth, Paper and Wood	1, 3, 4, 7, 8, 10, 11, 12
6.00%	Plants and Human Health Medicinal Plants	4, 8, 9, 10, 11, 12, 14
3.00%	Impact of Algae and Fungi on Human Affairs Algae	1, 2, 4, 12, 14
6.00%	Beverages and Foods from Fungi	1, 8, 11, 12
2.00%	Plants and the Environment Ecology	9, 13, 14
Lab (must total 100%)		
3.00%	Scientific Methods	13
6.00%	Cell Structure and Cell Division	2, 5
10.00%	Vegetative Plant Structures	3, 11
10.00%	Flowers and Fruits	2, 3, 4, 5, 6
6.00%	Plant Evolution and Diversity	5, 6
6.00%	Legumes	2, 3, 11
6.00%	Cereals and Grains	2, 3, 4, 11
6.00%	Starchy Plant Crops	2, 3, 4, 10, 11
6.00%	Fats, Oils, Waxes, Soap and Saponification	10, 11
3.00%	Plant Fibers	10, 11, 12
6.00%	Wood and Paper	2, 3, 4, 8, 10, 11
9.00%	Herbs and Spices	2, 3, 4, 10, 11
4.00%	Medicinal Plants	2, 3, 4, 10

4.00%	Psychoactive Plants and Plant Poisons	2, 3, 4, 10, 11
3.00%	Algae	2, 3, 10
6.00%	Fungi and Fermentation	2, 3, 4, 8, 10
6.00%	Plant Pigments and Dyes	2, 8, 10, 12

IV. TYPICAL ASSIGNMENTS

A. Writing assignments

Writing assignments are required. Possible assignments may include, but are not limited to:	
1	research topics for term papers on plant diversity.
2	write laboratory reports and journal entries.

B. Appropriate outside assignments

Appropriate outside assignments are required. Possible assignments may include, but are not limited to:	
1	problem sets characterizing commonly available fruits and vegetables by plant type and family.
2	oral presentations on plants and human health.
3	assigned reading from text and readings from scientific literature.

C. Critical thinking assignments

Critical thinking assignments are required. Possible assignments may include, but are not limited to:	
1	perform validity analysis of lay scientific literature.
2	determine which plants are best suited for dyes, fiber, foods, and medicines.
3	discuss strategies on feeding a hungry world.

V. METHODS OF INSTRUCTION

Methods of instruction may include, but are not limited to:

Distance Education – When any portion of class contact hours is replaced by distance education delivery mode (Complete DE Addendum, Section XV)

Lecture/Discussion

—

- Laboratory/Activity
- Other (Specify) Demonstrations
Group projects
Audio-visual presentations

- Optional Field Trips
- Required Field Trips

VI. METHODS OF EVALUATION

Methods of evaluation may include, but are not limited to:

- Essay Exam
- Classroom Discussion
- Skill Demonstration
- Problem Solving Exam
- Reports/Papers/Journals
- Participation
- Objective Exams
- Projects
- Other (specify)

Lab practicals

VII. REPRESENTATIVE TEXTS AND OTHER COURSE MATERIALS

Levetin, Estelle, et al. Laboratory Manual for Applied Botany. McGraw-Hill, 2001.

Levetin, Estelle, and Karen McMahon. Plants and Society. 7th ed. McGraw-Hill, 2015.

Simpson, Beryl, and Molly Ogorzaly. Plants in Our World: Economic Botany. 4th ed. McGraw-Hill, 2013.

VIII. STUDENT MATERIALS FEES

- No Yes

IX. PARALLEL COURSES

<i>College</i>	<i>Course Number</i>	<i>Course Title</i>	<i>Units</i>
California State University, Fresno	BIOL 11	Plant Biology	3
University of California Davis	PL SCI/SCI&SOC 12	Plants and Society	4

X. MINIMUM QUALIFICATIONS

Courses Requiring a Masters Degree:
Master's in any biological science OR Bachelor's in any biological science AND Master's in biochemistry, biophysics, or marine science OR the equivalent.

XI. ARTICULATION INFORMATION

- A. Title V Course Classification:
 1. This course is designed to be taken either:

- Pass/No Pass only (no letter grade possible); or
- Letter grade (P/NP possible at student option)

2. Degree status:

Either Associate Degree Applicable; or Non-associate Degree Applicable

B. Moorpark College General Education:

1. Do you recommend this course for inclusion on the Associate Degree General Education list?

Yes: No: If YES, what section(s)?

- A1 - Natural Sciences - Biological Science
- A2 - Natural Sciences - Physical Science
- B1 - Social and Behavioral Sciences - American History/Institutions
- B2 - Social and Behavioral Sciences - Other Social Behavioral Science
- C1 - Humanities - Fine or Performing Arts
- C2 - Humanities - Other Humanities
- D1 - Language and Rationality - English Composition
- D2 - Language and Rationality - Communication and Analytical Thinking
- E1 - Health/Physical Education
- E2 - PE or Dance
- F - Ethnic/Gender Studies

C. California State University(CSU) Articulation:

1. Do you recommend this course for transfer credit to CSU? Yes: No:

2. If YES do you recommend this course for inclusion on the CSU General Education list?

Yes: No: If YES, which area(s)?

