PROGRAM IMPLICATIONS AND DESIGN
FOR
LANDSCAPE HORTICULTURE PROGRAM
AT
SANTA BARBARA CITY COLLEGE

Program Operator
S.B.C.C.
INTRODUCTION

For the past four years, Santa Barbara City College has operated a one-year certificate program in Landscape Horticulture (see Exhibit A). Essentially, the trainees of this program are scheduled with classroom and laboratory experience stations in the community on Mondays, Wednesdays and Fridays, and receive other (usually paid) work experiences in landscaping activities for the remainder of the week.

The program has been very popular among students even though it has lacked the necessary resources to develop into a top quality program. It has lacked leadership in that the program has been taught with a cadre of hourly personnel.

OBJECTIVES AND FEASIBILITY

We now plan on expanding the Landscape Horticulture Program from Sept. 15, 1980 through June 25, 1981. The reasons are a general interest in gardening and landscaping in the South Coast area and continued opportunity for employment in the field of landscape maintenance, plant propagation and installation and retail sales.

Santa Barbara City College could conceivably expand its present program (one year certificate) from 24 trainees to 30 trainees; however, the following must be considered:

1. A workable arrangement be developed which would allow students more practical landscape experiences; i.e., plant installation, maintenance of turf, ground cover plants, pruning, fertilizing, insect control, etc., etc. Further, would be to schedule Landscape Horticulture students on our SBCC main campus and our Turnpike facility for these work experiences.

2. A full-time coordinator/instructor would be needed to schedule and supervise hourly faculty and students, purchase of supplies and equipment, and to coordinate activities with the campus Maintenance and Operations staff.
3. Rental of capital equipment and purchase of consumable and non-consumable supplies would be necessary in order that students be given a wide variety of practical landscape experiences.

4. Storage facilities centrally located on the main campus would need to be available for storage of landscape equipment, and consumable/non-consumable supply inventory.

5. A one-year trial program (expansion of existing program) would be started on Sept. 15, 1980 and terminate on June 25, 1981. This would allow participant students' activities to coincide with the college calendar.

6. The program curriculum would be taught with minimal lecture time and a wide variety of laboratory experiences. Most student tasks and laboratory exercises would be written as performance objectives.

7. The program coordinator/instructor would work with the work experience and employment pool (composed of the Nurserymen's Association, CLCA, Turf Grass Occupations, City Parks and Recreation, EDD representatives) to insure placement of trainees.

8. Part of the Landscape Horticulture students would be made up of low income participants (CETA eligible). More specifically, eligibility requirements would be as follows:

(a) economically disadvantaged; that is, have a family income of less than approximately $8,000, be dependent on public support such as welfare, foster care, sheltered work or prison; or be substantially handicapped; and

(b) be unemployed, underemployed or in school.

ENROLLEE ASSIGNMENT

All trainees in the Landscape Horticulture Program would be residents of the Santa Barbara City College attendance District. CETA eligible clients would be recruited from community service agencies, and target areas of recruitment would include
Census Tracts 8, 9, 10, 29.01, and 30. Target demographic pools would consist of out-of-school, unemployed youth and Vietnamese refugees. The minimum age requirement would be eighteen, and none of the training would be limited because of sex.

PROGRAM OPERATIONS/DESIGN

1. Length of Program

The present credit Landscape Horticulture Program (including support courses in Drafting, Botany and First Aid) covers some 738 hours of classroom instruction* over two semesters or approximately 36 weeks. (See Exhibit E)


*These hours do not include work experience.

2. Participants Served

Thirty students (20 CETA and 10 non-CETA eligible) would enroll in the program.

Approximately 80% of 30 students would complete the program with marketable skills in landscaping or the nursery business.

3. Program Objectives

It is anticipated that all enrollees will receive a minimum of 504 hours of experience (paid stations) either on our SBCC campus or in the community, or both, before finishing the program. The work experience schedule will be flexible enough to coincide with needs of students.

Classroom instruction will focus on principles covering a wide range in horticulture; i.e., soils, irrigation, plant identification, propagation, fertilizer, pest control, and maintenance. Hopefully, this will insure that graduates of the program will be prepared for employment within a wide variety of occupations in the horticulture business.

STRUCTURE OF PROGRAM (Not limited to CETA eligible clients)

1. Program recruitment will be scheduled for June 1 through Sept. 15, 1980. Those
students meeting CETA eligibility requirements will be screened by the CETA Service Center. If the student fails to meet minimum competencies in Math, English, or physical dexterity, further student assessments and recommendations for special services will be made.

Service providers at SBCC are:

English as a Second Language (ESL) ............... Suzanne Medina
Basic Skills (English) .................................. Director, Essential Skills
Math Competencies ...................................... Instructors, Math 1
Tutorial .................................................. Pablo Buckelew, Director
.................................................. Tutorial Center

2. Classroom training will include lectures and demonstrations, plant identification, soils, irrigation and plant installation, maintenance, construction, and greenhouse operations. Also, students will receive support course instruction in Botany, Drafting, and First Aid. (See Exhibit E)

Skills learned by trainees are outlined in Performance Objectives (see Course Outlines). Students would receive a Certificate of Completion for successfully demonstrating meeting a minimum of 70% proficiency level of performance in the modules required. Students would also receive credits recorded for courses successfully completed.

*See attached Course Outlines, Exhibit B.

3. Laboratory and work experience classes would be conducted both in the community and on the college campus. Fundamentals and principles would be taught under close supervision of the instructional staff, and as students became more proficient they would be assigned to a work experience station either on the SBCC campus or in the community.

4. Classroom and work experience schedules would be handled by an instructor (of subject area competency), a coordinator, and in some cases assisted by a laboratory assistant. (See Exhibit E)

5. The coordinator/instructor for the Landscape Horticulture Program would be the
"key figure" in establishing the necessary linkages between the following agencies and departments:

A. CETA Service Center for processing eligibility for economic, academic, and physical program requirements;

B. CETA Management Unit in reporting CETA student enrollments, student progress, and completions.

C. Nurseriesmen's Association, CLCA, Turf Growers Association, City Parks, PIC, for analyzing, projecting, and determining job opportunities and placement of graduates.

D. Grounds and Maintenance Department at SBCC campus to insure proper scheduling of student work experience and laboratory training activities.

ADMINISTRATION AND MANAGEMENT PROCEDURES

The instructor/coordinator and Assistant Dean, Occupational and Career Education, would have overall responsibilities for reporting progress of students, student placement, budget control, and for collecting and disseminating advisory committee information off campus.

