

**Florida Department of Education
Curriculum Framework**

Program Title: Aquaculture
Program Type: Career Preparatory
Career Cluster: Agriculture, Food and Natural Resources

Secondary – Career Preparatory	
Program Number	8004100
CIP Number	0101030303
Grade Level	9-12
Program Length	4 credits
Teacher Certification	Refer to the Program Structure section.
CTSO	FFA
SOC Codes (all applicable)	45-2093 -- Farmworkers, Farm, Ranch, and Aquacultural Animals 11-9013 – Aquaculture Managers
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

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 (AFNR) 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 Agriculture, Food and Natural Resources career cluster.

The content includes but is not limited to instruction in the planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety and environmental issues in the aquaculture industry.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of four credits. Planned and Supervised Agricultural Experiences (SAE) must be provided through one or more of the following: (1) foundational career exploration, (2) directed laboratory experience, (3) project ownership/entrepreneurship, (4) cooperative education/internship, (5) School Based Enterprise, or (6) Service Learning.

To teach the course(s) listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the secondary program structure:

Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
8106810	Agriscience Foundations 1	AGRICULTUR 1 @2 AGRICULTUR 7G	1 credit		3	EQ
8112010	Aquaculture 2		1 credit	45-2093	3	EQ
8112020	Aquaculture 3		1 credit	45-2093	3	EQ
8112030	Aquaculture 4		1 credit	11-9013	3	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

National Standards (NS): Council for Agricultural Education

Programs identified as having Industry or National Standards have been crosswalked with the corresponding standards and/or benchmarks. Industry or National Standards for the Council for Agricultural Education for the Aquaculture program can be found using the following link <https://ffa.app.box.com/v/Library/folder/52815452676>.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

05.04	Analyze information.
05.05	Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
06.01	Use technology.
07.0	Interpret and express interpersonal communication.
07.01	Communicate verbally.
07.02	Listen actively.
07.03	Comprehend written material.
07.04	Convey information in writing.
07.05	Communicate nonverbally.
07.06	Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
08.01	Collaborate with others in a team.
08.02	Respond to customer needs.
08.03	Exercise leadership.
08.04	Negotiate to resolve conflict.
08.05	Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
09.01	Demonstrate responsibility and self-discipline.
09.02	Adapt and show flexibility.
09.03	Work independently.
09.04	Demonstrate a willingness to learn.
09.05	Demonstrate integrity.
09.06	Demonstrate professionalism.
09.07	Take initiative.
09.08	Display positive attitude.
09.09	Take responsibility for professional growth.

Career Exploration & Planning	
10.0	Explain career opportunities aligned with the regional economy and personal aspirations.
10.01	Describe regional occupations that are high-demand, high-growth, high-wage and/or high-skill.
10.02	Describe careers aligned with his or her interests, skills and values based on career assessment, experiential learning, career informational interviews, research and/or reflection.
11.0	Explain postsecondary pathways aligned with his or her career aspirations.
11.01	Compare and contrast postsecondary pathways, including education, employment, entrepreneurship and enlistment (the “Four Es”).
11.02	Compare and contrast regional postsecondary training provider options, including apprenticeships, technical colleges, state colleges, universities and industry-recognized certification providers.
11.03	Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees.
11.04	Compare postsecondary training data for training programs of interest, such as total costs, average student loan debt, and median earnings and job placement rates after program completion.
12.0	Develop a personalized career and academic plan.
12.01	Prioritize an occupation, credential and postsecondary training provider for plan formation.
12.02	Self-assess progress toward meeting graduation requirements and skill-development goals.
12.03	Develop and complete a chronological checklist of steps and deadlines prior to postsecondary training or national service application that includes any required documentation to gather, writing prompts and examinations.
12.04	Identify a variety of financial aid opportunities, including scholarships, grants, savings, work, work-study programs, private loans and federal loans.
12.05	Develop a postsecondary training budget that is inclusive of living and school expenses.
Job Attainment	
13.0	Find, assess and apply to job opportunities.
13.01	Identify online job posts relevant to his or her career aspirations.
13.02	Compare and contrast the job posts’ required qualifications, job duties, compensation, benefits and employers.
13.03	Define what information, documentation and writing prompts are required for the positions.
14.0	Communicate personal competence, character and fit for a job opportunity.
14.01	Develop a resume.
14.02	Write a cover letter.
14.03	Curate a professional portfolio that includes work products.
14.04	Prepare for and experience a mock job interview.

