Florida CTE

Agriculture, Food, and Natural Resources: Horticulture Science 3 (2015-2016)

Apply safety procedures in the workplace – the student will be able to: 12.0	1 **Describe emergency procedures in the horticulture workplace.** 12.1
	2 **Create preventive measures to avoid hazardous situations.** 12.2
	3 **Identify appropriate PPE (Personal Protective Equipment) for all activities.** 12.3
	4 **Use MSDS for all materials used.** 12.4
	5 **Identify specific hazards with industry specific equipment, and conduct equipment care and maintenance.** 12.5
	6 **Apply problem solving skills to correct a hazardous situation.** 12.6
Classify plants based on scientific principles – the student will be able to: 13.0	1 **Describe principles of plant biology and growth.** 13.1
	2 **Explain the role of plants in the ecosystem.** 13.2
	3 **Describe the major classifications of plants based on life cycle.** 13.3
	4 **Demonstrate the use of botanical and common names of plants including genus and specific epithet and cultivar.** 13.4
	5 **Demonstrate proper use of botanical names.** 13.5
Demonstrate proper use of growing media and fertilizers – the student will be able to: 14.0	1 **Apply information on a label of fertilizer, including updated BMP rules, used in Florida.** 14.1
	2 **Apply fertilizer and soil amendments.** 14.2
	3 **Identify materials that are needed to alter pH and calculate the amount to apply to change the pH.** 14.3
	4 **Demonstrate the procedure for calibrating a fertilizer spreader or injector using appropriate mathematical concepts.** 14.4

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	5 Identify essential elements and nutrients in plant growth including macronutrients and micronutrients. 14.5
	6 Using references make fertilizer recommendations for ornamental plants, turf grass, and palms. 14.6
Demonstrate Integrated Pest Management approaches – the student will be able to: 15.0	1 Classify insects according to feeding habits. 15.1
	2 Describe IMP (Integrated Pest Management) methods of controlling plant pests. 15.2
	3 Diagnose and outline a plan for controlling pests on a horticultural crop. 15.3
	4 Describe methods of controlling nematode pests on ornamental plants, and use BMPs to prevent infestation.. 15.4
	5 Develop a pest control program for a horticultural crop using Integrated Pest Management. 15.5
	6 Identify specific cultural, mechanical, chemical, and biological methods of weed management. 15.6
	7 Identify evasive and poisonous plants in Florida. 15.7
	8 Identify types of weeds common to Florida. 15.8
Identify the principles and requirements of plant growth – the student will be able to: 16.0	1 Demonstrate methods of pruning plants. 16.1
	2 Identify appropriate time to prune plants. 16.2
	3 Identify and select pruning tools. 16.3
	4 Demonstrate proper use of pruning tools and care. 16.4
	5 Demonstrate sanitation of tools to prevent the spread of disease. 16.5
	6 Identify Plant Growth Regulators and their use on horticulture and landscape plants. 16.6
	7 Outline and use a record book for the use of a plant growth regulator on a horticultural or nursery crop. 16.7
	8 Identify appropriate pruning techniques to achieve plant size, form, and shape. 16.8
Apply best management pr de be	1 Identify and apply Best Management Practices for the design and installation of andscapes. 17.1

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	2 Identify and apply Best Management Practices on the management and handling of pesticides. 17.2
Demonstrate customer service skills that are essential in dealing with clients.- the student will be able to: 18.0	1 Demonstrate ability to communicate clearly with the client. 18.1
	2 Conduct a walk through and interview with client to assure clear vision. 18.2
	3 Identify future expectations of the client relationship. 18.3
Apply principles of landscape design and maintenance – the student will be able to: 19.0	1 Demonstrate the use of line, form, texture and color in designing landscapes. 19.1
	2 Demonstrate the principles of design (unity, repetition, balance, emphasis and scale) as they apply to landscapes. 19.2
	3 Apply points of emphasis and major design areas in the commercial landscape. 19.3
	4 Identify plant selection for a commercial and residential landscape using Florida Friendly Landscape Principles. 19.4
	5 Create a landscape plan for a residential or commercial property. 19.5
	6 Calculate materials needed according to the identified landscape plan. 19.6
	7 Identify factors in selecting turf for landscape installation. 19.7
Harvest, transport, and install plant materials – the student will be able to: 20.0	1 Determine requirements for preserving plant viability. 20.1
	2 Demonstrate proper landscape plant establishment techniques. 20.2
	3 Select and prepare plants for transporting and transplanting. 20.3
	4 Select horticultural products according to Florida grades and standards. 20.4
Identify procedures to operate, repair, and maintain tools and equipment – the student will be able to: 21.0	1 Perform equipment pre-operational check. 21.1
	2 Identify, maintain, and operate hand tools and power tools. 21.2
Identify emerging technologies in the horticulture industry – the student will be able to: 22.0	1 Investigate DNA and genetic applications in horticulture including the theory of probability. 22.1
	2 Evaluate advances in biotechnology that impact horticulture. (e.g. transgenic crops, biological controls, micro propagation etc.). 22.2
	nvestigate ways that GIS, Remote sensing, and precision agriculture, and UAV Unmanned Altererian Vehicles) are used in the Horticulture industry. 22.3

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Demonstrate leadership, employability, communications and human relations skills – the student will be able to: 23.0	**1** Identify appropriate work habits and personal characteristics. 23.1
	2 Identify proper employee hygiene habits. 23.2
	3 Identify or demonstrate appropriate responses to criticism from employer, 23.3
	4 Describe the importance of employee industry certifications. 23.4
	5 Discuss education opportunities available in the area of Horticulture. 23.5
Describe personal traits, attitudes, customer approaches, and activities that help successful selling. – the student will be able to: 24.0	**1** Demonstrate proper customer communication techniques. 24.1
	2 Determine your products pricing structure. 24.2
	3 Discuss components of customer satisfaction. 24.3