The Facilities and Operations Director will act as a "clearing" point for all landscape maintenance or work experience activities on any of the SBCC campuses; furthermore, the Facilities and Operations Director will provide space and inventory for all non-consumable and consumable supplies used on campus.

The Business Services Supervisor (SBCC) will be responsible for all fiscal reports required of PIC or CETA in the operation of the Landscape Horticulture Program.

Records maintenance and reporting procedures will be expedited and monitored by the office of the Assistant Dean, Occupational and Career Education.

Organizational structure and job descriptions of Assistant Dean, Occupational and Career Education, and the certificated coordinator are attached (see Exhibit C).
Santa Barbara City College has an adopted Affirmative Action/Grievance Plan which protects the individual from being discriminated against.

**BUDGET 1980-81**

Direct expenditures for 1980-81 would consist essentially of instructional staff, equipment and supplies (see Exhibit D, Budget Summary). Prospects as of this date would be to use District funds and categorical VEA funds and CETA funds to support the Landscape Horticulture Program; PIC funds would be used essentially as stipends for CETA eligible trainees.

**SUMMARY**

To best fit the training needs of the Landscape Horticulture industry and to make available training stations for prospective students, the college campus (SBCC) would be used as a work training site.

The South Coast Santa Barbara area offers many opportunities for students to learn a wide variety of skills in the Landscape Horticulture business; furthermore, employment has been good for those preparing themselves with job entry-level skills. Commingling of funds between the Santa Barbara Community College District, PIC, CETA, and VEA, will allow for some 30 training stations and 20 on-campus work experience stations in landscape horticulture during the 1980-81 school year. (See Exhibit D)
ADVISORY AND CONSULTANT PERSONNEL

In the process of this study a cross-section of individuals has been approached to determine the feasibility and desirability of expanding the Landscape Horticulture Program. In general, most have been very supportive.

Solicitation of advice and opinions came from the following:

1. TONY WOLCOTT, Student Advisor, Landscape Horticulture Program
2. TIM JOHNSON, Maintenance Contractor, Santa Barbara
3. DAVID HILL/LOUIE TORRES, Facilities and Operations, Santa Barbara City College
4. LANDSCAPE HORTICULTURE ADVISORY COMMITTEE, Santa Barbara City College
5. ROBERT FARETTA, President, California Landscape Contractors Association
6. ROBERT BARTHOLOMEW, Tri-Counties Nurserymen's Association
7. ALVIN J. REMMENGA, Director, Private Industry Council (PIC)
Santa Barbara City College will offer a two-semester Certificate Program in LANDSCAPE HORTICULTURE during the 1979-80 school year. Theory taught in the classes will be supported with practical work experience in the field. Specific courses for the fall and spring semesters are as follows:

<table>
<thead>
<tr>
<th>Course Title</th>
<th>UNITS</th>
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<tbody>
<tr>
<td>L.H. 1 - Plant Identification &amp; Culture</td>
<td>3</td>
</tr>
<tr>
<td>L.H. 2 - Soil &amp; Plant Nutrients</td>
<td>3</td>
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<tr>
<td>L.H. 3 - Irrigation &amp; Plant Installation</td>
<td>3</td>
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<td>L.H. 4 - Landscape Maintenance</td>
<td>3</td>
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<td>L.H. 5 - Landscape Construction</td>
<td>3</td>
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<td>L.H. 6 - Greenhouse Operations</td>
<td>3</td>
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<tr>
<td>L.H. 61 - L.H. Work Experience</td>
<td>2-4</td>
</tr>
<tr>
<td>Botany 4 - Botany for Horticulture Majors</td>
<td>4</td>
</tr>
<tr>
<td>I.T. 1 - Freehand Drawing</td>
<td>2</td>
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<tr>
<td>H.E. 2 - Standard First Aid</td>
<td>1</td>
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<td><strong>TOTAL:</strong></td>
<td><strong>15-17</strong> &quot;</td>
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**APPLICATION TO PROGRAM**

Those interested in the Landscape Horticulture Program must submit an application to the Asst. Dean, Occupational and Career Education. Application forms are available at the Occupational and Career Education Office - or the Human Relations Office on the Main Campus at 721 Cliff Drive.
EXHIBIT B

SANTA BARBARA CITY COLLEGE
Course of Study Outline

L.H. 1 - Plant Identification and Culture (3) F

A. Nature of the Course

1. Description: This course is designed to acquaint the student with approximately 200 landscape plant materials used in South Coast gardens. The student will learn each plant by its genus, species, and common name; its cultural requirements; and its landscape uses. In addition, the student will be introduced to basic landscape design theory and principles.

2. Class: Freshmen and Sophomores

3. Hours per Week: 5

4. Organization: 2 hours lecture, 3 hours laboratory

5. Prerequisite: Landscape Horticulture major - formally accepted to the program.

B. Aims and Objectives

1. To prepare the student for entry-level into and/or upgrading within the practice of horticulture in the South Coast area.

2. To introduce the student to basic principles of landscape design.

3. To provide the student with knowledge and understanding of the habits of growth, culture, and landscape use of herbaceous perennials, trees, shrubs, vines, and ground covers in the South Coast area.

4. To provide the student with historical and design information on the use and arrangement of plantings in a landscape.

5. To develop skills in the identification and selection of plant material appropriate to the particular environment of the South Coast.

6. To encourage students to continue their education in horticulture at four-year institutions of higher learning.

C. Content and Organization

Lectures: two hours per week

Unit 1 - Plant Classification
1. Definition of family, genus, species, subspecies, variety, cultivar.
2. Nomenclature; Linnaean system of binomial classification; Botanical Latin.
3. Significance of plant origin; famous plant hunters.

Unit 2 - Plant Character
1. Definition of tree, shrub, vine, ground cover, herbaceous perennial.
2. Definition and explanation of categories of growth habit: evergreen deciduous, coniferous, formal vs. informal, growth rate.
3. Definition and explanation of texture and density, tender, plant longevity, hardiness.

