

A Guide to Fishermen Training Programs

(Revised 2022)



MISSISSIPPI STATE UNIVERSITY™
EXTENSION

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Abstract

Commercial fishing is a culturally and economically important industry in coastal regions across the United States. During the past 30 years, the average age of commercial fishermen has increased substantially. This trend is commonly referred to as the “graying of the fleet” and is attributed to a substantial decrease in the number of new commercial fishermen entering the industry. Fishermen training programs can provide the infrastructure needed to encourage new entrants into this sector, including training and matching entrants with captains. However, no comprehensive lists of these programs previously existed. Therefore, we sought to collect information on existing commercial fishermen training programs across the U.S. Given the increased popularity of recreational fishing, aquaculture, and stewardship, we also included information on these types of training programs. We first performed a Google search to identify existing programs. Then, we entered program information into an online database,

contacted program organizers to obtain additional information and insight, and mapped program locations. We identified a total of 38 programs. Program activity spans from 1981 to present, but 42 percent of programs were created in the last 5 years. The numbers of commercial versus aquaculture programs are nearly equal, followed by the number of recreational programs. Eight programs are intended for all sectors or more than one sector. Programs are located in most of the coastal and Great Lakes states. Specifically, 32 percent of programs are located along the Atlantic Coast, 29 percent along the Gulf Coast, 13 percent around the Great Lakes, 18 percent in Alaska, and 3 percent along the continental U.S. Pacific Coast. Currently, no training programs exist in New Hampshire, New York, Pennsylvania, Delaware, Virginia, South Carolina, Texas, Wisconsin, or Minnesota. Our findings illustrate that, while a wide variety of fishermen training programs exist, additional efforts are still needed in specific regions.



A Guide to Fishermen Training Programs

How to Use This Guide

This list of programs is current as of January 1, 2022. A map is provided as a visual aid in identifying the location(s) of each program. The program locations are color-coded based on type: blue = saltwater, violet = freshwater, and green = aquaculture. Some portions of the map have been removed because we found no existing programs in those regions.

The guide provides detailed information for each program. The guide is organized into national and state categories, where national programs are found

together and the states are organized in alphabetical order. The program names are color-coded by type: blue = saltwater, violet = freshwater, green = aquaculture, and gray = saltwater and aquaculture. The gray category represents the Marine Resource Education Program (MREP) and the National Shellfish Initiative, which are neither solely saltwater nor aquaculture, but both. Note that MREP is not represented on the map. Appendix 1 contains insights and suggestions from program organizers for people intending to create fishermen training programs.

Marine Resource Education Program

Mission Statement/Goal: “By fishermen, for fishermen” — A fishermen-lead program where the goal is to empower fishermen with a better understanding of how, when, and where to engage in fisheries management effectively

Funding Source(s): Gulf of Maine Research Institute

Location(s): Varies by region — Maine and Maryland (Greater Atlantic), Florida (Southeast), California and Oregon (West Coast), Puerto Rico (Caribbean), Maine and Louisiana (Aquaculture), and Virginia (East Coast)

Organizing/Coordinating Group(s): Gulf of Maine Research Institute

Organizer(s) Name(s): Lauren O’Brien

Organizer(s) Contact Info: lobrien@gmri.org

Frequency: Annual

Year Range Running: 2003 to present

<https://www.gmri.org/projects/marine-resource-education-program-mrep/>

Prerequisites: The program accepts fishermen first but is open to everyone.

Age Range of Participants: 18+

Average Number of Participants per Course: 30

Duration (Classroom and Field): Three-day sequenced workshops (attendance is not required for all workshops)

Sector(s): Commercial, recreational, and aquaculture

Cost: Free

Unique Features: There are multiple programs across the United States and Caribbean, where each is individualized for its region: Greater Atlantic, Southeast, West Coast, Caribbean, and aquaculture. The program was founded by fishermen and is led by a steering committee in each region made up of fishermen who have previously participated in the workshops.

National Shellfish Initiative

Mission Statement/Goal: To provide overarching guidelines, goals, and strategic plans for the state to maximize the economic, environmental, and social benefits of shellfish resources, built with input from shellfish stakeholders across the state

Funding Source(s): National Fish and Wildlife Foundation, NOAA, and additional funds that vary by location

Location(s): Massachusetts, Connecticut, Rhode Island, North Carolina, Gulf of Mexico, Washington, Oregon, and California

Organizing/Coordinating Group(s): The Nature Conservancy, NOAA Fisheries, and some that vary by location: the Cape Cod Commercial Fishermen’s Alliance, the Massachusetts Aquaculture Association, and others

Organizer(s) Name(s): Stephanie Westby (Northeast)

Organizer(s) Contact Info: (301) 427-8677;
stephanie.westby@noaa.gov

<https://www.fisheries.noaa.gov/content/national-shellfish-initiative>

Frequency: Annual

Year Range Running: 2013 to present

Prerequisites: N/A

Age Range of Participants: 18+

Average Number of Participants per Course: Varies by state

Duration (Classroom and Field): Varies by state

Sector(s): Commercial, recreational, and aquaculture

Cost: Free

Unique Features: There are multiple programs across the United States and Caribbean, where each is individualized for its region or sector: Greater Atlantic, Southeast, West Coast, East Coast, Caribbean, and aquaculture. The program was founded by fishermen and is led by a steering committee in each region made up of fishermen who have previously participated in the workshops.

