

Course Title: Commercial Fishing 1
Course Number: 8751210
Course Credit: 1

Course Description:

The Commercial Fishing 1 course prepares students for entry into the commercial fishing industry. Content emphasizes beginning skills and concepts as a recommended requisite. Students study vessel underway procedures, docking, and vessel operation.

CTE Standards and Benchmarks

04.0 Unlock and get vessel underway--The student will be able to:

- 04.01 Bleed air compressor of water.
- 04.02 Check and maintain batteries.
- 04.03 Measure fuel in day tank.
- 04.04 Maintain proper level of coolant in expansion tank.
- 04.05 Use proper testing procedure to determine if all navigation lights are functioning.
- 04.06 Use a torque wrench to tighten engine mounts to predetermined level.
- 04.07 Inspect water level indicators for cleanliness.
- 04.08 Test marine radio equipment using proper technique.
- 04.09 Inspect antenna for physical damage.
- 04.10 Determine if hydraulic steering equipment is free of air and water.
- 04.11 Inspect fire-fighting equipment for excessive wear, proper location, and prescribed type.
- 04.12 Inspect buoyant apparatuses for excessive wear, proper location and prescribed type.
- 04.13 Determine that rudder-stuffing box is functioning properly.
- 04.14 Tighten propeller stuffing box.
- 04.15 Inspect vessel for fuel leakage.
- 04.16 Prepare list of equipment to be checked for oil leakage.
- 04.17 Use a voltage meter to determine if proper voltage is being generated.

CTE Standards and Benchmarks

04.18 Maneuver vessel from berth into navigable waterway.

04.19 Pump out bilges.

04.20 Secure loose deck equipment.

04.21 Secure watertight doors, hatches, vents and skylights.

05.0 Dock a vessel--The student will be able to:

05.01 Assign crewmembers positions for mooring vessel.

05.02 Cast off vessel's mooring lines while remaining on dock.

05.03 Cast off vessel's mooring lines while remaining aboard vessel.

05.04 Demonstrate how to tie various knots used in maritime operations.

05.05 Maneuver vessel to dock.

05.06 Release towing gear aboard towing vessel and barges.

05.07 Demonstrate how to secure mooring lines to dock.

05.08 Demonstrate how to secure mooring lines to vessel.

05.09 Summarize the steps for securing the engine room.

05.10 Secure propeller shaft.

05.11 Inspect engine room equipment for proper maintenance and safety.

05.12 Determine the correct nautical chart prior to departure.

05.13 Prepare vessel to take on fuel and lube oil.

05.14 Prepare to take on water aboard vessel.

05.15 Demonstrate how to splice an eye into line.

06.0 Operate vessel at sea--The student will be able to:

06.01 Act as vessel's lookout.

06.02 Determine if electrical connections and outlets are tight and dry.

CTE Standards and Benchmarks

- 06.03 Use a volt meter to determine if electrical outlets have proper voltage.
- 06.04 Change air filters on engines.
- 06.05 Change oil and fuel filters on engines.
- 06.06 Change oil in engines.
- 06.07 Demonstrate knowledge of the rules of the road in operating a vessel.
- 06.08 Determine time of arrival when current effect is known.
- 06.09 Determine time of arrival when current effect is unknown.
- 06.10 Display day or night signals for different towing situations.
- 06.11 Inspect heaving lines, mooring lines, and fixed and running rigging for excessive wear.
- 06.12 Clean engine room and its equipment.
- 06.13 Determine Greenwich Mean Time (GMT) by using vessel's chronometer.
- 06.14 Determine position by using Omega navigation system or equipment.
- 06.15 Steer a course by using the magnetic compass.
- 06.16 Operate radar equipment.
- 06.17 Interpret basic meteorological data from different sources.
- 06.18 Determine "distance off" by using angular measurements.
- 06.19 Establish a vessel's dead reckoning (DR) track.
- 06.20 Plot position by using GPS and GPS overprint charts.
- 06.21 Chip and paint vessel.

Course Title: **Commercial Fishing 2**
Course Number: **8751220**
Course Credit: **1**

Course Description:

The Commercial Fishing 2 course is designed to build on the skills and knowledge students learned in the Commercial Fishing 1 course for entry into the commercial fishing industry. Content emphasizes beginning skills and concepts as a recommended requisite. Students study maneuvering, anchoring, cargo handling duties.