Unit 3 - Plant Morphology
1. Leaves and leaflets: type and arrangement, compound vs. simple, shape, margins.
2. Inflorescences: type and arrangement
3. Fruits: types

(continued)
Unit 4 - Plant Ecology
1. Sun, half-shade, shade
2. Seashore zones
3. Temperature, wind, smog, drought tolerance
4. Soil types and preferences

Unit 5 - Landscape Value and Effect
1. Definition and explanation of accent, arbor, background, banks, barrier, bonsai, border, cascade, container, erosion control, espalier, facer, fall color, fences, fire retardance, fragrance, fruit, hanging basket, hedge, indoor, lawn, mass, naturalizing, patio, poolside, rockery, screen, shade, shrub border, specimen, standard, street tree, topiary, walls windbreak.
2. Explanation of achieving special landscape effects: Desert, Spanish, Oriental, and Tropical Gardens.

Unit 6 - Plant Propagation
1. Brief discussion of propagation methods.

Unit 7 - Culture
1. Fertilization: Special needs noted.
2. Irrigation: Drought tolerant, summer water, regular water, bog.
3. Pruning: Discussion of how a plant grows; theory and principles of pruning.

Unit 8 - Plant Pests and Diseases
1. Common pests and diseases noted, controls suggested.

Unit 9 - Landscape Design
1. Theory and principles defined and explained.
2. Practice in Design: Special project detailing four steps in good design.
3. Practice in Design: Special design project (e.g., Spanish patio).

Unit 10 - Special Lectures
1. Palms
2. Houseplants
3. Ferns
4. California natives and drought tolerant gardens
5. Pines
6. Eucalyptus

Unit 11 - How to Use a Key
1. Use of a plant manual.
2. Practical experience in identifying unfamiliar plants.

Laboratory Sessions: Two per week (three total hours)

Unit 1 - Introduction to and explanation of Plant Identification Card and Plant List.

Unit 2 through Unit 16 - Identification of plant materials in alphabetical order as indicated on Plant List. Students to fill out Plant I.D. Cards with information on each plant as given by the instructor. First Laboratory approximately eight plants; second Laboratory approximately ten plants, campus walk, projection of slides of plant materials discussed each week.

Unit 18 - Field Trips
1. Trip to local parks.
2. Trip to Perry's Plants to see ground cover material.
3. Trip to Court House grounds.
4. If time allows, trips to area neighborhoods to see plant material and design of landscapes.

(continued)
D. Texts, References, and Supplementary Aids

1. Required Text: SUNSET WESTERN GARDEN BOOK, Lane Publishing Co.
2. Suggested Optional Texts:
   a. Connor, THE BACK POCKET GUIDE TO ORNAMENTAL PLANTS, Vocational Education Productions
   b. Harrington and Durell, HOW TO IDENTIFY PLANTS, The Swallow Press
   c. Smith, VASCULAR PLANT FAMILIES
   d. Smith, WESTERN LANDSCAPE DESIGN
3. Major Reference: HORTUS THIRD, Staff on the L.H. Bailey Hortorium, Cornell University, Macmillan
4. Additional texts are available in the L.H. office and in the library.

E. Required Assignments

1. Student must complete a set of Plant Identification Cards.
2. Student must submit a completed landscape design showing the four steps to good design planning.
3. Student must complete assigned special design project.

F. Basis of Student Evaluation

1. Three hour examinations.
2. General performance in the laboratory.
3. Completion of assigned design projects and Plant Identification Cards.
4. The final examination.

G. Provisions for Special Needs of Students

Problems of individual students are discussed during office hours. The student may be referred to the library or to the Counseling Office for additional help. When sent to the library, the student is referred to specific texts or to the librarian. When the student is sent to the Counseling Office, the instructor makes a follow-up check with that office.

H. Contribution to General Education

1. Introduces the student to the field of ornamental horticulture.
2. Gives the student an aesthetic appreciation of the ornamental landscape plants in his/her community.
3. Gives the student an appreciation of the impact of man upon the environment.
LANDSCAPE HORTICULTURE 2 – Soil & Plant Nutrients (3) F

A. Nature of the Course

1. Description:
   a. A study of the properties of soil, fertilizers, erosion and ph control
      as applicable to ornamental plants, turf, shrubs, and trees.
2. Freshman or Sophomore.
3. Hours per week: Five hours
4. Organization: 2 hours lecture, 3 hours lab. weekly
5. Prerequisite: Landscape Hort. major, formally accepted to the program.

B. Aims and Objectives:

1. To provide the student with knowledge and understanding of the functions of soils,
   soil mixtures and amendments, soil structure and fertility.
2. To encourage the establishment of a scientific attitude in the student which impels
   him to demand facts as a matter of habit, to use an analytical approach in
   examining problems, and to think critically.
3. To provide the student with practical knowledge of how and where to find accurate
   agricultural information.
4. To develop skills in recognizing and solving soil problems, in using available
   amendments together with compatible plants.

C. Content and Organization

One week is devoted to each of the following lecture and laboratory topics:

1. Lecture: Functions of a soil, soil mixtures, and general geographic distribution.
   Laboratory: Soil texture, structure; mixing inorganic ingredients.
2. Lecture: Soil water influenced by soil mixture.
   Laboratory: Infiltration in various soil mixtures; bulk density, hydraulic conductivity.
3. Lecture: CAtion-Exchange capacity (CEC)
   Laboratory: Porosity, bulk density, salinity. Introduction to soil tests, fertility.
   Laboratory: Chemical fumigation; aerated steam pasteurization; regular steam
   pasteurization.
   Laboratory: Changing the soil mixture. Testing for humus, fertilizer, essential
   elements.
   Laboratory: Essential nutrient elements. Soil retention.
7. Lecture: Soil reaction or pH.
   Laboratory: Adjusting soil mixes for particular plantings.
   Laboratory: Practical applications. Economics.
   Laboratory: Soil pasteurization and nutrient-element disorders.
10. Lecture: Evaluating nutritional status, testing programs.
    Laboratory: Analysis of plant parts for concentrations.
11. Lecture: Applications of fertilizers; liquid, foliar, dry.
    Laboratory: Record-keeping, measuring, mathematics.

(Continued)
12. Lecture: Soil problems for particular plant species.
   Laboratory: Identification of deficiencies for particular plant species.
13. Lecture: Soil problems peculiar to plant propagation.
   Laboratory: Seeds and asexual propagation.
   Laboratory: Mechanical and chemical incorporation.
15. Lecture: Soil preparation for permanent ornamental trees and shrubs.
   Laboratory: Slow-release applications; basic pre-planting considerations;
   long-term management.

D. Texts, References and Supplementary Aids

   Plants, People, and Environmental Quality.

