

2012 - 2013

**Florida Department of Education
Curriculum Framework**

Program Title: Pest Control Technology
Career Cluster: Agriculture, Food and Natural Resources

	AS	AAS
CIP Number	1101110500	0101110500
Program Type	College Credit	College Credit
Standard Length	62 credit hours	62 credit hours
CTSO	N/A	N/A
SOC Codes (all applicable)	37-3012	37-3012
Targeted Occupation List	http://www.labormarketinfo.com/wec/TargetOccupationList.htm	
Perkins Technical Skill Attainment Inventory	http://www.fldoe.org/workforce/perkins/perkins_resources.asp	
Statewide Articulation	http://www.fldoe.org/workforce/dwdframe/artic_frame.asp	

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Agriculture, Food and Natural Resources career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the pest control sector within the Agriculture, Food and Natural Resources career cluster.

The content includes but is not limited to instruction that prepares individuals to supervise and manage the sales and application of agricultural chemicals and pesticides. Subject matter includes business management sales, equipment use management, safety, pest identification, recordkeeping, leadership, employability skills, communications and human and public relations.

Program Structure

This program is a planned sequence of instruction consisting of 62 hours.

Laboratory Activities

Laboratory activities are an integral part of this program. These activities include instruction in the use of safety procedures, tools, equipment, materials, and processes related to these

occupations. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

Planned and supervised occupational activities may be provided through directed laboratory experience, practicum or cooperative experience. Whenever the cooperative method is offered, the following is required for each student: a training plan, signed by the student, teacher and employer which includes instructional objectives and a list of on-the-job and in-school learning experiences; a work station which reflects equipment, skills and tasks which are relevant to the occupation which the student has chosen as a career goal. The student must receive compensation for work performed.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's IEP or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their postsecondary service provider. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Articulation

To be transferable statewide between institutions, this program must have been reviewed, and a "transfer value" assigned the curriculum content by the appropriate Statewide Course Numbering System discipline committee. This does not preclude institutions from developing specific articulation agreements with each other.

The following ATD program articulates credit into this degree program. This statewide articulation agreement has been approved by the Articulation Coordinating Committee.

Pest Control Operations- 0101110502

Curriculum for this program is listed separately.

For details on articulation agreements which correlate to programs and industry certifications refer to http://www.fldoe.org/workforce/dwdframe/artic_frame.asp.

Program Length

The AS degree requires the inclusion of a minimum of 15 credits of general education coursework according to SACS, and it must be transferable according to Rule 6A-14.030 (2), F.A.C. The AAS degree requires the inclusion of a minimum of 15 credits of general education coursework according to SACS. The standard length of this program is 62 credit hours according to Rule 6A-14.030, F.A.C.

Standards

After successfully completing this program, the student will be able to perform the following:

- 01.0 Manage and supervise the application of pesticides and agricultural chemicals.
- 02.0 Supervise and train personnel in the safe and efficient use of pesticides and agricultural chemicals.
- 03.0 List and interpret laws and regulations relative to the safe application of pest control materials.
- 04.0 Manage the maintenance of equipment used to apply pest control materials.
- 05.0 Qualify for appropriate certification to apply pest control materials.
- 06.0 Keep accurate records required by law and for business management purposes.
- 07.0 Classify and identify pests and the appropriate chemicals used to control them.
- 08.0 Apply business practices.
- 09.0 Market and merchandise goods and services.
- 10.0 Demonstrate leadership, communication, employability, and human and public relations skills.

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**Florida Department of Education
Student Performance Standards**

Program Title: Pest Control Technology
CIP Numbers: 1101110500 A.S.
 0101110500 A.A.S.
Program Length: 62 credit hours
SOC Code(s): 37-3012

The AS degree requires the inclusion of a minimum of 15 credits of general education coursework according to SACS, and it must be transferable according to Rule 6A-14.030 (2), F.A.C. The AAS degree requires the inclusion of a minimum of 15 credits of general education coursework according to SACS. At the completion of this program, the student will be able to:

01.0 Manage and supervise the application of pesticides and agricultural chemicals--The student will be able to:

- 01.01 Recognize pesticide and chemical poisoning symptoms.
- 01.02 Read and interpret packaging labels and guidelines for safety.
- 01.03 Read and interpret packaging labels for application rates and instructions.
- 01.04 Recommend kinds of pesticides and agricultural chemicals to be used in specific situations.
- 01.05 Use protective clothing and equipment when handling agricultural chemicals.
- 01.06 Recognize symptoms of pesticide, chemical and residue damage.
- 01.07 Calculate coverage of chemical.
- 01.08 Assess compatibility of selected chemicals.
- 01.09 Determine rate and volume of chemical to be applied.
- 01.10 Select time of chemical application.
- 01.11 Select and match nozzles for equipment type, chemical used and pattern of application.
- 01.12 Safely store chemicals.
- 01.13 Mix chemicals and carrying agents.
- 01.14 Apply granular or dry chemical materials.
- 01.15 Apply liquid materials.
- 01.16 Adjust ground speed of chemical application equipment.
- 01.17 Dispose of used chemical containers.
- 01.18 Recognize & respond to pesticide spills.
- 01.19 Read and interpret MSDS information.

