Agriculture, Food and Natural Resources Cluster
Safety, Watchkeeping, and Healthy Oceans for Commercial Fishing
Course Number 02.45000

Course Description: The goal of this course is to provide students instruction in basic health and safety on the boat and in the water. Students throughout this course in classroom and laboratory activities will apply knowledge and skills required to work safely on board a commercial fishing vessel, survival skills, first aid, Cardiopulmonary resuscitation (CPR), personal protective equipment, as well as firefighting and fire prevention on board. Students will learn and utilize knowledge of commercial fishing vessels and the skills and techniques required for proper operation in many settings, including weather reading, radio communication, signals and navigation in port, traveling to the fishing grounds, and while fishing nets are set.

Course Standard 1

AFNR-SWHOCF-1

The following standard is included in all CTAE courses adopted for the Career Cluster/Pathways. Teachers should incorporate the elements of this standard into lesson plans during the course. The topics listed for each element of the standard may be addressed in differentiated instruction matching the content of each course. These elements may also be addressed with specific lessons from a variety of resources. This content is not to be treated as a unit or separate body of knowledge but rather integrated into class activities as applications of the concept.

Standard: Demonstrate employability skills required by business and industry.

The following elements should be integrated throughout the content of this course.

1.1   Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities.

Person-to-Person Etiquette	Telephone and Email Etiquette	Cell Phone and Internet Etiquette	Communicating At Work	Listening
Interacting with Your Boss	Telephone Conversations	Using Blogs	Improving Communication Skills	Reasons, Benefits, and Barriers
Interacting with Subordinates	Barriers to Phone conversations	Using Social Media	Effective Oral Communication	Listening Strategies
Interacting with Co-workers	Making and Returning Calls		Effective Written Communication	Ways We Filter What We Hear
Interacting with Suppliers	Making Cold Calls		Effective Nonverbal Skills	Developing a Listening Attitude
	Handling Conference Calls		Effective Word Use	Show You Are Listening
	Handling Unsolicited Calls		Giving and Receiving Feedback	Asking Questions
				Obtaining Feedback
				Getting Others to Listen

Nonverbal Communication	Written Communication	Speaking	Applications and Effective Résumés
Communicating Nonverbally	Writing Documents	Using Language Carefully	Completing a Job Application
Reading Body Language and mixed Messages	Constructive Criticism in Writing	One-on-One Conversations	Writing a Cover Letter
Matching Verbal and Nonverbal communication		Small Group Communication	Things to Include in a Résumé
Improving Nonverbal Indicators		Large Group Communication	Selling Yourself in a Résumé
Nonverbal Feedback		Making Speeches	Terms to Use in a Résumé

Showing Confidence Nonverbally		Involving the Audience	Describing Your Job Strengths
Showing Assertiveness		Answering Questions	Organizing Your Résumé
		Visual and Media Aids	Writing an Electronic Résumé
		Errors in Presentation	Dressing Up Your Résumé

1.2 Demonstrate creativity by asking challenging questions and applying innovative procedures and methods.

Teamwork and Problem Solving	Meeting Etiquette
Thinking Creatively	Preparation and Participation in Meetings
Taking Risks	Conducting Two-Person or Large Group Meetings
Building Team Communication	Inviting and Introducing Speakers
	Facilitating Discussions and Closing
	Preparing Visual Aids
	Virtual Meetings

1.3 Exhibit critical thinking and problem solving skills to locate, analyze and apply information in career planning and employment situations.

Problem Solving	Customer Service	The Application Process	Interviewing Skills	Finding the Right Job
Transferable Job Skills	Gaining Trust and Interacting with Customers	Providing Information, Accuracy and Double Checking	Preparing for an Interview	Locating Jobs and Networking
Becoming a Problem Solver	Learning and Giving Customers What They Want	Online Application Process	Questions to Ask in an Interview	Job Shopping Online
Identifying a Problem	Keeping Customers Coming Back	Following Up After Submitting an Application	Things to Include in a Career Portfolio	Job Search Websites
Becoming a Critical Thinker	Seeing the Customer's Point	Effective Résumés:	Traits Employers are Seeking	Participation in Job Fairs
Managing	Selling Yourself and the Company	Matching Your Talents to a Job	Considerations Before Taking a Job	Searching the Classified Ads
	Handling Customer Complaints	When a Résumé Should be Used		Using Employment Agencies
	Strategies for Customer Service			Landing an Internship
				Staying Motivated to Search

1.4 Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity.