2. References: Additional texts are available in the laboratory. Library references
   are given periodically.

E. Required Assignments

Three types of assignments and references are given: Required reading, supplementary
reading to augment the text and other required reading, and advanced reading for the
more able students. Required reading is assigned in the text and occasionally in
texts on reserve in the library. Advanced reading is cited in texts available in
the library. All assignments give reference to specific chapters or pages.

F. Basis of Student Evaluation

1. Two written hour examinations.
2. General performance in the laboratory.
3. Laboratory quizzes.
4. Laboratory notes.
5. The final examination.

The main basis of grade placement is derived from the test results. An attempt is
made to test for the student's use of the scientific method, his ability to think
critically and his ability to generalize effectively on the basis of fact.

G. Provisions for Special Needs of Students

Problems of individual students are discussed during office hours and as time allows
during the laboratory periods. The student may be referred to the library or to the
Counseling Office for additional help. When sent to the library, the student is re-
ferred to specific texts or to the librarian. When the student is sent to the
Counseling Office, the instructor makes a follow-up check with that office.

H. Contribution to General Education

1. Student learns to apply the scientific method in his thinking.
2. Student becomes aware of the composition of the soil and what it can do in its
   natural state as well as what it can produce with man made help.
3. Gives the student a greater respect for growing things around him, and man's
   ability to beautify his environment.

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LANDSCAPE HORTICULTURE 3 - Irrigation and Plant Installation (3) S

A. Nature of the Course

1. Description: An introductory course on the materials and methods used in landscape irrigation systems. Selection of materials and an estimate of the quantities required for a typical installation, methods and techniques of installation, and operation and maintenance of systems will be covered.
2. Freshmen or Sophomores
3. Hours per week: Five hours
4. Organization: Two hours lecture, three hours laboratory weekly
5. Prerequisite: Landscape Horticulture major, formally accepted to program.

B. Aims and Objectives

1. To provide the student with an understanding of the materials used in irrigation systems.
2. To gain an understanding of the methods of systems design and hydraulics.
3. To develop an understanding of systems maintenance and repair.
4. To gain an understanding of systems operations.
5. To prepare job entry skills required for landscape construction and maintenance industries.

C. Content and Organization

1. Introduction and history of irrigation systems.
2. Orientation of materials used:
   a. Pipe
   b. Heads
   c. Fittings
   d. Valves
   e. Control Units
3. Methods of small area systems design:
   a. Site analysis
   b. Hydraulics
   c. Systems layout
4. Installation methods
5. Maintenance and repair
6. Systems application and operation:
   a. Water schedules
   b. Amounts of applications

D. Texts, References and Supplementary Aids

D. (continued)

Supplementary: Sarsfield, Lawn and Turf Irrigation Handbook, Berkeley, CA
Rain Bird, Architect-Engineers Turf Sprinkler Manual, Glendora, CA

E. Required Assignments

1. Announced or unannounced quizzes
2. Weekly laboratory exercises and write-ups
3. Finished drawings, designs, sketches, etc.
4. Mid-term examination
5. Final examination
6. Term project

F. Basis of Student Evaluation

The student is evaluated by a point system. At the end of the semester, quizzes, exercises, finished drawings, midterm and final examination, and term project points are added together. This total is divided by the total possible point value and the result multiplied by 100. The results, in a percentile which determines the student's grade, are:

90-100% - A  
80-89% - B  
70-79% - C  
60-69% - D  
50% and below - F

G. Provisions for Special Needs of Students

Problems of individual students are discussed during office hours and as time allows during the laboratory periods.

H. Contribution to General Education

To make the student aware of the general layout of an irrigation system, and to give him a better understanding of what goes into the analysis and design of such a system.
LANDSCAPE HORTICULTURE 4 - LANDSCAPE MAINTENANCE (3) S

A. Nature of the Course

1. Description: This is an introductory course covering the various functions, activities, materials, machinery and tools involved in the field of landscape maintenance.
2. Freshman or Sophomore.
3. Hours per week: Five
4. Organization: Two hours lecture, three hours laboratory weekly
5. Prerequisite: Landscape Horticulture major, formally accepted to the program.

B. Aims and Objectives

1. To provide the student with the knowledge and understanding of the functions, equipment and hardware involved in landscape maintenance.
2. To acquaint the student with the purpose and ideals set forth by industry, commerce, business, institution and residential clients in the decade of the 1970's.
3. To provide the student with a practical knowledge of how and where to find accurate information in the field.
4. To provide the student with a general knowledge of more common plant materials and their healthy upkeep.

C. Content and Organization

1. Introduction to landscape maintenance - its various aspects. The "art of keeping the landscape in a perpetual state of growth and repair." Problems faced by industrial, commercial, institutional and residential employers. Employment opportunities.
2. Analyzing the problems of the individual site; initial inventories; maintenance schedules.
3. Functions of landscape maintenance; mowing, edging, trimming, etc.
4. Fertilization.
5. Examination.
6. Spraying; herbicides, pesticides; laws and regulations.
7. Rodent and pest control
8. Turf; management, seeding and weed control.
9. Review and examination.
10. Plant materials; their characteristics, growth, upkeep and planned replacement.
12. Record keeping; inventories, inspections, reordering and quarterly and yearly reports.
13. Field day; inspection and operation of typical machinery of the industry.
14. Final examination.

D. Texts, References and Supplementary Aids

Supplementary Bibliography:
Grounds Maintenance, periodical
Lawn and Ground Cover Book, Editors, Lane Publishing, Menlo Park, CA 1960
Time-Life Series
Western Fertilizer Handbook, Soil Improvement Comm., Sacramento, CA
Western Garden Book, Editors, Lane Publishing, Menlo Park, CA

E. Required Assignments

Three types of assignments and references are given: required reading, supplementary reading to augment the text and other required reading, and advanced reading for the more able students. Required reading is assigned in the text and occasionally in texts on reserve in the library. Advanced reading is cited in texts available in the library. All assignments give reference to specific chapters or pages.

F. Basis of Student Evaluation

1. Three written examinations are given.
2. General performance in the laboratory.
3. Laboratory quizzes.
4. Laboratory notes.
5. Term Paper: A term paper on some aspect of the field of landscape maintenance will be required. Assignment will be made early in the course and a rough outline should be submitted to the instructor before the ninth week of the course. Final submission of paper will be no later than the end of the sixteenth week of the course.

G. Problems of individual students are discussed during office hours, and as time allows during the laboratory periods. The student may be referred to the library or to the Counseling Office for additional help. When sent to the library, the student is referred to specific texts or to the Librarian. When the student is sent to the Counseling Office, the instructor makes a follow-up check with that office.

