

PALOMAR COLLEGE
COURSE OUTLINE OF RECORD FOR
DEGREE CREDIT COURSE

Transfer Course A.A. Degree applicable course
(check all that apply)

COURSE NUMBER AND TITLE: BOT 105, Identification of Trees and Shrubs

UNIT VALUE: 4

MINIMUM NUMBER OF SEMESTER HOURS: 96

BASIC SKILLS REQUIREMENTS: Appropriate language and computational skills.

ENTRANCE REQUIREMENTS: None

PREREQUISITE: None

COREQUISITE: None

RECOMMENDED PREPARATION: None

SCOPE OF COURSE:

The identification and classification of trees, shrubs and ground covers including the morphology of fruits, leaves, stems, roots, and their utilization by man. Special emphasis will be given to the distribution and identification of native, naturalized and cultivated trees in San Diego County. CSU

SPECIFIC COURSE OBJECTIVES:

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

1. Analyze and identify native and exotic trees, shrubs and ground covers, particularly those with horticultural applications;
2. Use technical taxonomic keys for the purpose of identifying unknown plant families and difficult taxa;
3. Evaluate and apply botanical terminology, particularly vegetative morphology utilized in dichotomous keys when flowering material is not available;
4. Select woody plant species for a variety of landscaping situations;
5. Use computer-data base programs to analyze voluminous data on horticultural plants.

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

- I. Introduction
 - A. Required textbooks and references
 - B. Course objectives
 - C. Procedure for collecting, pressing & mounting plants
 - D. Identification labels
 - E. Native vs. naturalized vs. cultivated plants
 - F. Life zones, biomes, and plant communities
- II. Classification of the plant kingdom
 - A. Major subdivisions of nonvascular and vascular plants
 - B. Binomial system of nomenclature
 - C. Definition of species and subspecies
 - D. Pronunciation of scientific names--long and short accents
 - E. Taxonomic keys--bracket and indented types
- III. Plant taxonomy terminology (Stressing terms needed to key out trees and shrubs during the fall semester when flowers are scarce.)
 - A. Types of roots and stems
 - B. Leaf types and arrangement
 - C. Phyllodes and cladodes (cladophylls)
 - D. Monocots vs. dicots
 - E. Fruit types
 - F. Vegetable types
- IV. Special adaptations of seeds and fruits
 - A. Economic importance of seeds
 - B. Seed and fruit dispersal
 - C. Longevity of seeds
 - D. Factors affecting seed germination (rainfall, temperature, seed scarification, fire, etc.)
- V. Genera of cone-bearing trees
 - A. Identification by means of foliage characteristics
 - B. Diversity of ovulate cones
- VI. Miscellaneous topics
 - A. Poisonous plants in cultivation
 - B. Economically important plant families
 - C. Cultivated trees, shrubs and ground covers of Palomar College campus & arboretum
 - D. Use of plants in landscaping situations - desirable and undesirable plants
 - E. Use of computer data base programs in large botanical collections in parks & gardens

REQUIRED READING:

Vasek, F.C. A Vegetative Guide to the Perennial Plants of Southern California. San Bernardino: San Bernardino County Museum Publisher, 1982.

Labadie, E.L. Ornamental Shrubs for Use in The Western Landscape. El Portal, CA: Sierra Press, 1980.

Hickman, J.C. The Jepson Manual of Higher Plants of California. Berkeley: University of California Press, 1993.

Supplemental published articles handed out in class by the instructor.

Armstrong, W.P. Wayne's Word: A Newsletter Of Natural History Trivia. <http://waynesword.palomar.edu>, 2002.

SUGGESTED READING:

Everett, T.H. Encyclopedia of Horticulture. New York: Garland Publishing, Inc., 1981.

Bailey, L.H. Hortus Third. New York: MacMillan Pub. Co., 1977.

Sunset Western Garden Book. Menlo Park, CA: Lane Book Co., 1995.

REQUIRED WRITING:

Term paper, a minimum of five pages, on selected plant family with economically important and horticulturally useful representatives, written according to format specified in AIBS style manual for biological journals. A minimum of 5 journal references in bibliography are required.

OUTSIDE ASSIGNMENTS:

Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short-term classes.

Plant collection of 25 specimens - properly pressed and identified according to the rules of botanical nomenclature. Students will read their text and study lecture notes in preparation for class work.

INSTRUCTIONAL METHODOLOGY:

Check all that apply:

- lecture
- laboratory
- lecture-laboratory combination
- directed study

Classroom lectures supplemented with 35mm color transparencies, botanical models and charts, living plant material, herbarium specimens (from Palomar College Herbarium - PASM); extensive use of dissecting microscope, and herbarium material in laboratory sessions; also field trips to local park, botanical gardens. (Palomar College Arboretum, Palomar Cactus & Succulent Garden, Quail Botanical Garden, San Diego Zoo and Wild Animal Park and Balboa Park.)

DISTANCE LEARNING:

This course may be offered as a distance learning course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380.

Yes No

If yes, check all that apply:

- Television Course (Video one-way, e.g. ITV, video cassette, etc.)
- Online Course (Text one-way, e.g. newspaper, correspondence, electronic file, etc.)
- Two-Way Video Conferencing (Two-way interactive video and audio)
- One-Way Video Conferencing (One-way interactive video and two-way interactive audio)
- Computer Assisted Instruction (A specialized form of mediated instruction relying primarily on student access to information and prepared lessons or teaching materials through a computer terminal, but not under immediate supervision of a qualified instructor.)

GRADING POLICY AND STANDARDS (include methods of determining whether the stated objectives have been met by students):

Final grade based on total points accumulated during semester; a minimum of 3 objective/subjective exams (multiple choice and essay) plus comprehensive final; at least 10 "Keying Out" quizzes involving one or more unknown tree or shrub species; several terminology quizzes on plant families and plant communities; a plant collection of 25 plants properly pressed, identified and labeled; and a minimum 5 page term paper.

Exams =	25%
Quizzes =	25%
Plant Collection =	25%
Term Paper =	25%

IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?

Yes ____ No Number of times course may be taken for credit: 1

If yes, identify specific provision of Title 5 Division 2 section(s), 55761-55763 and 58161 which qualifies course as repeatable:

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SIGNATURES ON FILE