Workplace Ethics	Personal Characteristics	Employer Expectations	Business Etiquette	Communicating at Work
Demonstrating Good Work Ethic	Demonstrating a Good Attitude	Behaviors Employers Expect	Language and Behavior	Handling Anger
Behaving Appropriately	Gaining and Showing Respect	Objectionable Behaviors	Keeping Information Confidential	Dealing with Difficult Coworkers
Maintaining Honesty	Demonstrating Responsibility	Establishing Credibility	Avoiding Gossip	Dealing with a Difficult Boss
Playing Fair	Showing Dependability	Demonstrating Your Skills	Appropriate Work Email	Dealing with Difficult Customers
Using Ethical Language	Being Courteous	Building Work Relationships	Cell Phone Etiquette	Dealing with Conflict
Showing Responsibility	Gaining Coworkers' Trust		Appropriate Work Texting	

Reducing Harassment	Persevering		Understanding Copyright	
Respecting Diversity	Handling Criticism		Social Networking	
Making Truthfulness a Habit	Showing Professionalism			
Leaving a Job Ethically				

1.5   Apply the appropriate skill sets to be productive in a changing, technological, diverse workplace to be able to work independently and apply team work skills.

Expected Work Traits	Teamwork	Time Management
Demonstrating Responsibility	Teamwork Skills	Managing Time
Dealing with Information Overload	Reasons Companies Use Teams	Putting First Things First
Transferable Job Skills	Decisions Teams Make	Juggling Many Priorities
Managing Change	Team Responsibilities	Overcoming Procrastination
Adopting a New Technology	Problems That Affect Teams	Organizing Workspace and Tasks
	Expressing Yourself on a Team	Staying Organized
	Giving and Receiving Constructive Criticism	Finding More Time
		Managing Projects
		Prioritizing Personal and Work Life

1.6   Present a professional image through appearance, behavior and language.

On-the-Job Etiquette	Person-to-Person Etiquette	Communication Etiquette	Presenting Yourself
Using Professional Manners	Meeting Business Acquaintances	Creating a Good Impression	Looking Professional
Introducing People	Meeting People for the First Time	Keeping Phone Calls Professional	Dressing for Success
Appropriate Dress	Showing Politeness	Proper Use of Work Email	Showing a Professional Attitude
Business Meal Functions		Proper Use of Cell Phone	Using Good Posture
Behavior at Work Parties		Proper Use in Texting	Presenting Yourself to Associates
Behavior at Conventions			Accepting Criticism
International Etiquette			Demonstrating Leadership
Cross-Cultural Etiquette			
Working in a Cubicle			

Support of CTAE Foundation Course Standards and Georgia Standards of Excellence
L9-10RST 1-10 and L9-10WHST 1-10:
Georgia Standards of Excellence ELA/Literacy standards have been written specifically for technical subjects and have been adopted as part of the official standards for all CTAE courses.

Course Standard 2

AFNR-SWHOCF-2
Utilize and practice commercial fishing safety.
2.1   Define and demonstrate skills that promote safety on deck of commercial fishing vessels.
2.2   Identify the risks and signs of seaman fatigue.
2.3   Explain the risks associated with improper hydration and techniques to ensure proper hydration.
2.4   Identify and summarize the risks of improper nutrition and techniques to ensure proper nutrition.
2.5   Demonstrate and support proper actions to emergency drills onboard commercial fishing vessels.
2.6   Demonstrate different techniques used to plug and patch holes on boat exterior, deck, storage tanks found on a commercial fishing vessel.
2.7   Explain the history of local and regional commercial fishing vessel and significant marine casualties.
2.8   Identify the local, county, state and federal agencies that regulate the commercial fishing industry.

Course Standard 3

AFNR-SWHOCF-3
Understand and apply basic Cardiopulmonary resuscitation (CPR) and First Aid aboard commercial fishing vessels.