H. This will introduce the student to the general field of landscape maintenance and to the steps and methods necessary to keep the landscape in good order and repair. It will provide an awareness of what is necessary to keep one's community and home properly designed and maintained.
SANTA BARBARA CITY COLLEGE
Course of Study Outline

L.H. 5 - Landscape Construction (3) F

A. Nature of the Course

1. Description: A semester course in Landscape Construction. The first ten weeks deals with Carpentry, and the second eight weeks deals with Plumbing and Electricity. The course is required for the Landscape Horticulture certificate.
2. Class: Freshmen and Sophomores
3. Hours per Week: 5
4. Organization: 1 hour lecture; 6 hours lab.
5. Prerequisite: Landscape Horticulture major - formally accepted to the program.

B. Aims and Objectives

1. To provide the student with the knowledge and understanding of the functions, equipment and hardware involved in landscape construction.
2. To acquaint the student with the purpose and ideals set forth by industry, commerce, business, institution and residential clients in the decade of the 1970's.
3. To provide the student with a practical knowledge of how and where to find accurate information in the field.
4. To provide the student with a general knowledge of common practices and materials used in landscape construction.

C. Content and Organization

Ten Week Module (Carpentry):

1. Safety in the use of carpentry tools.
2. Use of common hand tools.
3. Use of carpentry level (reading "back sites and differential elevations").
4. Building of forms.
5. Cutting of common rafters.
6. Use of common fasteners.
7. Use of fiberglass and polyethylene materials.
12. Construction of wells and steps.

Eight Week Module (Plumbing and Electricity):

1. Introduction to plumbing tools, etc.
2. Use and (underground) installation of copper pipes, and pump usage.
3. Theory of electrical circuits.
4. Wiring of off-on switch and 2-3 way switches.
5. Installation of timers.
6. Design of low voltage lighting systems.
7. Construction of ponds.
D. Texts, References and Supplementary Aids

New York (2nd printing)

E. Required Assignments

Research in common industrial practices and in the landscaping business, plus occasional library assignments.

F. Basis of Student Evaluation

1. Three written examinations are given for each module.
2. General performance in the laboratory - projects graded for quality.
3. Laboratory quizzes.
4. Laboratory notebook.
LANDSCAPE HORTICULTURE 6 - Greenhouse Operations & Plant Propagation (3) S

A. Nature of the Course

1. Description: This is a course covering the principles of greenhouse design and construction to include orientation, structural components, shade bays and lath/saran use, heating, cooling, and misting systems, maintenance of equipment, and an introduction to the methods used in plant propagation: seed, cuttings, graftage, layering, and tissue culture.

2. Class: Freshmen or Sophomores

3. Hours per Week: 5

4. Organization: Two hours lecture, three hours laboratory weekly.

5. Prerequisites: L.H. 2 and L.H. 3 (may be taken concurrently).

   Landscape Hort. major, formally accepted to the program.

B. Aims and Objectives

1. To provide the student with the principles involved in greenhouse design and construction.

2. To provide the student with the knowledge necessary to maintain optimum conditions for plant growth.

3. To teach the student current methods of plant propagation.

C. Content and Organization

Greenhouse Operation:

1. Introduction, purposes, location (site), orientation, and circulation patterns (vehicular and pedestrian).

2. Basic construction: materials and methods (wood, plastic, metal, fiberglass); cost and efficiency comparisons.


4. Heating: gas, electric, forced air, solar; cost and efficiency.


6. Irrigation: conventional and low pressure drip systems, injection feeding.

7. Interior: benches, shelves, bins, work stations, insecticide storage, circulation patterns (work flow sequence).

8. Exterior: storage bins (bulk) and compost sequence.


Plant Propagation:

10. Methods: seed, cuttings, graftage, layering, and tissue culture (soil mixtures are covered in L.H. 2 (Soil & Plant Nutrients).

11. Laboratory work: soil mixtures reviewed, starting growth from seed.

12. Vegetative propagation: cuttings, layering, scales (bulbs), cormlets, tubers, tuberous roots, rhizones, tissue culture.

13. Transfer: from starting medium to growing medium, liners or 4" pots, flats, or film trays (ferns).

14. Moving-up, from transfer to growing medium to transfer to industry standards: 6-8" pots, 1 gallon cans, 5 gallon cans, 15 gallon cans.

(continued)
15. Transfer of plant material to industry standards for specimens (18" box or larger.)
16. Industry standards, ethics, record keeping, and Agricultural Commission requirements.

D. Texts, References and Supplementary Aids


Supplementary Bibliography:
Sunset WESTERN GARDEN BOOK
DISEASES and PESTS of ORNAMENTAL PLANTS, Pirone
The RETAIL FLORIST BUSINESS, Pfahl
Time-Life Encyclopedia of Gardening: entire series (SBCG library)

E. Required Assignments

Three types of assignments are given: required reading, supplemental reading; followed by practical application (after demonstration by instructor).

F. Basis of Student Evaluation

1. Three written examinations are given.
2. Ten quizzes are given.
3. Performance in laboratory exercises is graded.
4. Term paper/project: a term paper on an aspect of greenhouse design or construction, or plant propagation not covered in depth, shall be required. The assignment shall be announced in the first week of classes, and a topic shall be chosen no later than the sixth week of instruction. The preliminary outline shall be submitted by the eighth week of instruction, and the project shall be due no later than the last scheduled day of instruction, at which time it shall be graded.

G. Provisions for Special Needs of Students

Problems of individual students shall be dealt with in accordance with Faculty Manual Guidelines.

H. Contribution to General Education

This course shall introduce the student to the design and construction of a greenhouse/lath-house complex, to the principles of management and operation of a propagating facility, and to methods of plant propagation. It shall prepare the student to enter the economically important industry in the area served by the community college district (38 wholesale nurseries, 31 retail nurseries, the Botanic Garden, the Mesa Project of the Community Environmental Council, as well as the community garden projects; and interact with the Park Department and Downtown Organization as a possible source of material not available through local sources. It should also enable the student to advance his/her career if self-employed, and to upgrade the industry by providing trained personnel to fill vacancies in the expanding field of horticulture.
Landscape Horticulture 20 - History of Gardens (1)

A. Nature of the Course

1. Description: This is an introductory survey course covering the history of gardens, the elements of classical garden design, examples of famous gardens, the story of botanic gardens and introduction of plant materials into modern gardens.

