

# **UTAH CERTIFIED NURSEY PROFESSIONAL UCNP TEST SYLLABUS**

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## **UCNP Program Description:**

*The Retail Garden Center Manual* and *Utah State University Fact Sheets* are intended to be both an instructional resource and a study aid for individuals seeking to become a Utah Certified Nursery Professional (UCNP) and also basic horticulture references for UCNP members. Chapters and Fact Sheets address important topics on basic horticulture, soil and water management, plant problem diagnosis and integrated pest management, landscape design and retail nursery sales. The UCNP program certifies that individuals have minimum levels of experience and education and that they have successfully completed an exam demonstrating their understanding of a wide variety of horticulture knowledge and skills to competently serve in the green industry.

## **Required Text:**

*The Retail Garden Center Manual* - from the University of California Agriculture and Natural Resources, Publication 3492, Edited by Dennis R. Pittenger. The first manual is free and is available from the UNLA.

## **Other Materials:**

### **Utah Sate University Extension Agency Fact Sheets:**

USU Fact Sheets are available from the UNLA. The fact sheets and websites are available by mail, fax, email or on-line at [www.utahgreen.org](http://www.utahgreen.org).

USU Fact Sheets will be listed under the corresponding chapters for reference.

- USU Ext Hg-517
- USU Ext ENT 104-07
- USU Ext AG/Soils/2003-02
- USU Ext AG/Soils/2003-01
- USU HG-2003-01
- USU Ext HG 525
- USU Ext HG-243
- USU Ext ENT 17-08
- USU Ext HG/Orchard/06
- USU Ext ENT 19-07
- USU Ext ENT 102-06
- HG-508 pg. 1
- USU Ext ENT 100-06PR
- USU Ext HG/Orchard/14

## **USU Websites:**

Only needed for Chapter 7:

<http://utahpests.usu.edu/ipm/htm/publications/slideshows> and  
<http://utahpests.usu.edu/plantdiseases/htm/non-pathogenic/herbicide>



# *The Retail Garden Center Manual*

## *Chapter Instructional Resource and Study Aid*

### *Chapter 1 – Introduction to Horticulture*

#### ***Learning Objectives:***

- Learn the principal characteristics of green plants, their structure and common horticulture terminology.
- Understand the general vegetative and reproductive growth processes of plants and the factors that influence them.
- Learn the classic applications of fundamental horticultural knowledge.

#### ***Study:***

- What plants are
- Plant structure
- Classification of plants
- Plant growth
- Vegetative development
- How plants function

### *Chapter 2 – Woody Landscape Plants*

#### ***Learning Objectives:***

- Learn how to select woody landscape plants.
- Learn how to plant wood landscape plants.
- Learn how to make pruning cuts; train young trees; and prune mature broadleaf trees, conifers and other narrowleaf evergreens, hedges, broadleaf shrubs, groundcovers, vines and garden roses.
- Learn correct fertilizing techniques for woody plants.
- Learn how to design and maintain the landscape for fire protection.

#### ***Study:***

- Selection of landscape plants
- Selecting plants in the nursery
- Planting
- Pruning
- Fertilizing woody plants
- Designing and maintaining the landscape for fire protection

### *Chapter 3 – Lawns*

Also, refer to USU Fact sheets: **USU Ext Hg-517** and **USU Ext ENT 104-07**



### ***Learning Objectives:***

- Understand the basic functions of turfgrass in landscapes.
- Understand the procedures involved in lawn establishment and maintenance practice for commonly used lawn grasses in Utah.
- Learn the basic steps in renovating and old lawn.
- Become acquainted with the names and important characteristics of the cool-season and warm-season turfgrasses for Utah lawns.
- Learn the basic concepts of seed, stolons and sod.
- Learn the basic concepts of routine turfgrass maintenance and management (mowing, fertilization, irrigation, weed control and pest control, i.e. Japanese Beetle/White Grub.
- Become aware of the less frequent need for dethatching, aeration and disease and insect control.

### ***Study:***

- Establishing a lawn
- Renovating old lawns
- Turfgrasses for Utah
- Purchasing seed, stolons and sod
- Lawn maintenance

## **Chapter 4 – House Plants**

### ***Learning Objectives:***

- Understanding the basic principles for growing house plants.
- Learn which varieties and cultivars of house plants are best suited to different interiorscape climates (temperature and sunlight exposure).
- Become acquainted with some of the major pests of house plants and learn basic information about how to control them.

### ***Study:***

- Selecting an interior foliage plant
- Environmental factors affecting plant care
- Growing media
- Containers
- Repotting
- Training and grooming
- Care of potted holiday plants
- Common house plant problems

## **Chapter 5 – Soil and Fertilizer Management**

Also, refer to USU Fact Sheets:

USU Ext AG/Soils/2003-02 pg. 1 and USU Ext AG/Soils/2003-01 pg. 2



### ***Learning Objectives:***

- Learn the four components of soil. Understand the basic principles of soil formation, soil function and soil profiles.
- Learn about the physical properties of soil and their effects on plant growth. Know the difference between soil texture and soil structure. Understand the basic properties of soil minerals, organic matter, cat-ion (positive) exchange and carbon-to-nitrogen ratio.
- Develop an understanding of the basic concepts of soil water and its availability to plants in different soil types.
- Learn the basic concepts of soil fertility and pH. Learn the 17 essential elements needed by plants and their sources. Learn about essential nutrient function, deficiency and toxicity symptoms.
- Be able to define what a fertilizer is. Learn about fertilizer analysis, sources, formulations and application methods. Understand the differences and similarities between organic and inorganic fertilizers and amendments.
- Learn the basics of composting and rapid backyard composting.
- Learn when and how to amend landscape soils, how to prevent compaction and structure breakdown, how to rejuvenate good structure and how to manage lead contamination.