Auburn University School of Fisheries, Aquaculture, and Aquatic Sciences Training Programs

Mission Statement/Goal: To advance the boundaries of aquatic sciences, train the next generation of leaders in the field, and help address the needs of citizens of the state, nation, and world by providing research, teaching, and Extension programs

Funding Source(s): N/A

Location(s): Varies by course

Organizing/Coordinating Group(s): Auburn University School of Fisheries, Aquaculture, and Aquatic Sciences

Organizer(s) Name(s): Allen Davis

Organizer(s) Contact Info: (334) 844-4786;
fish@auburn.edu

Frequency: Based upon interest of groups

Year Range Running: 10+ years

Prerequisites: N/A

Age Range of Participants: 18+

Average Number of Participants per Course: Varies, maximum of 50

Duration (Classroom and Field): Varies (1- to 3-week and 4- to 16-week courses available)

Sector(s): Aquaculture

Cost: Dependent upon number of participants, length of program, travel, and program content

Unique Features: Training programs are customized to fit the needs of program participants.

<https://agriculture.auburn.edu/research/faas/>

Certification for Aquaculture Professionals (CAP, Auburn University)

Mission Statement/Goal: To provide training and certification for aquaculture professionals that allows them to excel in their jobs with a deeper understanding of the environment, food safety, animal welfare, animal health, and social responsibility

Funding Source(s): N/A

Location(s): Auburn, Alabama

Organizing/Coordinating Group(s): Auburn College of Agriculture, School of Fisheries, Aquaculture, and Aquatic Sciences

Organizer(s) Name(s): Auburn College of Agriculture

Organizer(s) Contact Info: (334) 844-2345;
agcomm@auburn.edu

Frequency: N/A

Year Range Running: 10+ years

Prerequisites: There are no prerequisites, but the program is geared toward those who wish to continue their education in aquaculture.

Age Range of Participants: 18+

Average Number of Participants per Course: 50

Duration (Classroom and Field): Dependent upon the interest of the applicant(s) and the number of certifications needed

Sector(s): Aquaculture

Cost: Dependent on number of certifications; discounts for large groups available (range \$4,000 to \$6,000)

Unique Features: On-site practical training sessions by internationally recognized experts will be designed with each training group based on its specific needs. Certification lasts for 3 years. Upon certification completion, each participant will have access to the CAP community, which offers several ongoing educational resources.

<https://agriculture.auburn.edu/research/faas/cap/>

OVPRED 500 — Zebrafish Husbandry Education Online Course

Mission Statement/Goal: To teach husbandry, facilities management, and basic animal health care for zebrafish used in biomedical research

Funding Source(s): University of Alabama-Birmingham, Zebrafish Husbandry Association

Location(s): Alabama (online)

Organizing/Coordinating Group(s): University of Alabama-Birmingham

Organizer(s) Name(s): Dr. Hugh Hammer

Organizer(s) Contact Info: hsh30@pitt.edu

Frequency: Three times per year starting in January, May, and August

Year Range Running: 2014 to present

Prerequisites: N/A

Age Range of Participants: 18+

Average Number of Participants per Course: N/A

Duration (Classroom and Field): 15 weeks

Sector(s): Aquaculture

Cost: N/A

Unique Features: This course includes presentations, quizzes, and case studies focused on the biology and physiology of zebrafish, how to achieve optimal water quality, aquatic systems/filtration, spawning and larviculture, nutrition, feeding, diseases, regulations, and more.

<https://prostudies.uab.edu/search/publicCourseSearchDetails.do?method=load&courseId=4607518>

Oyster Farming Fundamentals Course

Mission Statement/Goal: To provide students with the practical training needed to successfully operate an off-bottom oyster farm

Funding Source(s): Mississippi-Alabama Sea Grant Consortium

Location(s): Auburn Shellfish Laboratory (Dauphin Island, Alabama)

Organizing/Coordinating Group(s): Mississippi Department of Marine Resources, Auburn Shellfish Laboratory, and Dauphin Island Sea Lab

Organizer(s) Name(s): Rusty Grice

Organizer(s) Contact Info: rtg0010@auburn.edu

Frequency: Annual

Year Range Running: 2015 to 2018

Prerequisites: Applicants must be at least 18 and submit an application by March. Applicants must reside in Hancock, Harrison, or Jackson Counties of Mississippi or in southern Alabama, or they must attend Alma Bryant High School in southern Alabama. Applicants must obtain valid seafood permits and driver's licenses.

Age Range of Participants: Juniors/seniors at Alma Bryant High School or 18+

Average Number of Participants per Course: 15 to 25

Duration (Classroom and Field): Five Saturdays from 9 a.m. to noon

Sector(s): Commercial

Cost: \$250, but starting a farm could exceed \$25,000

Unique Features: Students receive 10,000 oyster seeds to begin their own farm and receive access to Grand Bay Oyster Park for a year.