2. Freshman or Sophomore

3. Hours per week: one

4. Organization: one hour lecture

5. Prerequisite: none

B. Aims and Objectives

1. To provide the student with an understanding of the relationship of man to those parts of the landscape he has developed during the course of history and of how man today is motivated to express himself in landscape design.

2. To provide the student with an introduction to the aesthetics of classical garden design.

3. To acquaint the student with the history of how plant materials have come to be cultivated in the landscape.

4. To provide the student with an awareness of the long history of the noble art of horticulture and the great tradition which is being continued by today's gardens and gardeners.

C. Content and Organization

1. Introduction; Stone Age to the Nile
   Paradise Lost; Stone Age; Mesopotamia; Egypt

2. Hellenic and Hellenistic Gardens
   Crete; Greece; Rome

3. Chinese Garden Art
   Landscape Painting; Religion and Philosophy; Paradise

4. Garden Art of Japan
   Religion and Philosophy; Early, Middle, Late Periods

5. Islamic Gardens
   Byzantium; Persia and India; Spain

6. Monastic and Castle Gardens
   Medieval Age; Beginning of the Renaissance
7. Pre-Columbian Gardening in America
   Aztec; Incan

8. Hour Examination

9. The Tradition of the Botanic Garden; Botanical Books and Illustrators
   Origins; European; American; Others; Modern

10. The Renaissance
    Classic Italian Villas; Designers; World-wide Examples

11. The French Century
    Vaux-le-Vicomte and Versailles; Le Notre; World-wide Examples

12. The English Landscape
    Classic Examples; Kent, Brown, Repton; *le jardin anglais* abroad

13. Gardening in America
    Beginnings; Classic Examples of Great Gardens; Olmstead, Jackson

14. The Great Plant Hunters
    Tradescant to Kingdoms abroad

15. Modern Gardens
    World-wide Examples; Influential Designers

16. Southern California Gardens
    Spanish Tradition; Missions, Adobes

17. Santa Barbara Gardens and Horticulturalists
    Classic Examples; Franceschi, Orpet, Sexton

D. Texts, References, Supplementary Aids

   Required Text: Berral, THE GARDEN

   Supplementary Bibliography: A bibliography will be compiled and given to
   each student.

E. Required Assignments

   Supplementary Reading will be required. A term paper will be required.

F. Basis of Student Evaluation

   1. One hour examination and one final examination will be given.

   2. Term paper: A term paper on some aspect of garden history, garden
      design, or plant exploration will be required. Assignment will be
      made early in the course, an outline is to be submitted to the
      instructor by the eighth week. Final submission will be no later
      than the fifteenth week of the course.
G. Problems of individual students are discussed during office hours. The student may be referred to the library or to the Counseling Office for additional help. When sent to the library, the student is referred to specific texts or to the Librarian. When the student is sent to the Counseling Office, the instructor makes a follow-up check with that Office.

H. This course will introduce the students to the history of gardens and gardening from prehistory to the present. It will provide them with an awareness of the aesthetic and design elements to be seen in modern gardens. It will introduce them to the importance of botanic gardens and to the influence of plant explorations on the availability of plant materials found in cultivation. In particular, it is hoped that it will give students a greater appreciation of the impressive horticultural heritage which is unique to Southern California and Santa Barbara.
LANDSCAPE HORTICULTURE 61 A,B - Landscape Horticulture Experience (2-4) F,S

A. Nature of the Course

1. Description: Provides for supervised on-the-job experience with opportunity for the practical application of skills and knowledge learned in directly related classes. Employment may be obtained subsequent to enrollment. Class will meet with instructor one hour weekly during the semester. Students must write at least three specific, measurable objectives evidencing experiences beyond those already accomplished during previous employment, achievable during the semester. A student may enroll in each L.H. 61 A and L.H. 61 B class once. One unit of credit is allowed for each seventy-five hours of on-the-job experience completed during the semester in addition to one unit of credit for the weekly class meeting; course has a two unit minimum and four unit maximum credit allowed.

2. Grade Level: Freshman and sophomore.

3. Hours per week: One hour lecture weekly; five to fifteen hours on-the-job training.

4. Organization: Class meets one hour weekly; students, in consultation with job supervisor and instructor, will write individual measurable learning objectives for on-the-job training; lectures will cover (A) background to Landscape Horticulture employment, and (B) individualized related instruction.

5. Prerequisites: Students either employed or available for employment in a field directly related to their major in Landscape Horticulture.

6. Corequisite: Must be enrolled in no less than eight units including Work Experience.

B. Aims and Objectives

1. General - To help students to integrate classroom theory and skills with practical experience on-the-job.

2. Skills and Abilities
   a. To write individual measurable learning objectives.
   b. To know the breadth of the job market.
   c. To prepare resumes.
   d. To understand personal responsibility.
   e. To understand job responsibility.
   f. To apply human relations skills.

3. Attitudes and Appreciations
   a. To develop an attitude favorable to the working environment.
   b. To appreciate and accept the responsibilities necessary for satisfactory job performance.
   c. To develop a respect for authority and rules and regulations.

(continued)
C. Content and Organization

1. Landscape Horticulture 61 A - Background to Landscape Horticulture Employment - Units 2-4
   a. Orientation and Placement
   b. Writing Learning Objectives
   c-d. Discussion of Individual Learning Objectives
   e-f. Job Market Analysis - Santa Barbara County, California and the United States
   g. Self Inventory
   h. Job Success - Adaptability, Initiative, Judgment
   i. Job Success - Cooperation, Appreciation, Gratitude
   j. Job Success - Speech and Appearance
   k-l. Preparing a Letter of Application, a Resume or Data Sheet, and Follow-up Correspondence
   m. Personnel Practices - Affirmative Action
   n. Preparing for an Interview
   o. Progress Reports on Learning Objectives
   p. Review of Employer Evaluations
   q. Final Examination

2. Landscape Horticulture 61 B - Individualized Related Instruction - Units 2-4

This class includes orientation and writing measurable objectives, as above. The students meet each week thereafter for a seminar type classroom discussion of the individual application of skills learned in prior work experience and major classes, discussing experiences and/or problems related to work and receive counseling as necessary. Outside assignments, classroom participation, quizzes and final examination are required in addition to working toward individual learning objectives on-the-job.

D. Texts, References and Supplies
1. The SBCC library will supply special texts and materials relating to the Landscape Horticulture field. Also, special texts and material will be supplied by employer and instructor-coordinator.