### ***Study:***

- Soil formation
- Physical and chemical properties of soil
- Soil water
- Soil fertility and plant nutrition
- Fertilization of garden soils
- Management of soil's physical properties
- Amending landscape soils: When and how
- Organic gardening

### **Chapter 6 – Water Management**

Also, refer to USU Fact Sheets: **USU Ext HG 2003-01 pg. 2** and **USU ext HG 525 pg. 1**

### ***Learning Objectives:***

- Develop an understanding of basic concepts of water management and plant water availability in different soil types.
- Become familiar with the basic concept of evapotranspiration (ET).
- Understand basic principles of irrigation and water management.
- Learn how to conserve water in home orchards and landscapes.
- Learn how to manage drought in landscapes and gardens.

### ***Study:***

- The water cycle
- Plant water use
- Drought resistance and the use of native plants
- Water infiltration and movement in soil
- Estimating drainage and depth of water penetration
- Best management practices for irrigation
- Specific water management strategies
- Keeping landscapes alive under severe water restrictions

### **Chapter 7 – Diagnosing Plant Problems**

Also, refer to USU Fact Sheets and websites:  
**USU Ext HG-243** and **USU Ext ENT 104-07**

<http://utahpests.usu.edu/ipm/htm/publications/slideshows> and  
<http://utahpests.usu.edu/plantdiseases/htm/non-pathogenic/herbicide>



***Learning Objectives:***

- Learn how to approach a plant problem and how to deal with clientele.
- Understand how to gather information and formulate a diagnosis.

***Study:***

- Knowledge needed to diagnose plant problems
- Diagnosing plant problems
- Working with clients and assisting gardeners
- Prescribing solutions and recommendations
- Sample collection and laboratory testing
- Diagnosing problems in various types of plants

**Chapter 8 – Integrated Pest Management for Retail Nursery Professionals**

Also, refer to USU Fact Sheet:

**USU Ext publication HG/Orchard/06, USU Ext ENT 104-07, USU Ext ENT 19-07,  
USU Ext ENT 102-06, HG-508, USU Ext ENT 100-06PR,  
USU Ext HG/Orchard/14 and USU Ext ENT 17-08**

***Learning Objectives:***

- Understand the concept of integrated pest management and how to apply it against various types of pests.
- Recognize the benefits of letting customers know about pest-resistant plant varieties and pest-free plants.
- Understand how natural enemies such as predators and parasites reduce insect and mite problems through biological control.
- Recognize how changes in pruning, fertilization and irrigation practices can reduce pest problems.
- Know how the following products can be used to manage pests through physical and mechanical control: cultivation tools, traps and barriers; mulches; hose nozzles; adjustable lawn mower blades.
- Know how to read and understand a pesticide label.
- Know what an active ingredient is and how to find it on the label and distinguish it from a trade name.
- Recognize the common pest groups in gardens – arthropods, plant pathogens, weeds, nematodes, vertebrates – and know general types of management practices that are effective against each group.
- Find out about other resources that should be in a nursery library to provide detailed information on identifying and managing specific pests.

***Study:***

- What is integrated pest management
- Pest management methods
- Types of pest

**Chapter 9 – Landscape and Garden Design**

Also, refer to USU Fact Sheet: **USU Ext HG-243**

***Learning Objectives:***

- Understand basic principles of landscape design.
- Understand several practical consideration of landscape design.
- Develop the knowledge to visualize plants (tree, shrubs, turf and ground covers) as key elements in a comprehensive landscape design plan.



- Understand xeriscape concepts.
- Understand how to design a simple landscape plan step by step.

***Study:***

- Factors influencing landscape design
- Landscape use areas and design considerations
- Elements and principles of landscape design
- Irrigation design
- Landscape design, xeriscape and irrigation
- Drawing a landscape plan
- Selection of plant materials in landscape design

**Chapter 10 – Salesmanship and Customer Service**

***Learning Objectives:***

- Know some of the attributes of a good salesperson.
- Learn the ways in which a retail nursery salesperson can expand his or her knowledge in order to best serve customers.
- Recognize the ways in which fertilizers and pesticides are sold, and how providing specific information about these products is important to good customer service.
- Know some ways to successfully interest customers in purchasing bedding plants, fruit trees and other plant materials.
- Understand the importance and benefits of tie-in sales to both the retail garden center and the customer.
- Learn how to clarify customers' needs and wants with the goal of "closing the sale".
- Recognize the techniques that build customer loyalty.
- Understand the importance of a first impression, whether in person or on the phone.
- Know some of the various methods and techniques of displaying and merchandising goods and entice potential customers.

***Study:***

- Salesmanship basics for nursery professionals
- Selling plants
- Selling fertilizers and pesticides
- Selling bedding plants
- Selling fruit trees
- Tie-in-sales
- Display and merchandising