<https://agriculture.auburn.edu/research/faas/auburn-shellfish-lab/extension/>

Alaska Longline Fishermen's Association's Crew Training Program

Mission Statement/Goal: To provide young people with an opportunity to gain experience and to better understand commercial fishing, the lifestyle it provides, and its important role in supporting coastal communities

Funding Source(s): Alaska Sea Grant, National Fish and Wildlife Foundation, Edgerton Foundation, City and Borough of Sitka, and Alaska Community Foundation

Location(s): Alaska

Organizing/Coordinating Group(s): Alaska Longline Fishermen's Association

Organizer(s) Name(s): Tara Racine and Natalie Sattler

Organizer(s) Contact Info: alfa.outreach@gmail.com and asft.alfa.programs@gmail.com

Frequency: Annual

Year Range Running: 2015 to present

Prerequisites: Participants should have an interest in pursuing a career in commercial fishing.

Age Range of Participants: 18+

Average Number of Participants per Course: Varies

Duration (Classroom and Field): 4 to 12 months, but shorter experiences available

Sector(s): Commercial

Cost: Free; deckhands compensated for their time

Unique Features: This program can be tailored to a short-term experience for those who can't commit to a whole fishing season.

<https://www.alfafish.org/crewtraining>

Alaska Marine Safety Education Association (AMSEA) — Safety and Survival Training

Mission Statement/Goal: To reduce injury and death in the marine and freshwater environment by providing mariners engaged in commercial and noncommercial activities with hands-on safety and survival training needed to respond to onboard emergencies

Funding Source(s): Dependent on program

Location(s): Varies by program and year

Organizing/Coordinating Group(s): Alaska Marine Safety Education Association (AMSEA), Alaska Department of Commerce, Community, and Economic Development, National Institute for Occupational Safety and Health, United States Coast Guard, and others

Organizer(s) Name(s): AMSEA

Organizer(s) Contact Info: (907) 747-3287

Frequency: Varies by program; most offered several times per year

Year Range Running: 1985 to present

Prerequisites: Workshops are recommended for captains and crew members serving on any commercial vessel.

Age Range of Participants: Youth/adults

Average Number of Participants per Course: 8+

Duration (Classroom and Field): Dependent on training (1 to 2 days on average)

Sector(s): Commercial and recreational

Cost: Varies with training type and location (\$125 to \$185 for commercial fisherman training)

Unique Features: This program includes many different safety-training programs for different people, including youth, adults, mariners, recreational fishermen, and teachers. Scholarships may be available for certain workshops to help alleviate cost.

<https://www.amsea.org/>

Alaska Young Fishermen's Summit

Mission Statement/Goal: To provide networking and skill building for new entrants in managing modern commercial fishing businesses

Funding Source(s): Alaska Sea Grant Marine Advisory Program

Location(s): Alaska

Organizing/Coordinating Group(s): Alaska Sea Grant and University of Alaska-Fairbanks

Organizer(s) Name(s): Sunny Rice

Organizer(s) Contact Info: sunny.rice@alaska.edu

Frequency: Annual

Year Range Running: 2007 to present

Prerequisites: N/A

Age Range of Participants: 18+

Average Number of Participants per Course: 50

Duration (Classroom and Field): 3 days

Sector(s): Commercial

Cost: Non-Alaskan commercial fishermen, \$200 (\$225 for later registration); Alaskan commercial fishermen, \$150 (\$175 for later registration)

Unique Features: The program offers a free drill conductor class for commercial fishermen.

<https://alaskaseagrant.org/events/alaska-young-fishermens-summit/>

Bristol Bay Fly Fishing and Guide Academy

Mission Statement/Goal: Prepares young local leaders by equipping them with the knowledge, values, and skills necessary to be conservation advocates in their communities and to link visitors to the salmon and trout conservation issues in the region

Funding Source(s): NOAA Fisheries, Bristol Bay Native Corporation (BBNC), Alaska Fly Fishers, and more (see Resources section below)

Location(s): Alaska

Organizing/Coordinating Group(s): NOAA Fisheries and University of Alaska Bristol Bay Campus

Organizer(s) Name(s): Meghan Barker

Organizer(s) Contact Info: mbarker@tu.org

Frequency: Annual

Year Range Running: 2008 to present

Prerequisites: The program is reserved for, but not limited to, Bristol Bay residents and BBNC shareholders and descendants.

Age Range of Participants: 14 to 24

Average Number of Participants per Course: 10 to 15

Duration (Classroom and Field): 1 week

Sector(s): Recreational

Cost: Free for students; sponsors pay for the academy

Unique Features: The graduates are qualified for introductory jobs (local lodges, tourism-based businesses, etc.) but can also participate in an apprenticeship program instead of being immediately hired.

<https://bristolbayriveracademy.org/history/>

<https://bristolbayriveracademy.files.wordpress.com/2011/11/bbraguidebook-e-2012.pdf>

FishBiz Project

Mission Statement/Goal: To provide financial and business tools to Alaskan fishermen through free online resources

Funding Source(s): Alaska Sea Grant

Location(s): Alaska

Organizing/Coordinating Group(s): University of Alaska Fairbanks (UAF) College of Fisheries and Ocean Sciences

Organizer(s) Name(s): UAF or Sunny Rice

Organizer(s) Contact Info: UAF-fishbiz@alaska.edu or sunny.rice@alaska.edu

Frequency: Online; can be taken at any point

Year Range Running: 2015 to present

Prerequisites: N/A

Age Range of Participants: 18+

Average Number of Participants per Course: No limit

Duration (Classroom and Field): All online and at own pace

Sector(s): Intended for commercial, but any businessperson can participate

Cost: Free

Unique Features: The website has steps for starting, growing, and managing a business, as well as planning for the fishermen's future.