02.0 Supervise and train personnel in the safe and efficient use of pesticides and agricultural chemicals--The student will be able to:

- 02.01 Develop a labor supply plan.
- 02.02 Hire and dismiss employees.
- 02.03 Establish and record pay scale and benefits for workers.
- 02.04 Instruct employees in the safe and efficient use of chemicals and equipment.
- 02.05 Observe and evaluate employees.
- 02.06 Maintain safety standards in the application of agricultural chemicals.
- 02.07 Observe rights and needs of employees.
- 02.08 Post appropriate health and safety announcements.

- 02.09 Give and take verbal and written instructions.
- 02.10 Maintain a safe working environment.

- 03.0 List and interpret laws and regulations relative to the safe application of pest control materials--The student will be able to:
 - 03.01 Observe local, state and federal pesticide and agricultural chemical regulations.
 - 03.02 Observe EPA regulations.
 - 03.03 List agencies responsible for the regulation of the pest control and chemical application industry.
 - 03.04 Attend workshops and seminars to upgrade skills and knowledge.
 - 03.05 Maintain a file for technical information, periodicals and other information.
 - 03.06 Determine sources of up-to-date information and services.
 - 03.07 List societies, organizations and associations relative to the occupation or profession.

- 04.0 Manage the maintenance of equipment used to apply pest control materials--The student will be able to:
 - 04.01 Inspect safety equipment for cleanliness, effectiveness and proper fit.
 - 04.02 Inspect equipment for leaks, clogs, and other malfunctions, and determine appropriateness of equipment for a specific job.
 - 04.03 Adjust pressure and spray patterns.
 - 04.04 Adjust equipment height and width.
 - 04.05 Adjust mixing apparatus.
 - 04.06 Repair or replace hoses, nozzles and cut-off valves.
 - 04.07 Prepare equipment for storage.
 - 04.08 Order replacement parts and supplies.
 - 04.09 Supervise and/or perform maintenance and repairs.
 - 04.10 Lubricate equipment.
 - 04.11 Follow operators manual.
 - 04.12 Repair and/or maintain dusters.
 - 04.13 Repair and/or maintain fumigators.
 - 04.14 Supervise and/or maintain vehicle maintenance records.
 - 04.15 Maintain and use shop equipment and tools.
 - 04.16 Clean and flush chemical application equipment.
 - 04.17 Describe compatibility of equipment with chemicals used.

- 05.0 Qualify for appropriate certification to apply pest control materials--The student will be able to:
 - 05.01 Interpret certification and licensing requirements.
 - 05.02 Identify qualification needed for various certificates or licensure.
 - 05.03 Apply for license or certificate.
 - 05.04 Maintain license or certificate.

- 06.0 Keep accurate records required by law and for business management purposes--The student will be able to:
 - 06.01 Maintain personnel records.
 - 06.02 Maintain health and accident records.

- 06.03 Maintain equipment maintenance records.
 - 06.04 Keep and maintain complete pesticide application records.
 - 06.05 Keep records of employee training and licensure.
 - 06.06 File required local, state and federal reports.
 - 06.07 Maintain inventory control of pesticides and chemicals.
- 07.0 Classify and identify pests and appropriate chemicals used to control them--The student will be able to:
- 07.01 Identify fungi and bacteria and their symptoms.
 - 07.02 Recognize symptoms of insects and nematodes.
 - 07.03 Classify feeding habits and life cycles of insects.
 - 07.04 Describe life cycles of bacteria and fungi.
 - 07.05 Consider the pest, host being attacked and chemical when recommending chemical control measures.
 - 07.06 Assess environmental impact when recommending chemical control measures.
 - 07.07 Identify insect, weed and other pests.
 - 07.08 Assess economic and aesthetic thresholds to determine if pesticide applications are warranted.
- 08.0 Apply business practices--The student will be able to:
- 08.01 Maintain ledger of accounts.
 - 08.02 Determine cost efficiency of operation.
 - 08.03 Prepare a tax return.
 - 08.04 Prepare a budget.
 - 08.05 Determine credit, cash flow and investment returns.
 - 08.06 Review sources and kinds of insurance required.
 - 08.07 Review bonding needs and procedures.
 - 08.08 List major sources of business credit and loans.
- 09.0 Market and merchandise goods and services--The student will be able to:
- 09.01 Display goods.
 - 09.02 Manage sales.
 - 09.03 Open and close office daily.
 - 09.04 Update price list for goods and services.
 - 09.05 Prepare advertising.
 - 09.06 Handle customer complaints and questions.
 - 09.07 Take order for goods and services by telephone.
 - 09.08 Inspect and follow-up quality of services performed for customer.
 - 09.09 Advise customer in the selection of goods or services.
- 10.0 Demonstrate leadership, communication, employability, human and public relations skills--The student will be able to:
- 10.01 Conduct a job search.
 - 10.02 Secure information about a job.
 - 10.03 Identify documents that may be required when applying for a job.
 - 10.04 Complete a job application form correctly.
 - 10.05 Demonstrate competence in job interview techniques.

- 10.06 Identify or demonstrate appropriate responses to criticism from employer, supervisor, or other persons.
- 10.07 Identify acceptable work habits.
- 10.08 Demonstrate knowledge of how to make job changes appropriately.
- 10.09 Demonstrate acceptable employee health habits.