15.0	Cultivate and leverage relationships to professionally advance.
15.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
15.02	Develop a plan to cultivate a professional digital footprint.
15.03	Develop a networking plan for a specific industry of interest.

Standards

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

Agriscience Foundations 1

- 01.0 Examine the history of AFNR production at the local, national, and global level.
- 02.0 Employ scientific reasoning to make informed decisions in AFNR systems.
- 03.0 Apply scientific skills and principles in natural resources.
- 04.0 Apply scientific skills and principles in plant science.
- 05.0 Apply scientific skills and principles in animal science.
- 06.0 Apply scientific skills and principles in food science.
- 07.0 Apply scientific skills and principles in power, structure, and technical systems.
- 08.0 Explore AFNR professional development organizations.

Aquaculture 2

- 09.0 Safely operate, maintain and repair machinery, equipment and facilities used in aquaculture.
- 10.0 Describe the nature and origin of and career opportunities in aquaculture.
- 11.0 Demonstrate the management and environmentally sound use of water resources.
- 12.0 Apply biological principles to the reproduction, identification and growth of aquaculture species.
- 13.0 Assist in the propagation and culture of an aquaculture organism.
- 14.0 Identify applicable local, state, and federal rules and regulations and assistance programs.
- 15.0 Students evaluate the importance of the food and fiber system to understand the impact on global economy.

Aquaculture 3

- 16.0 Exhibit the management and environmentally sound use of water and land resources.
- 17.0 Complete the propagation and culture of an aquaculture organism.
- 18.0 Research local aquaculture markets and marketing techniques.
- 19.0 Incorporate business management skills in managing an aquaculture operation.
- 20.0 Demonstrate leadership, employability, communication, networking, and human relations skills.
- 21.0 Produce an aquaculture species in one or more of the following: pond, cage, tank, raceway, net pen.
- 22.0 Control disease, pest and water quality problems.
- 23.0 Assist in harvesting and processing aquaculture species.

Aquaculture 4

- 24.0 Identify biological components of reptiles, amphibians, and fish.
- 25.0 Discuss production practices of reptiles, amphibians, and fish.
- 26.0 Investigate scientific skills and principles in aquatic plant science.
- 27.0 Describe techniques for producing marine ornamentals, clams, oysters, and shrimp.
- 28.0 Manage aquatic animal health.
- 29.0 Determine nutritional needs of aquaculture organisms.

- 30.0 Manage aquaculture systems.
- 31.0 Perform economic practices involved with aquaculture enterprises.
- 32.0 Participate in classroom extension activities.

**Florida Department of Education
Student Performance Standards**

Course Title: Agriscience Foundations 1
Course Number: 8106810
Course Credit: 1

Course Description:

This course is designed to develop competencies in the areas of agricultural history and the global impact of agriculture; career opportunities; scientific and research concepts; biological and physical science principles; environmental principles; agriscience safety; principles of leadership; and agribusiness, employability, and human relations skills in agriscience. Laboratory-based activities are an integral part of this course. These include the safe use and application of appropriate technology, scientific testing and observation equipment.

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error, and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. A minimum of 20% of classroom time will be dedicated to laboratory experiences.

Agriscience Foundations 1 (8106810) is part of several programs across the Agriculture, Food & Natural Resources career cluster. To ensure consistency, the standards and benchmarks for this course (01.0 – 8.0) have been placed in a separate document. To access this document, visit: <https://www.fldoe.org/file/20894/Agsci-Fnds1-Core-2627.rtf>

**Florida Department of Education
Student Performance Standards**

Course Title: Aquaculture 2
Course Number: 8112010
Course Credit: 1

Course Description:

This course is designed to develop competencies in the areas of nature and origin, career opportunities, biological principles, safety, water quality, seed production, market outlets, rules and regulations, technological advances, problem solving and leadership employability communication and human relations skills.

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error, and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. A minimum of 20% of classroom time will be dedicated to laboratory experiences.