<http://fishbiz.seagrant.uaf.edu/>

University of Alaska Southeast Applied Fisheries Program

Mission Statement/Goal: To develop programs to meet the growing need for fisheries technicians and fisheries biologists

Funding Source(s): National Science Foundation

Location(s): Sitka, Alaska

Organizing/Coordinating Group(s): University of Alaska Southeast, Sitka Campus

Organizer(s) Name(s): Angie Bower

Organizer(s) Contact Info: abowers4@alaska.edu

Frequency: Annual

Year Range Running: 2021 to present

Prerequisites: Must register as nondegree/degree-seeking student at the University of Alaska Southeast

Age Range of Participants: 18 to 28

Average Number of Participants per Course: 5 to 10

Duration (Classroom and Field): One semester

Sector(s): Commercial and aquaculture

Cost: \$1,300 for 13-credit course; students responsible for lodging, meals, and travel

Unique Features: Available courses cover disciplines such as oceanography, fish biology, Alaskan fisheries management, and aquaculture, and courses can be completed online.

https://uas.alaska.edu/career_ed/fisheries/index.html#tab2

Young Fishing Fellows Program

Mission Statement/Goal: To provide valuable learning, leadership, and career-building skills with opportunities in fisheries management and policy, seafood business, seafood marketing, and fisheries

Funding Source(s): Alaska Fishermen's Network and some that vary by year: Copper River/Prince William Sound Marketing Association, Kachemak Bay National Estuarine Research Reserve, Homer Charter Association, Alaska Longline Fishermen's Association, North Pacific Fisheries Association, Alaska Fishermen's Network, Catch 49, and others

Location(s): Alaska

Organizing/Coordinating Group(s): Alaska Fishermen's Network

Organizer(s) Name(s): Alasha Brito

Organizer(s) Contact Info: alasha@akmarine.org or fish@akmarine.org

Frequency: Annual

Year Range Running: 2017 to present

Prerequisites: Any Alaskan resident can participate, but priority goes to those who are under 40, have at least 3 years of experience, and are active crew members or skippers or permit/quota holders.

Age Range of Participants: 18+

Average Number of Participants per Course: Depends on how many hosts (captains or companies willing to take on a fellow) sign up per year (four in 2020)

Duration (Classroom and Field): 4 to 12 months

Sector(s): Commercial

Cost: Free; fellows are paid a stipend

Unique Features: Fellows must cohost one or two outreach events; current and former participants are on the steering committee.

<https://www.akyoungfishermen.org/young-fishing-fellows>

California Commercial Fishing Apprenticeship Program

Mission Statement/Goal: To make California commercial fisheries more resilient by training fishermen as they enter fisheries, thereby supporting economically, ecologically and socially sustainable fisheries

Funding Source(s): California Sea Grant, National Fish and Wildlife Foundation, NOAA, the Gordon and Betty Moore Foundation, the David and Lucile Packard Foundation, and the Walton Family Foundation

Location(s): San Diego, California (hopes to extend to Santa Barbara and Eureka)

Organizing/Coordinating Group(s): University of California-San Diego, San Diego commercial fishermen's groups, and California Sea Grant

Organizer(s) Name(s): Theresa Talley

Organizer(s) Contact Info: ttalley@ucsd.edu

Frequency: Annual to biannual

Year Range Running: 2020 to present

Prerequisites: Applicants must acquire a licensed commercial fisherman sponsor, obtain a high school diploma or equivalent, pass a swim test, observe on one commercial fishing trip, and be approved of at-sea fitness.

Age Range of Participants: 18+

Average Number of Participants per Course: Five

Duration (Classroom and Field): 6 to 12 months consisting of 100 hours of training; then, paired with a veteran fisherman for 1,000 hours of paid on-the-job training

Sector(s): Commercial

Cost: \$500 to \$1,000, but scholarships often available

Unique Features: Most of the program is paid on-the-job training with a paired veteran fishing crew.

<https://caseagrants.ucsd.edu/sites/default/files/CCFAP%20Manual%201st%20Edition.pdf>

Florida Friendly Fishing Guide Certification

Mission Statement/Goal: To work with fishing guides to enhance the preservation of Florida's fisheries through sustainable boating and fishing techniques and to provide a richer fishing experience for the clients through the fishing guides' angling expertise and environmental stewardship

Funding Source(s): Florida Sea Grant, CaddyCan, Sport Fish Restoration, and University of Florida

Location(s): Florida

Organizing/Coordinating Group(s): University of Florida Institute of Food and Agricultural Sciences Extension and Florida Fish and Wildlife Conservation Commission

Organizer(s) Name(s): Mike Sipos

Organizer(s) Contact Info: sipos624@ufl.edu

Frequency: Fully online; can be taken at any point

Year Range Running: 2019 to present

Prerequisites: These vary depending on course type but include a captain's license, USCG safety requirements, vessel registration, etc.