- | | | | | | | |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|--|--|-----------------------------|
| A1 <input type="checkbox"/> | A2 <input type="checkbox"/> | A3 <input type="checkbox"/> | B1 <input type="checkbox"/> | B2 <input checked="" type="checkbox"/> | B3 <input checked="" type="checkbox"/> | B4 <input type="checkbox"/> |
| C1 <input type="checkbox"/> | C2 <input type="checkbox"/> | D1 <input type="checkbox"/> | D2 <input type="checkbox"/> | D3 <input type="checkbox"/> | D4 <input type="checkbox"/> | D5 <input type="checkbox"/> |
| <input type="checkbox"/> | D6 <input type="checkbox"/> | D7 <input type="checkbox"/> | D8 <input type="checkbox"/> | D9 <input type="checkbox"/> | D10 <input type="checkbox"/> | E <input type="checkbox"/> |

D. University of California (UC) Articulation:

1. Do you recommend this course for transfer to the UC? Yes: No:

2. If YES do you recommend this course for the Intersegmental General Education Transfer Curriculum (IGETC)? Yes: No:

IGETC Area 1: English Communication

- English Composition
- Critical Thinking-English Composition
- Oral Communication

IGETC Area 2: Mathematical Concepts and Quantitative Reasoning

Mathematical Concepts

IGETC Area 3: Arts and Humanities

Arts

Humanities

IGETC Area 4: Social and Behavioral Sciences

Anthropology and Archaeology

Economics

Ethnic Studies

Gender Studies

Geography

History

Interdisciplinary, Social & Behavioral Sciences

Political Science, Government & Legal Institutions

Psychology

Sociology & Criminology

IGETC Area 5: Physical and Biological Sciences (mark all that apply)

Physical Science Lab or Physical Science Lab only (non-sequence)

Physical Science Lecture only (non-sequence)

Biological Science

Physical Science Courses

Physical Science Lab or Biological Science Lab Only (non-sequence)

Biological Science Courses

Biological Science Lab course

First Science course in a Special sequence

Second Science course in a Special Sequence

Laboratory Activity

Physical Sciences

IGETC Area 6: Language other than English

Languages other than English (UC Requirement Only)

U.S. History, Constitution, and American Ideals (CSU Requirement ONLY)

U.S. History, Constitution, and American Ideals (CSU Requirement ONLY)

XII. REVIEW OF LIBRARY RESOURCES

A. What planned assignment(s) will require library resources and use?

The following assignments require library resources:

Using the Library's print and online resources, conduct literature reviews of

botanical resources on topics appropriate to the course; also use Library resources to locate sources in preparation for writing a term paper on such topics as how have particular plants been used in rituals and religious ceremonies.

- B. Are the currently held library resources sufficient to support the course assignment?

YES: NO:

If NO, please list additional library resources needed to support this course.

XIII. PREREQUISITE AND/OR COREQUISITE JUSTIFICATION

BOT M06: Not Applicable

XIV. WORKPLACE PREPARATION

BOT M06: Not Applicable

XV. DISTANCE LEARNING COURSE OUTLINE ADDENDUM

BOT M06: Not Applicable

XVI. GENERAL EDUCATION COURSE OUTLINE ADDENDUM

General Education Division of Learning [check all applicable boxes]:

- Natural Sciences
 - Biological Science
 - Physical Science
- Social and Behavioral Sciences
 - American History/Institutions
 - Other Social Science
- Humanities
 - Fine or Performing Arts
 - Other Humanities
- Language and Rationality
 - English Composition
 - Communication and Analytical Thinking
- Health/Physical Education
- Ethnic/Women's Studies

Check either Option 1 or Option 2

- OPTION #1:** Moorpark College has already received approval from the CSU and/or UC systems for this course to fulfill a GE requirement. Note: This option applies only to technical revisions and updated courses.
- OPTION #2:** Moorpark College has not received approval from the

- CSU and/or UC systems for this course to fulfill a GE requirement. This option applies to all new and substantively revised courses.

XVII. STUDENT MATERIALS FEE ADDENDUM

BOT M06: Not Applicable

XVIII. REPEATABILITY JUSTIFICATION TITLE 5, SECTION 55041

BOT M06: Not Applicable

XIX. CURRICULUM APPROVAL

Course Information:

Discipline: BOTANY

Discipline Code and Number: BOT M06

Course Revision Category: Outline Update

Course Proposed By:

Originating Faculty Paul Kores 09/06/2018

Faculty Peer: Paul Kores 09/07/2018

Curriculum Rep: Beth Miller 09/08/2018

Department Chair: Jazmir Hernandez 09/06/2018

Division Dean: Carol Higashida 09/10/2018

Approved By:

Curriculum Chair: Jerry Mansfield 02/08/2019

Executive Vice President: _____

Articulation Officer: Letrisha Mai 02/06/2019

Librarian: Mary LaBarge 02/05/2019

Implementation Term and Year: Fall 2019

Approval Dates:

Approved by Moorpark College Curriculum Committee: 02/19/2019

Approved by Board of Trustees (if applicable): _____

Approved by State (if applicable): 02/25/2019