CTE Standards and Benchmarks

07.0 Maneuver around offshore structures--The student will be able to:

07.01 Assist personnel in boarding personnel basket.

07.02 Maneuver vessel to discharge passengers.

07.03 Maneuver vessel to discharge cargo.

07.04 Demonstrate the proper method to secure hoses on board vessel.

07.05 Demonstrate the proper methods to secure lashings, hawsers, or mooring lines on board vessel.

08.0 Anchor vessel--The student will be able to:

08.01 Anchor vessel.

08.02 Maneuver vessel to anchorage area.

08.03 Anchor vessel by using anchor winch.

08.04 Anchor vessel by using anchor windlass.

08.05 Stack (tier) anchor chain in chain locker.

09.0 Manage and perform cargo handling duties--The student will be able to:

09.01 Adjust vessel's mooring lines to allow for variations of tides and current.

09.02 Determine if all cargo is aboard.

09.03 Determine if all deck cargo is secured.

09.04 Determine if vessel is loaded in compliance with stability laws.

09.05 Discharge cargo by using bulk cargo system.

CTE Standards and Benchmarks

09.06 Load cargo by using bulk cargo system.

09.07 Prepare list of lost or damaged cargo.

Course Title: Commercial Fishing 3
Course Number: 8751230
Course Credit: 1

Course Description:

The Commercial Fishing 3 course is designed to build on the skills and knowledge students learned in the Commercial Fishing 2 course for entry into the commercial fishing industry. Content emphasizes beginning skills and concepts as a recommended requisite. Students study deckhand, net fisher, pot fisher and line duties.

CTE Standards and Benchmarks

13.0 Perform shrimp boat deckhand duties--The student will be able to:

- 13.01 Stand lookout, steering, and engine room watches.
- 13.02 Attach nets, slings, hooks, and other lifting devices to cables, booms, and hoists.
- 13.03 Load equipment and supplies aboard vessel by hand or using hoisting equipment.
- 13.04 Signal other workers to move, hoist, and position loads.
- 13.05 Attach accessories, such as floats, weights, and markers to nets and lines.
- 13.06 Pull and guide nets and lines onto vessel.
- 13.07 Remove shrimp from nets.
- 13.08 Sort, clean and identify marine life and return undesirable and illegal catch to the sea.
- 13.09 Operate brine tank and refrigeration equipment.
- 13.10 Place catch in containers and store in hold and cover with salt and ice.
- 13.11 Wash decks, conveyors, knives, and other equipment, using proper sanitary procedures.
- 13.12 Lubricate, adjust, and make minor repairs to engines and equipment.

14.0 Perform net fisher duties--The student will be able to:

- 14.01 Demonstrate proper procedures to catch finfish, shellfish, and other marine life alone or as crew.
- 14.02 Use and operate equipment such as dip, diver, gill, hoop, lampara, pound, trap, reef, trammel, and travel nets.
- 14.03 Use and operate equipment such as purse seine, haul, drag, or beach seine.
- 14.04 Insert and attach hoops, rods, poles, ropes, floats, weights, beam runners, other boards, and cables to form, reinforce, position, set tow and anchor net.

CTE Standards and Benchmarks

14.05	Attach flags and lights to buoys to identify net location.
14.06	Put net into water and anchor or tow net according to kind of net used, location of fishing area, and method of fishing.
14.07	Haul net to boat or shore manually and using winch.
14.08	Empty catch from net, using dip net, brail bucket, hydraulic pump, and conveyor, and by lifting net, using block and tackle, and dumping catch.
14.09	Store catch in hold and containers, or transfer catch to base ship or bigger boat.
14.10	Ride in skiff and hold end of net as base ship discharges net to surround school of fish or other seafood.
14.11	Sort and clean fish.
14.12	Repair fishing nets and gear.
14.13	Act as lookout or observe instruments to sight schools of fish.
15.0	Perform pot fisher duties--The student will be able to:
15.01	Fish for marine life, including crab, eel, or lobster, using pots (cages with funnel-shaped net openings).
15.02	Tie marker float to line, attach line to pot, fasten bait inside pot, and lower pot into water.
15.03	Hook marker float with pole and pull up pot.
15.04	Reach through hinged door of pot to remove catch or dump catch on deck.
15.05	Measure catch with fixed gauge to insure compliance with legal size.
15.06	Place legal catch in container and toss illegal catch overboard.
15.07	Rubber band claws to prevent lobsters in container from killing each other.
15.08	Rig and lower dredge (rake scoop with bag net attached), drag dredge behind boat to gather marine life from water bottom, and hoist it to deck by hand using block and tackle.
16.0	Perform line fisher duties--The student will be able to:
16.01	Catch fish and other marine life with hooks and lines, working alone or as a member of crew.
16.02	Lay out line and attach hooks, bait, sinkers, and various anchors, floats, and swivels, depending on the targeted species sought.
16.03	Put line into water, and hold, anchor, or troll (tow) line to catch fish.
16.04	Haul line onto boat deck by hand, reel, or synch, and remove catch.