Age Range of Participants: 18+

Average Number of Participants per Course: No limit (web-based)

Duration (Classroom and Field): 4 hours (20- to 30-minute increments)

Sector(s): Recreational

Cost: \$130

Unique Features: The program is fully online and helps current Florida fishermen's small and local businesses.

<https://www.flseagrant.org/florida-friendly-fishing-guide-certification/>

Sharks Aquaculture Life Training (SALT)

Mission Statement/Goal: To work with juniors and seniors at Cedar Key High School so they can become certified in industrial aquaculture upon graduation. This course provides them with business, aquaculture, and other related skills needed for the industry

Funding Source(s): Florida Aquaculture Association

Location(s): Cedar Key, Florida

Organizing/Coordinating Group(s): Cedar Key Aquaculture Association, Cedar Key High School, Migrant Education Program, Florida Aquaculture Association, and University of Florida Institute of Food and Agricultural Sciences Extension

Organizer(s) Name(s): University of Florida Institute of Food and Agricultural Sciences Extension and Florida Aquaculture Association

Organizer(s) Contact Info: (352) 543-5057;
LNST@ufl.edu or Tiffany@flaa.org

Frequency: Annual

Year Range Running: 2018 to present

Prerequisites: Applicants must work for 300 hours on an aquaculture farm, take the Florida Aquaculture Association Industry certification test, take safety skills courses, and pass background checks.

Age Range of Participants: Juniors and seniors at Cedar Key High School

Average Number of Participants per Course: Four to six students

Duration (Classroom and Field): 2 years

Sector(s): Aquaculture

Cost: Free

Unique Features: This program requires 300 work hours on an aquaculture farm, is designed for high school students, and permits the students to run their own clam farm. To obtain certification, students must register and pass the FAA exam. The cost of registration is \$95 (<https://www.flaa.org/certification-information>).

<https://sites.google.com/levyk12.org/salt/home>

Teach Aquaculture

Mission Statement/Goal: To provide teachers' curriculum modules on aquaculture and aquatic sciences

Funding Source(s): Previously funded by Florida Department of Agriculture and Community Services, but varies by year

Location(s): Varies by participant; course PDF is downloadable

Organizing/Coordinating Group(s): University of Florida Institute of Food and Agricultural Sciences Indian River Research and Education Center

Organizer(s) Name(s): Dr. Cortney Ohs

Organizer(s) Contact Info: (772) 577-7348; cohs@ufl.edu

Frequency: N/A

Year Range Running: 2008 to present

Prerequisites: Training modules were designed for teacher curriculum use.

Age Range of Participants: Not specified

Average Number of Participants per Course: N/A

Duration (Classroom and Field): N/A

Sector(s): Aquaculture

Cost: Free

Unique Features: Teaching modules have been written at a 9th-grade level but are highly adaptable to grades K-12.

<https://irrec.ifas.ufl.edu/teach-aquaculture/>

Basic Commercial Fisherman Program

Mission Statement/Goal: To provide students at McIntosh County Academy with courses on how to be a successful fisherman

Funding Source(s): Georgia Sea Grant

Location(s): McIntosh, Georgia

Organizing/Coordinating Group(s): University of Georgia Marine Extension, Georgia Sea Grant, Coastal Pines Technical College (Dual Enrollment), and McIntosh County Academy

Organizer(s) Name(s): Bryan Fluech

Organizer(s) Contact Info: fluech@uga.edu

Frequency: Annual

Year Range Running: 2019 to present

Prerequisites: Applicants must currently be enrolled in McIntosh County Academy in Georgia and achieve passing placement scores in reading, English, and mathematics.

Age Range of Participants: 18+

Average Number of Participants per Course: N/A

Duration (Classroom and Field): 12 credit hours total

Sector(s): Commercial

Cost: Coastal Pines tuition costs

Unique Features: This program is for those who want to begin a career in commercial fishing and covers subjects that will better prepare participants to serve as a crew member aboard a commercial fishing vessel. Participants are exposed to a variety of gear, including trawls, cast nets, hook and line, and traps.

[http://iq2prod1.smartcatalogiq.com/en/Catalogs/Coastal-Pines-Technical-College/2019-2020/Catalog-Student-Handbook/Programs-of-Study1/Basic Commercial Fisherman BT41/Basic Commercial Fisherman BCF1 Technical Certificate of Credit](http://iq2prod1.smartcatalogiq.com/en/Catalogs/Coastal-Pines-Technical-College/2019-2020/Catalog-Student-Handbook/Programs-of-Study1/Basic%20Commercial%20Fisherman%20BT41/Basic%20Commercial%20Fisherman%20BCF1%20Technical%20Certificate%20of%20Credit)

Education and Training — Lake Michigan Fisheries Workshops

Mission Statement/Goal: To provide information on research, fish populations, food webs, and the environmental components of Lake Michigan to local anglers within Illinois and Indiana

Funding Source(s): Illinois-Indiana Sea Grant

Location(s): Illinois and Indiana

Organizing/Coordinating Group(s): Purdue University Extension, Indiana Department of Natural Resources, Illinois Natural History Survey, U.S. Fish and Wildlife Service, NOAA Great Lakes Environmental Research Laboratory, and others (see Resources section)

Organizer(s) Name(s): Mitchell Zischke

Organizer(s) Contact Info: mzischke@purdue.edu

Frequency: Multiple workshops throughout the fall and spring

Year Range Running: 2017 to present

Prerequisites: Applicants must obtain a fishing license for Illinois or Indiana.