CTE Standards and Benchmarks	
09.0	Safely operate and maintain machinery, equipment, and facilities used in aquaculture. The student will be able to:
09.01	Recognize and observe safety practices necessary in carrying out aquaculture activities.
09.02	Inspect, maintain and perform basic repairs on aquaculture machinery, equipment and facilities.
09.03	Safely operate aquaculture machinery and equipment.
09.04	Discuss the safety and maintenance of a re-circulating aquaculture system (RAS) including biological, chemical, and mechanical filtration, degassing, sterilization, and foam fractionation.
10.0	Describe the nature and origin of and career opportunities in aquaculture. The student will be able to:
10.01	List the definition of aquaculture as defined by the Florida Division of Aquaculture.
10.02	Compare and contrast aquaculture and fisheries.
10.03	List and describe major global aquatic species.
10.04	Explain the history of aquaculture.
10.05	List, describe, and research aquaculture related occupations.

CTE Standards and Benchmarks	
10.06	Determine the educational requirements and experience needed to enter and advance in aquaculture occupations.
11.0	Demonstrate the management and environmentally sound use of water resources. The student will be able to:
11.01	Identify and describe the physical and chemical characteristics of water for use in aquaculture.
11.02	Explain how changes in water affect aquatic life.
11.03	Be able to measure the total ammonia nitrogen (TAN), unionized ammonia, nitrite, nitrate in a water system.
11.04	Be able to measure the water temperature dissolved oxygen, pH, salinity, hardness, alkalinity, turbidity, chlorine/chloramine and carbon dioxide in a water system.
11.05	Explain how the nitrogen cycle is related to maintaining healthy fish.
12.0	Apply biological principles to the reproduction, identification and growth of aquaculture species. The student will be able to:
12.01	Define morphology, anatomy, and physiology.
12.02	Identify and describe the anatomy and physiology of crustaceans.
12.03	Identify and describe the anatomy and physiology of mollusks.
12.04	Identify and describe the anatomy and physiology of fish.
12.05	Identify and describe the basic morphology of aquatic macroalgae and microalgae.
12.06	List and describe important characteristics in choosing a production species.
12.07	Identify and describe common aquaculture organism by scientific classification.
12.08	List and describe the chemical and physical factors which influence the growth of aquatic fauna and flora.
12.09	Identify aquaculture species of commercial importance in Florida (mollusks, alligators, fish, plants).
13.0	Assist in the propagation and culture of an aquaculture organism. The student will be able to:
13.01	Identify/describe facilities used in a grow-out operation.
13.02	List sources of aquaculture organisms and how they are produced.
13.03	Determine the purpose and functions of a hatchery.
13.04	Describe and contrast the reproductive anatomy of aquaculture organisms.

CTE Standards and Benchmarks	
13.05	Describe and contrast types of spawning exhibited by aquaculture organisms.
13.06	Discuss proper broodstock conditioning and spawning techniques for aquaculture organisms.
13.07	Discuss proper grow-out techniques for aquaculture organisms.
13.08	Demonstrate accurate data collection.
14.0	Identify applicable local, state and federal rules, regulations and best management practices. The student will be able to:
14.01	Identify and observe laws and regulations affecting the industry in the local area.
14.02	Describe process to obtain required permits, licenses, and leases.
14.03	Identify and list agencies regulating the industry and their functions.
15.0	Evaluate the importance of aquaculture to understand the impact on global economy. The student will be able to:
15.01	Assess the impact of US aquaculture products to the total global aquaculture industry.
15.02	Recognize the value of aquaculture food products and agribusiness industry.

**Florida Department of Education
Student Performance Standards**

Course Title: Aquaculture 3
Course Number: 8112020
Course Credit: 1

Course Description:

This course is designed to develop competencies in the area of management and use of water, the propagation and rearing of seed, producing aquaculture species, control of diseases, pests and water quality problems, harvesting and processing, marketing and transportation, management skills and leadership, employability, communication and human relation skills.

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error, and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. A minimum of 20% of classroom time will be dedicated to laboratory experiences.