CTE Standards and Benchmarks

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| 16.05 | Store catch in hold or boxes and pack catch in ice. |
| 16.06 | Hit fish with club to stun it before removing it from hook. |
| 16.07 | Use gaff to assist in lifting fish from water and placing them on the deck. |
| 16.08 | Use proper and safe technique to slit fish, remove viscera, and wash cavity to clean fish for storage. |
| 16.09 | Navigate vessel in fishing area safely and legally. |

Course Title: Commercial Fishing 4
Course Number: 8751240
Course Credit: 1

Course Description:

The Commercial Fishing 4 course is designed to build on the skills and knowledge students learned in the Commercial Fishing 3 course for entry into the commercial fishing industry. Content emphasizes beginning skills and concepts as a recommended requisite. Students study bringing vessels into port, and crew operations and maintenance.

CTE Standards and Benchmarks

17.0 Bring vessel into port--The student will be able to:

- 17.01 Determine approximate position and hazardous conditions by using depth recorder.
- 17.02 Determine position by using GPS satellite information.
- 17.03 Determine vessel's course and position against dead reckoning plots.

18.0 Perform crew operational and maintenance duties aboard vessel in port--The student will be able to:

- 18.01 Prepare and perform necessary duties for dry-docking a vessel.
- 18.02 Change lube oil filters on auxiliary engines.
- 18.03 Change fuel filters on auxiliary engines.
- 18.04 Clean electric motor.
- 18.05 Prepare a list of hoses, valves, connections, gaskets, and tanks that have been determined to need repairs.
- 18.06 Determine if const-a-voltage regulator is functioning properly.
- 18.07 Determine if drive bolts on air compressors are excessively loose.
- 18.08 Tighten panel box fittings to prevent vibration.
- 18.09 Clean keel cool strainers.
- 18.10 Clean oil coolers.
- 18.11 Clean oil strainers in marine gears.
- 18.12 Drain water out of fuel traps.
- 18.13 Check tightness of fuel and oil line connections on engines and tighten if necessary.

CTE Standards and Benchmarks

- 18.14 Inspect day tanks containing fuel for leaks.
- 18.15 Lubricate deck and engine room equipment on a regular schedule.
- 18.16 Determine vessel's manning requirements.
- 18.17 Wash down vessel's superstructure and decks.

Course Title: Commercial Fishing 5
Course Number: 8751250
Course Credit: 1

Course Description:

The Commercial Fishing 5 course is designed to build on the skills and knowledge students learned in the Commercial Fishing 4 course for entry into the commercial fishing industry. Content emphasizes beginning skills and concepts as a recommended requisite. Students study preparing meals, emergency procedures, math, science, and employability skills, and entrepreneurship.

CTE Standards and Benchmarks

19.0 Prepare meals aboard vessel--The student will be able to:

- 19.01 Make yeast breads.
- 19.02 Make pie crust.
- 19.03 Make cream filling in pie.
- 19.04 Make pancakes.
- 19.05 Make corn bread.
- 19.06 Make cakes.
- 19.07 Make biscuits.
- 19.08 Clean galley deck, woodwork, and cabinets.
- 19.09 Wash dishes, glasses, flatware, trays, pots and pans.
- 19.10 Cook vegetables by boiling, simmering and steaming.
- 19.11 Cook meats, seafood, and fowl by frying.
- 19.12 Cook meats, seafood, and fowl by stewing and braising.
- 19.13 Cook meats, seafood, and fowl by broiling.
- 19.14 Cook meats, seafood, and fowl by roasting or baking.
- 19.15 Cook meats, seafood, and fowl by braising.
- 19.16 Season and bread meats, seafood, and fowl for baking, roasting, broiling and frying.
- 19.17 Cook eggs by frying and scrambling.