E. Required Assignments
1. Completion of Cooperative Work Experience Student Employer Record Card with appropriate signatures each semester.
2. Five to fifteen hours of reliable work per week each semester in the area of Landscape Horticulture.
3. At least three written individual objectives during each semester.
4. Attendance at weekly classes.
5. Submission of report on individual objectives and final report on achievement of these goals.
6. Final examination.

F. Basis of Student Evaluation
1. Students will receive an evaluation from their supervisor based upon their individual learning objectives.
2. Attendance and participation in seminar meetings.
3. Individual written learning objectives.
4. Submission of monthly reports.
5. Completion of outside assignments.
6. Final examination. 

(continued)
G. Provision for Special Needs of Students
1. Each student has personal consultation with instructor each semester.
2. Job Supervisor's assistance as required.
3. Career Education Center provides special testing services for students as required.

H. Contribution to General Education
1. Increased understanding of how the field of Landscape Horticulture contributes to society as a whole.
2. An exposure to the need for acceptance of responsibility adds meaningfulness to study and aids in the understanding of theory.
3. Working with others will develop the team concept which will lead to career development and self-improvement.
A. Nature of the Course.

1. Description: This course will be a study of plant function and a structure basic to the understanding of horticultural techniques, and a study of plant geography, ecology and ecosystem dynamics basic to the understanding of horticultural planning and the role of horticulture in society.

2. Freshman or sophomore.

3. Hours per week: 6

4. Organization: 2 one hour lectures and 2 two hour labs per week.

5. Prerequisite: Landscape design major, formally accepted to the program.

B. Aims and Objectives.

1. To provide the student with knowledge of the structure and growth patterns of plants most commonly used in landscaping.

2. To provide a basic understanding of plant metabolic functions as they relate to plant requirements.

3. To create an understanding of the role of individual plant in community and ecosystem dynamics such as energy flow and nutrient cycling.

4. To present basic plant adaptations to specific climatic and edaphic factors.

5. To develop an appreciation of the complex interdependencies of plants and society.
C. Content and Organization.

One week is devoted to each of the following topics:

1. Gross plant anatomy diversity in the plant body.
2. Plant cell structure and diversity.
4. Leaf, root and stem anatomy.
5. Primary growth.
7. Photosynthesis.
8. Respiration.
11. Seed plant life cycle.
12. Genetics and plant breeding.
15. Community synecology.

D. Texts, References and Supplementing Aids.

   Greulach, "Plant Function and Structure", MacMillan

2. Additional Texts and References available in the laboratory.

3. Library reference assignments as may be required.
E. Required Assignments.
Reading as assigned.
Laboratory and lecture notebooks.

F. Basis of Student Evaluation.
1. Two written midterm exams.
2. Lab quizzes.
3. Lecture and Laboratory notebook.
4. Final Exam.

Problems of individual students are discussed during office hours and as time allows during the laboratory periods. The student may be referred to the library or to the Counseling Office for additional help. When sent to the library, the student is referred to specific texts or to the Librarian. When the student is sent to the Counseling Office, the instructor makes a follow-up check with that office.

H. Contribution to General Education.
Provides the necessary scientific information needed as a foundation for appreciation of the role of horticulture in society.

A. Flinck
1/75
INSTRUCTOR-COORDINATOR/LANDSCAPE HORTICULTURE PROGRAM: The Instructor/Coordinator for Landscape Horticulture has overall responsibility for planning, developing, supervision and evaluation of the Landscape Horticulture Program. Furthermore, this person has individual responsibility as follows:

A. COORDINATES:
   1. All on-campus student laboratory experiences with Maintenance and Operations staff.
   2. All articulation and in-service training, in establishing liaison with business and industry, and community agencies and organizations relative to the Landscape Horticulture Program.
   3. Curriculum revision with representatives of the Landscape Horticulture industry.

B. ASSIGNS ALL SCHEDULES FOR ON-CAMPUS STUDENT WORK EXPERIENCES WITH COORDINATOR OF FINANCIAL AIDS AND INVOLVED LANDSCAPE HORTICULTURE FACULTY.

C. ADVISES AND ASSISTS LANDSCAPE HORTICULTURE STAFF regarding:
   1. Developing program curriculum.
   2. Evaluation of student training.
   3. Follow up and job placement of students.

D. INSTRUCTS ALL LANDSCAPE HORTICULTURE MAINTENANCE ACTIVITIES AND SUPERVISES ON-CAMPUS LABORATORY MAINTENANCE PROJECTS.

ASSISTANT DEAN, OCCUPATIONAL AND CAREER EDUCATION: The Assistant Dean, Occupational and Career Education is responsible to the Administrative Dean of Instruction for planning, developing, coordinating, supervising, and evaluating credit occupational programs in Trade and Technical education and Work Experience and for assisting the Administrative Dean of Instruction in administering Vocational Education, Industrial Arts Education, and other pre-employment programs.

A. ADVISES AND ASSISTS DEPARTMENTS (except Health Occupations) regarding:
   1. Development and statement of occupational curriculum goals.
   2. Development and statement of five-year academic plan as it is related to occupational education.
   3. Development and statement of three-year projection of resource needs as related to occupational education.
   4. Evaluation of occupational curricula.
   5. Development of new occupational curricula and modifications in existing occupational curricula.
   6. Preparation of justification of need for new occupational curricula.
   7. Preparation of occupational course outline.
   11. Recruitment and selection of occupational faculty.
12. Preparation of justification of need for new occupational personnel.
13. In-service training of occupational personnel.
15. Communication and liaison with other educational institutions and with community agencies and organizations concerned with occupational and career education.
16. Research and data gathering related to occupational and career education.
17. Grant and special project development related to occupational and career education.
18. Planning and development of facilities for occupational education.
19. Occupational program offerings for special sessions.
20. Administration of special occupational and career education programs.
21. Development of procedures for selecting and classifying students, enforcing student regulations, placing students in employment, counseling and advising students, and conducting follow-up studies of students in occupational programs.
22. Administration of Work Experience programs.
23. Recruitment of lay leadership for service on occupational advisory committees.
24. Recruitment and selection of staff for occupational programs.

B. DEVELOPS AND PREPARES:
1. Programs within the guidelines of the Vocational Education Act and reports and forms required by the Chancellor of the California Community Colleges.
2. Plans for achieving goals of District for occupational and career education.
3. The District five-year Vocational Education Plan.
4. The District Work Experience Education Plan.
5. Reports on occupational and career education as required.