CTE Standards and Benchmarks	
16.0	Exhibit the management and environmentally sound use of water and land resources. The student will be able to:
16.01	Calculate volume in circular, rectangular and irregular shaped water structures.
16.02	Identify and explain point and non-point pollution management associated with aquaculture.
16.03	Determine soil types, land slope and other factors to consider in choosing a location for an aquaculture operation (aquaculture structures).
16.04	Discuss Florida Department of Agriculture and Consumer Services (FDACS) Best Management Practices (BMP) for managing water usage and aquaculture affluent.
16.05	Discuss different stages of construction of ponds and/or other aquaculture production facilities.
16.06	Discuss the advantages and disadvantages of hydroponics and aquaponics.
17.0	Complete the propagation and culture of an aquaculture organism. The student will be able to:
17.01	Identify and describe the methods of reproducing aquaculture organisms.
17.02	Identify and describe the hatchery facilities used in aquaculture.
17.03	Select a method of producing seed for a selected species.

CTE Standards and Benchmarks

17.04	List and explain the process for hatching eggs in multiple aquaculture organisms.
17.05	Determine the types and sizes of feeds to grow different life stages of aquaculture organisms.
17.06	Discuss the proper methods for harvesting, grading and transporting seed, fry and juvenile aquaculture organisms.
18.0	Research local aquaculture markets and marketing techniques. The student will be able to:
18.01	Develop a marketing plan for an aquaculture product.
18.02	Determine laws and regulations involved in transporting and marketing aquaculture organisms.
18.03	Market aquaculture products.
18.04	Identify possible market outlets for aquaculture products.
18.05	Identify the steps in securing a specific market outlet for a given species.
18.06	Describe the product characteristics of marketable animal and plant products for both food and ornamental markets.
19.0	Incorporate business management skills in managing an aquaculture operation. The student will be able to:
19.01	Determine cost of production/harvesting and profitability of different systems.
19.02	Determine procedures and costs for acquiring the land/water, machinery, equipment structures, etc., needed for an operation specified by the instructor.
19.03	Discuss the relevance of (a) land purchase, (b) water leases, (c) permits, (d) licenses, (e) financial loans, (f) insurance, in an aquaculture business.
19.04	Discuss the relevance of: (a) property ownership, (b) equipment acquired, (c) equipment repair and maintenance, (d) income and expense, (e) employee time and days, (f) income tax and social security, (g) insurance, in aquaculture business.
19.05	Manage a production/harvesting system.
19.06	Complete Supervised Agriculture Experienced (SAE) records.
19.07	Identify and list functions in the management process.
19.08	Demonstrate basic bookkeeping skills.
20.0	Demonstrate leadership, employability, communication, networking, and human relations skills. The student will be able to:
20.01	Demonstrate competence in job-interview techniques.

CTE Standards and Benchmarks

20.02	Demonstrate appropriate response to criticism from employer, supervisor, or other persons in the workplace.
20.03	Demonstrate knowledge of how to appropriately make a career change, including resigning from a job.
20.04	Demonstrate acceptable employee-hygiene habits.
20.05	Research information about employment opportunities.
21.0	Produce an aquaculture species in one or more of the following: pond, cage, tank, raceway, net pen. The student will be able to:
21.01	Identify the types of growing systems and important factors in their selection, design and use.
21.02	Determine economic factors to consider in choosing a system for commercial production.
21.03	Identify and describe facility construction and site requirements.
21.04	Select species for a specific culture facility.
21.05	Determine feeding methods and calculate feeding rates for an aquaculture organism.
21.06	Assist in managing water quality in one or more production systems.
21.07	Maintain and perform repairs on aquaculture machinery, equipment, and facilities.
22.0	Control disease, pest and water quality problems. The student will be able to:
22.01	Identify major diseases of several locally important commercial species and list different methods of prevention and treatment.
22.02	Identify major pests of several locally important commercial species and list recommended control methods.
22.03	Describe methods of prevention, treatment and control of the major diseases and pests previously identified.
22.04	Identify water quality problems.
22.05	Determine water quality parameters and describe corrective action where needed.
22.06	Identify resources for assistance in disease prevention, identification, and treatment.
23.0	Assist in harvesting and processing aquaculture species. The student will be able to:
23.01	Recognize and observe safety and sanitary practices including biosecurity in harvesting and processing aquaculture organisms.
23.02	Determine harvesting practices recommended for aquaculture organisms.