Age Range of Participants: 18+

Average Number of Participants per Course: 25

Duration (Classroom and Field): 1 day

Sector(s): Commercial and recreational

Cost: Free

Unique Features: The workshops are offered at convenient times and locations for fishermen (out of season, nighttime, near docks, etc.).

<https://iiseagrant.org/work/fisheries/education-training/>

Louisiana Fisheries Forward Summit

Mission Statement/Goal: To help fishermen understand the “science” of fishing, business trends, new technologies and equipment, and regulatory rules and policies that lead to financial success

Funding Source(s): Louisiana Seafood, Louisiana Shrimp Task Force, Louisiana Crab Task Force, and Louisiana’s Seafood Future

Location(s): Louisiana

Organizing/Coordinating Group(s): Louisiana Sea Grant, Louisiana State University AgCenter, and the Department of Louisiana Wildlife and Fisheries

Organizer(s) Name(s): Thomas Hymel

Organizer(s) Contact Info: Thymel@agctr.lsu.edu

Frequency: Every 2 years

Year Range Running: 2010 to present

Prerequisites: Applicants must be interested in fisheries.

Age Range of Participants: 18+

Average Number of Participants per Course: 100

Duration (Classroom and Field): 1 day

Sector(s): Commercial and recreational

Cost: Free

Unique Features: The program offers information about a variety of subjects: commercial fishing, crabbing, shrimping, business, seafood, etc.

<https://www.lafisheriesforward.org/>

Aquaculture in Shared Waters

Mission Statement/Goal: To prepare fishermen to start an aquaculture venture with a focus on understanding the attitudes, perceptions, and knowledge of fishermen with respect to change

Funding Source(s): National Sea Grant Program

Location(s): Maine

Organizing/Coordinating Group(s): University of Maine School of Marine Sciences, Maine Sea Grant, University of Maine Cooperative Extension, Maine Aquaculture Association, Maine Aquaculture Innovation Center, Coastal Enterprises Inc., and the Island Institute

Organizer(s) Name(s): Dana Morse

Organizer(s) Contact Info: (207) 563-8186;
dana.morse@maine.edu

Frequency: Annual

Year Range Running: 2013 to present

Prerequisites: There are no prerequisites, but the program is geared toward working waterfront family members.

Age Range of Participants: Varies

Average Number of Participants per Course: N/A

Duration (Classroom and Field): 12 Weeks

Sector(s): Aquaculture

Cost: Free

Unique Features: This program covers a wide range of topics and uses a mix of meetings, field trips/site visits, and guest speakers and experts in the field to introduce students to the issues important to running a successful aquaculture business.

<https://seagrant.umaine.edu/extension/aquaculture-in-shared-waters/>

Eastern Maine Skippers Program

Mission Statement/Goal: To provide high school students with the core knowledge and skills needed to participate in coastal fisheries

Funding Source(s): Local businesses

Location(s): Southeastern Maine

Organizing/Coordinating Group(s): Maine Center for Coastal Fisheries

Organizer(s) Name(s): Tom Duym

Organizer(s) Contact Info: (207) 610-0213;
tduym@coastalfisheries.org

Frequency: Annual

Year Range Running: 2012 to present

Prerequisites: Prerequisites are dependent on the participating school.

Age Range of Participants: High school (grades 9 to 12)

Average Number of Participants per Course: 60 to 100

Duration (Classroom and Field): Dependent on school

Sector(s): Commercial

Cost: Dependent on program; generally no cost for tuition, but participants may incur some associated costs for travel

Unique Features: Students must complete an intensive group or individual project in which they work collaboratively with community fishermen, scientists, regulators, and related businesses to investigate challenges within the fishing industry. They then research, develop, and present effective solutions.

<https://coastalfisheries.org/collaborative-education/eastern-maine-skippers/>

Maine's Lobster Apprentice Program "FISH SAFE"

Mission Statement/Goal: To provide Maine's lobster commercial fishermen with the safety training required by the U.S. Coast Guard and any extra safety skills needed to safely operate as a commercial fisheries vessel and crew

Funding Source(s): Maine Department of Marine Resources

Location(s): Maine

Organizing/Coordinating Group(s): NOAA Fisheries and Maine Department of Marine Resources

Organizer(s) Name(s): Ann Backus

Organizer(s) Contact Info: abackus@hsph.harvard.edu

Frequency: Annual

Year Range Running: 1998 to present

<https://www.maine.gov/dmr/science-research/species/lobster/limitedentry.html>

Prerequisites: Applicants must meet the eligibility for the lobster license (LD 1503).

Age Range of Participants: 18 to 23

Average Number of Participants per Course: N/A

Duration (Classroom and Field): 1,000 hours over 200 days stretched out over 2 years

Sector(s): Commercial

Cost: Free

Unique Features: Fishermen must follow specific rules and regulations that vary by fishing zone.