C. COORDINATES:
1. With Teacher/Coordinator, Articulation and In-Service Training, in establishing liaison with business and industry, and community agencies and organizations relative to occupational and career education.
2. Development and annual revision of the five-year Vocational Education Plan.
4. With Assistant Dean, Health Occupations in reviewing plans and programs as they relate to District Vocational Education Plans and Vocational Education Act claims.
5. With Department Chairperson in Business Education subject areas in reviewing plans and programs as they relate to District Vocational Education plans and Vocational Education Act claims.
JOB DESCRIPTIONS (Continued)

6. With Assistant Dean, Continuing Education (non-credit vocational education), in reviewing plans and programs as they relate to District Vocational Education plans and Vocational Education Act claims.
7. Supervision of Trade and Technical departments and vocational Work Experience programs.
8. Administration of Child Care Center.

D. REVIEWS:
1. Requests for new occupational curricula.
2. Requests for modifications in existing occupational curricula.
3. Occupational course outlines.
4. Budget requests for occupational programs.
5. College Catalog material related to occupational and career education except those of Health Occupations.

Performs such other duties as may be assigned by the Administrative Dean of Instruction.
EXHIBIT D

BUDGET SUMMARY PAGE - 1980-81
(DIRECT EXPENDITURES)

1. One FTE Coordinator/Instructor (11 months).... $ 28,600.00
2. Hourly instruction (excluding support courses)
   (10 hrs./week x 36 weeks x $14.27) .... 5,137.00
3. Teaching Lab. Asst. ....... 12,000.00

                   Salaries: $ 45,737.00

4. Consumable Supplies:
   Gasoline
   Oil (6 cases, 30 wt.) $ 78.00
   Fertilizer (16-6-8) 1,000.00
   Spark plugs (36) 36.00
   Mower Blades (6) 72.00
   Edger blades (100) 125.00
   Plastic Plant Tie 25.00
   Pre emerge herbicide 300.00
   Round up (4 gals.) 280.00

       Total: $1,916.00 $ 1,916.00

5. Reusable Supplies:
   50' 3/4" hoses (4) $200.00
   #8 galvanized wire (200') 40.00
   8' Tree stakes (40) 120.00
   50' 1/2" Nylon rope 20.00

       Total: $380.00 $ 380.00

6. Non-Consumable Supplies:
   Flat shovels (2) $ 24.00
   Diamond point shovels (4) 32.00
   Trench shovel (1) 16.00
   Aluminum scoop shovels (2) 50.00
   Cal flex rakes (10) 70.00
   Long handled loppers (2) 44.00
   Pole trimmer (1) 29.00
   Folding pruning saws (2) 16.00
   Push brooms (3) 36.00
   32 Gal. plastic barrels (20) 160.00
   Hand weeders (26) 78.00
   Hand pruners (26) 310.00
   Holsters (for pruners - 26) 78.00
   Grass shears (2) 16.00
   Flat metal files (5) 10.00
   Phillips screwdrivers (3) 3.00

(continued)
6. Non-Consumable Supplies (continued):

Screwdrivers (regular with square shafts) (3) $ 6.00
Face shields (6) 60.00
Hula hoes (10) 70.00
6' Crescent wrenches (4) 20.00
6' Aluminum step ladders (2) 50.00
14' Aluminum extension ladder (1) 180.00
2 Gal. gas cans (4) 80.00
5 Gal. pressure sprayer (1) 45.00
Hose end proportioner (1) 16.00

Total: $1,489.00

7. Capital Equipment:

21" 5 h.p. Bobcat rotary mowers (2)
3 h.p. Powertrim edgers (2)
Backpack blower (1)
Yard Vac Vacuum (1)
"Green Machine" power trimmer (1)
38" Riding mower (1) e.g. John Deere with bagger
Cyclone fertilizer spreader (1)
Truck - Pick up (1)

Total: $8,000.00

8. Work Study (SBCC contribution) $6,249.00

TOTAL DIRECT COSTS $65,771.00
EXHIBIT D  
BUDGET SUMMARY PAGE - 1980-81 (DIRECT AND INDIRECT EXPENDITURES)

BUDGET TO SERVE SOME 20 CETA AND 10 NON-CETA STUDENTS  
IN LANDSCAPE HORTICULTURE TRAINING 1980-81

<table>
<thead>
<tr>
<th>District</th>
<th>P.I.C./CETA</th>
<th>VEA Subpart 2</th>
<th>Federal Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBCC</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
| 1. FTE Instr./Coordinator  
  40% Coordinator  
  60% Instructor | $17,160 | $11,440 |               |
| 2. Hourly Instructors-Classroom | 5,137 | | |
| 3. Teaching Lab. Assistant | | 12,000 | |
| 4. Stipends (for CETA eligible students) | | 36,780 | |
| 5. Work Study (est. 20 students  
  CETA and Non-CETA) | 6,249 | | 24,999 |
| 6. Rental of Equipment | | 8,000 | |
| 7. Reusable Supplies | | 380 | |
| 8. Non-consumable Supplies | | 1,489 | |
| 9. Consumable Supplies | | 1,916 | |
| 10. Indirect Expenditures (28,546 x 36) | 10,276 | | |

TOTALS: $38,822 $64,005 $8,000 $24,999
SCHEDULE
FALL SEMESTER 1980

8 a.m.  M  Tu  W  Th  F
9 a.m.  Bot. 4  Bot. 4  Bot. 4
10 a.m. LH 3  LH 61  LH 3  LH 61  Bot. 4  Lab.
11 a.m.
12 noon
1 p.m.  LH 5  LH 1  LH 61  LH 61  LH 1
2 p.m.  LH 61
3 p.m.  W.E.
4 p.m.  LH 20
5 p.m.

LH 1 - Plant ID
LH 3 - Irrigation
Bot. 4 - Botany for Hort.
LH 5 - Construction
LH 20 - Hist. of Gardens
LH 61 - Work Exp.

SCHEDULE
SPRING SEMESTER 1981

8 a.m.  M  Tu  W  Th  F
9 a.m.  LH 2  LH 61  LH 2  LH 61  LH 4
10 a.m. LH 2  LH 61  LH 4
11 a.m.
12 noon  LH 6
1 p.m.  LH 6
2 p.m.  LH 61  IT 1  LH 61  IT 1
3 p.m.  LH 6
4 p.m.
5 p.m.

LH 2 - Soils
LH 4 - Maintenance
IT 1 - Drafting
LH 61 - Work Exp.