CTE Standards and Benchmarks

19.18	Make gravies.
19.19	Make coffee.
19.20	Make salads.
19.21	Prepare soup stock.
19.22	Prepare sandwiches.
19.23	Prepare dehydrated or concentrated foods.
19.24	Make soup with stock, meats, vegetables, and seasonings, as required by recipe.
19.25	Carve cooled meats.
19.26	Cut, trim, and bone beef, lamb, pork, or fish into prescribed portions for steaks, chops, and fillets.
19.27	Clean and care for equipment using proper sanitary procedures.
19.28	Order food.
19.29	Plan menu.
19.30	Keep records for purchasing foods.
19.31	Store food.
19.32	Keep continuous inventory of food items.
20.0	Plan and perform emergency procedures--The student will be able to:
20.01	Act as lookout to keep person in sight who has been lost overboard.
20.02	Administer first aid to prevent shock.
20.03	Administer first aid to control bleeding.
20.04	Administer CPR
20.05	Launch lifeboat and life raft.
20.06	Close emergency fuel shutoff valves.
20.07	Extinguish class A, B, and C type fires.
20.08	Maneuver life raft or lifeboat away from vessel.

CTE Standards and Benchmarks

20.09	Maneuver vessel to return to area in which person was lost overboard.
20.10	Issue life preservers for use by passengers and crew.
20.11	Secure engine room to prevent spread of fire.
20.12	Send out distress signals.
20.13	Sound abandon-ship alarm.
20.14	Train crew to perform emergency procedures.
21.0	Demonstrate appropriate communication skills--The student will be able to: 21.01 Write logical and understandable statements, or phrases, to accurately fill out forms/invoices commonly used in business and industry. 21.02 Read and understand graphs, charts, diagrams, and tables commonly used in this industry/occupation area. 21.03 Read and follow written and oral instructions. 21.04 Answer and ask questions coherently and concisely. 21.05 Read critically by recognizing assumptions and implications and by evaluating ideas. 21.06 Demonstrate appropriate telephone/communication skills.
22.0	Demonstrate appropriate math skills--The student will be able to: 22.01 Solve problems for volume, weight, area, circumference and perimeter measurements for rectangles, squares, and cylinders. 22.02 Measure tolerance(s) on horizontal and vertical surfaces using millimeters, centimeters, feet and inches. 22.03 Add, subtract, multiply and divide using fractions, decimals, and whole numbers. 22.04 Determine the correct purchase price, to include sales tax for a materials list containing a minimum of six items. 22.05 Demonstrate an understanding of federal, state and local taxes and their computation.
23.0	Demonstrate appropriate understanding of basic science--The student will be able to: 23.01 Understand molecular action as a result of temperature extremes, chemical reaction, and moisture content. 23.02 Draw conclusions or make inferences from data. 23.03 Identify health-related problems that may result from exposure to work related chemicals and hazardous materials, and know the proper precautions required for handling such materials.

CTE Standards and Benchmarks

23.04	Understand pressure measurement in terms of PSI, inches of mercury, and KPA.
24.0	Demonstrate employability skills--The student will be able to:
24.01	Conduct a job search using periodicals and the internet.
24.02	Secure information about a job.
24.03	Identify documents that may be required when applying for a job interview.
24.04	Complete a job application form correctly.
24.05	Demonstrate competence in job interview techniques.
24.06	Identify or demonstrate appropriate responses to criticism from employer, supervisor or other employees.
24.07	Identify acceptable work habits.
24.08	Demonstrate knowledge of how to make appropriate job changes.
24.09	Demonstrate acceptable employee health habits.
24.10	Demonstrate knowledge of and the ability to locate on-line the "Florida Right-To-Know Law" as recorded in Florida Statutes Chapter 442.
25.0	Demonstrate an understanding of entrepreneurship--The student will be able to:
25.01	Define entrepreneurship.
25.02	Describe the importance of entrepreneurship to the American economy.
25.03	List the advantages and disadvantages of business ownership.
25.04	Identify the risks involved in ownership of a business.
25.05	Identify the necessary personal characteristics of a successful entrepreneur.
25.06	Identify the business skills needed to operate a small business efficiently and effectively.