3.1   Demonstrate and acquire certification in CPR and First Aid by a certified instructor from American Heart Association or American Red Cross (or) CPR-PRO for the Professional Rescuer from the American Health and Safety Institute.
3.2   Make observations about the type of onboard accidents that commonly occur on commercial fishing vessels.
3.3   Summarize and simulate the types of treatments that can be provided for injuries/accidents onboard commercial fishing vessels.

Course Standard 4

AFNR-SWHOCF-4
Compare and contrast skills and techniques to survive various situations aboard a commercial fishing vessel, fisherman overboard, and Personal Protective Equipment.

4.1   Identify and show the types of survival equipment and emergency signals used on commercial fishing vessels.
4.2   Explain the purpose of the contents and create a flooding control kit on a commercial fishing vessel.
4.3   Summarize the levels of training and practice the types of drills necessary for commercial fishing.
4.4   Identify situations that require the crew to abandon ship on a commercial fishing vessel.
4.5   Demonstrate cold-water survival skills and related hazards for commercial fishermen.
4.6   Discuss survival behavior and psychology's impact on a commercial fishing crew/ industry.
4.7   Show and explain the proper procedures and conduct drills for Man Overboard on a commercial fishing vessel.
4.8   Demonstrate donning personal flotation devices used in the commercial fishing industry.
4.9   Demonstrate the proper attire for the commercial fishing environment including weather and job duties.
4.10   Demonstrate procedures for personal floatation device maintenance.
4.11   Show and explain the proper procedures for regular inspection of lifesaving equipment, timeline for servicing equipment, and determining when equipment is unserviceable.
4.12   Create a checklist of all lifesaving equipment for expiration and service dates.

Course Standard 5

AFNR-SWHOCF-5
Explain and implement firefighting and prevention measures aboard commercial fishing vessels.

5.1   Categorize the types of fires possible on a commercial fishing vessel and best techniques to extinguish each fire.
5.2   Explain the various fire extinguishers and types of fires where each is utilized.
5.3   Simulate and summarize general firefighting techniques and proper procedures to extinguish.
5.4   Summarize methods of fire prevention on commercial fishing vessels.
5.5   Identify and label the most common locations for fires on commercial fishing vessels.
5.6   Demonstrate proper storage, inspection, and maintain a maintenance schedule for firefighting equipment, fire extinguishers, and fire suppression systems on a commercial fishing vessel.

Course Standard 6

AFNR-SWHOCF-6
Understand the identification, features, equipment, stability, and terminology for commercial fishing vessels.

6.1 Explain the vessel numbering and registration standards for commercial fishing vessels.
6.2 Identify and categorize the necessary equipment and feature areas of commercial fishing vessels.
6.3 Summarize the various types and purposes of fishing vessels used in commercial fishing.
6.4 Interpret and use docking and mooring terminology used in the commercial fishing industry.
6.5 Summarize terminology related to food source traceability, food safety, and product flow from fishing nets to consumer.
6.6 Discuss the types of alarm systems used on commercial fishing vessels.
6.6 Discuss the various types of anchors used on commercial fishing vessels.
6.7 Identify vessel loading constraints for commercial fishing vessels.
6.8 Identify vessel operating restrictions for commercial fishing vessels.
6.9 Describe and show stability instructions for maintaining stability on commercial fishing vessels.
6.10 Simulate the watertight and watertight integrity of commercial fishing vessels.
6.11 Identify and demonstrate proper routes to egress from various points on a commercial fishing vessel and importance of maintaining clear escape routes.

Course Standard 7

AFNR-SWHOCF-7
Obtain, evaluate, and communicate information that describes the types of weather conditions experienced on the water and complex relationships between weather, climate and the oceans.