CTE Standards and Benchmarks

23.03 Determine equipment, labor, financial and legal requirements for harvesting aquaculture organisms.

23.04 Harvest aquaculture organisms using recommended practices.

23.05 Determine processing and packaging practices recommended for aquaculture organisms.

23.06 Determine equipment, labor, financial and legal requirements for processing and packaging aquaculture organisms.

23.07 Process and/or package aquaculture organisms using recommended practices.

23.08 Compare and contrast methods for shipping aquaculture organisms.

**Florida Department of Education
Student Performance Standards**

Course Title: Aquaculture 4
Course Number: 8112030
Course Credit: 1

Course Description:

This course is designed to develop competencies in the area of management and use of water, the propagation and rearing of seed, producing aquaculture species, control of diseases, pests and water quality problems, harvesting and processing, marketing and transportation, management skills and leadership, employability, communication and human relation skills.

CTE Standards and Benchmarks	
24.0	Identify biological components of reptiles, amphibians, and fish. The student will be able to:
24.01	Describe anatomy and physiology of alligators and turtles.
24.02	Describe anatomy and physiology of frogs.
24.03	Describe anatomy and physiology of marine and freshwater baitfish.
24.04	Describe anatomy and physiology of sturgeon.
25.0	Discuss production practices of reptiles, amphibians, and fish. The student will be able to:
25.01	Determine production needs of alligators and turtles.
25.02	Determine production needs of frogs.
25.03	Determine production needs of marine and freshwater baitfish.
25.04	Determine production needs of sturgeon.
26.0	Investigate scientific skills and principles in aquatic plant science. The student will be able to:
26.01	Explain nutrient uptake and photosynthesis in aquatic plants.
26.02	Describe reproductive methods used by aquatic plants.
26.03	Identify commercially important aquatic plants.

CTE Standards and Benchmarks	
27.0	Describe techniques for producing marine ornamentals, clams, oysters, and shrimp. The student will be able to:
27.01	Discuss practices necessary to produce marine ornamentals.
27.02	Discuss practices necessary to produce clams.
27.03	Discuss practices necessary to produce oysters.
27.04	Discuss practices necessary to produce shrimp.
28.0	Manage aquatic animal health. The student will be able to:
28.01	Outline general management measures for preventing disease outbreaks.
28.02	Calculate treatment for aquatic systems.
28.03	Discuss disease resistances.
28.04	Discuss the role of stress in fish diseases.
28.05	Create a biosecurity plan for an aquaculture production facility.
28.06	Develop proper animal husbandry protocols for aquaculture production.
29.0	Determine nutritional needs of aquaculture organisms. The student will be able to:
29.01	Describe dietary requirements needed for aquatic organisms.
29.02	Explain how anatomy and behavior affect feeding.
29.03	Select the appropriate feed for different life stages of aquatic organisms.
29.04	Design a feeding protocol from day one post hatch to mature adult.
30.0	Manage aquaculture systems. The student will be able to:
30.01	Perform routine maintenance on the system.
30.02	Record day to day observations on the system.
30.03	Design standard operating procedures for an aquaculture system.
30.04	Perform water quality checks on aquaculture systems.

CTE Standards and Benchmarks

30.05	Design a recirculating system.
31.0	Perform economic practices involved with aquaculture enterprises. The student will be able to.
31.01	Create a cost analysis for producing an individual species.
31.02	Determine the cost of installation and operation of an aquaculture system.
31.03	Calculate a profit and loss analysis of an aquaculture system.
32.0	Participate in classroom extension activities. The student will be able to:
32.01	Conduct a field experiment or research study on aquaculture topics.
32.02	Complete a Proficiency Applications research project, or student internship in an aquaculture area.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:

Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at SALA@fldoe.org

Extended Student Supervision

Because of the production and marketing cycle of the agriculture industry, this program requires individual instruction and supervision of students for the entire period beyond the 180-day school year.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTOSs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (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 counselor and/or instructors. 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.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Some secondary students with disabilities (ESE) may need additional time (i.e., longer than the regular school year), to master the student performance standards associated with a regular course or a modified course. If needed, a student may enroll in the same career and technical course more than once. Documentation should be included in the IEP that clearly indicates that it is anticipated that the student may need an additional year to complete a Career and Technical Education (CTE) course. The student should work on different competencies and new applications of competencies each year toward completion of the CTE course. After achieving the competencies identified for the year, the student earns credit for the course. It is important to ensure that credits earned by students are reported accurately. The district's information system must be designed to accept multiple credits for the same course number for eligible students with disabilities.