Cape Cod Fishermen Training Program

Mission Statement/Goal: A fishing program that is driven by the community's needs and is meant to be the place to start a fishing career by providing professional certifications through training from respected, knowledgeable captains and certified trainers

Funding Source(s): Cape Cod Commercial Fishermen's Alliance

Location(s): Massachusetts

Organizing/Coordinating Group(s): Cape Cod Commercial Fishermen's Alliance

Organizer(s) Name(s): Stephanie Sykes

Organizer(s) Contact Info:
stephanie@capecodfishermen.org

<https://capecodfishermen.org/item/fishermen-s-training-program>

Frequency: Biannual

Year Range Running: 2020 to present

Prerequisites: N/A

Age Range of Participants: 18+

Average Number of Participants per Course: N/A

Duration (Classroom and Field): Two sessions per course (January-February and February-March)

Sector(s): Commercial

Cost: Free

Unique Features: The program provides professional certifications to be used in any maritime career, not just by captains.

Extreme Gloucester Fishing

Mission Statement/Goal: To provide professional training in sustainable fishing practices and assist with job placement within the fishing community

Funding Source(s): Extreme Gloucester Fishing and limited donations from local fishermen

Location(s): Gloucester, Massachusetts

Organizing/Coordinating Group(s): Extreme Gloucester Fishing and Maritime Gloucester

Organizer(s) Name(s): Joseph Sanfilippo

Organizer(s) Contact Info: (978) 879-3577;
extremegloucesterfishing@outlook.com

Frequency: Biannual

Year Range Running: 2019 to present

Prerequisites: None

Age Range of Participants: 16 to 25

Average Number of Participants per Course: 7 to 21

Duration (Classroom and Field): Varies upon request for training

Sector(s): Commercial

Cost: Free

Unique Features: This program is designed for students to become deck bosses and first mates with an emphasis on how to work up the employment ladder. The program is almost exclusively self-funded and is still in its infancy, but it is quickly gaining popularity. It is the only one of its kind in the region. This modularized program allows flexibility to accommodate student needs, and private, one-on-one hands-on training is available upon request.

<https://www.extremegloucesterfishing.com/classes>

Fundamentals of Shellfish Farming

Mission Statement/Goal: To provide the knowledge needed to operate a productive shellfish farm

Funding Source(s): Woods Hole Sea Grant and Cooperative Extension of Barnstable County, Massachusetts

Location(s): Cape Cod, Massachusetts

Organizing/Coordinating Group(s): Woods Hole Sea Grant and Woods Hole Oceanographic Institution

Organizer(s) Name(s): Abigail Archer

Organizer(s) Contact Info: aarcher@barnstablecounty.org

Frequency: Annual

Year Range Running: 2000 to present

Prerequisites: Applicants must be interested in starting/learning about shellfish farms.

Age Range of Participants: 18+

Average Number of Participants per Course: N/A

Duration (Classroom and Field): 10 weeks

Sector(s): Aquaculture

Cost: \$75

Unique Features: Certification is awarded upon completion of an exam with a score of 80+. It is issued by the Southeastern Massachusetts Aquaculture Center (SEMAC).

<https://www.capecodextension.org/marine/workshops/>

Project FISH

Mission Statement/Goal: To provide fishing education and skills to interested adults and youths from Michigan

Funding Source(s): Great Lakes Fisheries Trust

Location(s): Michigan

Organizing/Coordinating Group(s): Project F.I.S.H. Partners

Organizer(s) Name(s): Michigan State University, Department of Community, Agriculture, Recreation, and Resource Studies, the Great Lakes Fishery Trust, the Michigan Department of Natural Resources, Michigan State University Extension, and Michigan United Conservation Clubs

Organizer(s) Contact Info: infor@projectfish.org or steph143@msu.edu

Frequency: Multiple workshops throughout the year

Year Range Running: 1998 to present

Prerequisites: Applicants must be interested in learning about the Great Lakes fisheries.

Age Range of Participants: Children and adults

Average Number of Participants per Course: N/A

Duration (Classroom and Field): Weekends or 3-hour sessions

Sector(s): Recreational

Cost: Free

Unique Features: This is a mentor-based, community-supported program.

<http://www.projectfish.org/index.html>

Off-Bottom Oyster Farming Fundamentals Course

Mission Statement/Goal: To provide oyster farmers in Mississippi with a foundation of knowledge to start and/or improve their oyster farm operation

Funding Source(s): Mississippi-Alabama Sea Grant Consortium and RESTORE-Act Project

Location(s): Bolton Building, Biloxi, Mississippi

Organizing/Coordinating Group(s): Mississippi Department of Marine Resources

Organizer(s) Name(s): Jason Rider

Organizer(s) Contact Info: jason.rider@dmr.ms.gov

Frequency: Annual

Year Range Running: 2020 to present

Prerequisites: Applicants must complete the application by March; reside in Hancock, Harrison, or Jackson Counties; be 18 or older; have a valid boat registration; have a valid Mississippi driver's license; and attend the information session. Priority goes to applicants with commercial seafood licenses.

Age Range of Participants: 18+

Average Number of Participants per Course: 15

Duration (Classroom and Field): Five Saturdays from 8 a.m. to noon

Sector(s): Aquaculture

Cost: Free

Unique Features: Applicants receive 10,000 oyster seeds and access to Deer Island Oyster Park for 1 year.