7.1 Identify and summarize the uses of weather broadcasts (NOAA VHF broadcast channels) and maps for commercial fishing.
7.2 Demonstrate how to use local observations to read the weather for commercial fishing.
7.3 Describe how icing conditions impact vessel operations in commercial fishing.
7.4 Discuss tropical weather conditions impact on vessel operations in commercial fishing.
7.5 Develop a model to explain the effects of tilt of the earth, solar energy inputs, and heat capacity of land and oceans on the resulting patterns of weather and climate.
7.6 Investigate and provide explanations about the influence of the Coriolis Effect on winds, ocean currents, and climate and impact on commercial fishing grounds.
7.7 Analyze and interpret data to develop models for global patterns including deep-water currents for atmospheric and oceanic circulation.
7.8 Construct an explanation for variations in global weather patterns such as El Nino, hurricanes, and monsoons and design solutions to minimize the impact of these systems on human populations.
7.9 Explain using computational thinking how climate change influences the ocean, sea levels, and ocean acidification.

Course Standard 8

AFNR-SWHOCF-8
Distinguish relevant watchkeeping arrangements for a commercial fishing crew.

8.1 Compare and contrast watchkeeping arrangements for various crew sizes in commercial fishing.
8.2 Summarize the watchkeeping procedures and importance of crew-member live watch at all times when the commercial vessel is anchored and at sea.
8.3 Explain the duties and responsibility of the crew and captain for watchkeeping when anchored and at sea.
8.4 Discuss the lookout duties for each crewmember on board a commercial fishing vessel.
8.5 Discuss the in port watchkeeping responsibilities for each crewmember on board a commercial fishing vessel.

Course Standard 9

AFNR-SWHOCF-9

Obtain and interpret the importance of radio communication skills on commercial fishing vessels.

9.1   Identify and list radio communication equipment used on various commercial fishing vessels.
9.2   Discuss safe operation of radio communication equipment on a commercial fishing vessel.
9.3   Demonstrate basic radio operations on a commercial fishing vessel.
9.4   Demonstrate and describe the technique of radio use (e.g., VHF, MF, and Single Side Band radio) during an emergency on board a commercial fishing vessel.
9.5   Discuss a distress broadcast that is used on board a commercial fishing vessel.
9.6   Compare and contrast types of radar used on board a commercial fishing vessel.
9.7   Research the cause/effect of using Unmanned Aircraft Systems (drones) to locate, identify, and navigate in the commercial fishing industry.
9.8   Explain the importance and purpose of Digital Selective Calling (DSC) on commercial fishing vessels.
9.9   Summarize the importance and FCC requirements for maintaining radio communication on commercial fishing vessels at all times.

Course Standard 10

AFNR-SWHOCF-10

Explain and show relationships for distinguishing the types of signals on commercial fishing vessels.

10.1   Describe the types of signals used on commercial fishing vessels.
10.2   Compare and contrast the type of sound signals used on commercial fishing vessels.
10.3   Identify the types of emergency or distress signals use on commercial fishing vessels.
10.4   Explain the use of the Emergency Position Indicator Radio Beacons (EPIRBs) on commercial fishing vessels.
10.5   Discuss the use of the signal flare for emergencies on commercial fishing vessels.

Course Standard 11

AFNR-SWHOCF-11

Organize and categorize navigation rules, lights and shapes used in the commercial fishing industry.

11.1   Discuss the navigation rules used in the commercial fishing industry.
11.2   Classify and define the various navigation lights on commercial fishing vessels.
11.3   Classify and define the various navigation shapes used in the commercial fishing industry.
11.4   Explain the types of navigation publications available and used for commercial fishing.
11.5   Demonstrate the use of the compass/compass deviation table on board a commercial fishing vessel.
11.6   Demonstrate the use of the electronic position fixing device (e.g., LORAN, Garmin, FISH 10) and importance of radar/positioning devices in the commercial fishing industry.
11.7   Discuss the navigation rules used for inland navigation for commercial fishing and all boats.

Course Standard 12

AFNR-SWHOCF-16
Relate the role of the FFA student organization in the students' personal development.

12.1   Summarize the FFA history including a basic timeline of events, key people, and major historical occurrences of the organization.

12.2   Illustrate the relationship of the FFA within the Agricultural Education model and describe the role and function of the organizational structure from the chapter to national level.

12.3   Interpret basic FFA information such as the emblem, colors, motto, mission, salute, behavior, and official dress.

12.4   Demonstrate communication skills individually and within group situations by using public speaking skills and parliamentary procedure abilities.

12.5   Design personal leadership plan that includes opportunities for personal development through student, chapter, and community related activities.