<https://dmr.ms.gov/oboa-training-program/>

Fishermen Invested in Science, Healthy Ecosystems and Sustainability (FISHES)

Mission Statement/Goal: To extend practical, science-based information about fisheries management, fisheries science, and sustainability to fish enthusiasts in a user-friendly format

Funding Source(s): Mississippi-Alabama Sea Grant Consortium and Mississippi State University

Location(s): Biloxi, Mississippi

Organizing/Coordinating Group(s): Mississippi-Alabama Sea Grant Consortium and Mississippi State University

Organizer(s) Name(s): Marcus Drymon

Organizer(s) Contact Info: marcus.drymon@msstate.edu

Frequency: Annual

Year Range Running: 2021 to present

Prerequisites: Applicants must be involved in commercial and/or recreational fishing and interested in learning more about fisheries management, fisheries science, and sustainability.

Age Range of Participants: 18+

Average Number of Participants per Course: 12

Duration (Classroom and Field): 5 Thursday nights for 2 hours plus a 5-hour field trip

Sector(s): Commercial, recreational, and aquaculture

Cost: \$50

Unique Features: This course is designed to illustrate the union of fisheries management and fisheries science using specific examples from Mississippi and Alabama.

<https://coastal.msstate.edu/fisheries-fishes>

Introductory Fisheries Science for Stakeholders (IFISSH)

Mission Statement/Goal: To educate stakeholders of New Jersey's marine fisheries on the science, management, and responsible stewardship of fishery resources so that they are better prepared to make progress on, and get involved with, issues impacting their industry

Funding Source(s): Alampi Fund from the Department of Agriculture and Natural Resources and Rutgers Cooperative Extension

Location(s): New Jersey

Organizing/Coordinating Group(s): Rutgers Cooperative Extension

Organizer(s) Name(s): Doug Zemeckis

Organizer(s) Contact Info: zemeckis@njaes.rutgers.edu

Frequency: Annual

Year Range Running: 2018 to present

Prerequisites: N/A

Age Range of Participants: 18+

Average Number of Participants per Course: 70

Duration (Classroom and Field): 8 to 10 weeks

Sector(s): Recreational

Cost: \$60

Unique Features: The program takes a hybrid approach and is offered as a "night school" to increase attendance.

<https://ocean.njaes.rutgers.edu/marine/IFISSH.html>

Fish Camp: North Carolina Sea Grant's Young Fisher Training

Mission Statement/Goal: To engage participants in conversations about why fishermen and fishing matter, to share visions for the future of their industry, and to discuss how they can shape their values and principles into messages that the public and policymakers understand and respect

Funding Source(s): Varies by year

Location(s): North Carolina

Organizing/Coordinating Group(s): North Carolina Sea Grant

Organizer(s) Name(s): Katelyn Vause or Sara Mirabilio

Organizer(s) Contact Info: kmosher@ncsu.edu
or semirabi@ncsu.edu

Frequency: Biannually, dependent upon funding

Year Range Running: 2018 to present

Prerequisites: There are no prerequisites, but the workshop is geared toward North Carolina fishermen.

Age Range of Participants: 17+

Average Number of Participants per Course: 25

Duration (Classroom and Field): 3 consecutive days

Sector(s): Commercial

Cost: Free

Unique Features: Participants receive 2 nights' lodging, all meals, and a modest compensation for attending to cover lost fishing income.

<https://ncseagrant.ncsu.edu/news/2019/12/fish-camp-workshops/>

Introductory North Carolina Marine Fisheries Management for Fishermen

Mission Statement/Goal: To provide saltwater anglers in North Carolina with an introduction to fisheries science and management

Funding Source(s): North Carolina Sea Grant, fee-based class

Location(s): North Carolina

Organizing/Coordinating Group(s): North Carolina Division of Marine Resources and North Carolina Sea Grant

Organizer(s) Name(s): Scott Baker and Mary Beth Barrow

Organizer(s) Contact Info: msbaker@ncsu.edu and mebarrow@ncsu.edu

Frequency: Annual

Year Range Running: 2019 to present

Prerequisites: Applicants must be saltwater anglers.

Age Range of Participants: 18+

Average Number of Participants per Course: 60 (20 in person, 40 virtual)

Duration (Classroom and Field): Three Tuesday nights for 2 hours

Sector(s): Commercial, recreational, and aquaculture

Cost: \$15

Unique Features: The program offers a webinar format to allow for more participants (e.g., people located out-of-state).

<https://ncseagrant.ncsu.edu/news/wp-content/uploads/sites/7/2019/10/Fisheries-Mgmt-Flyer.pdf>

North Carolina Shellfish Farming Academy

Mission Statement/Goal: To introduce students to shellfish-farming techniques and strategies, shellfish leases, and starting a shellfish business in North Carolina

Funding Source(s): North Carolina Sea Grant, Carteret County Community College

Location(s): North Carolina

Organizing/Coordinating Group(s): North Carolina Sea Grant, Carteret County Community College

Organizer(s) Name(s): David Cerino

Organizer(s) Contact Info: cerinod@carteret.edu

Frequency: Annual

Year Range Running: 2020 to present

Prerequisites: None

Age Range of Participants: 18+

Average Number of Participants per Course: 70

Duration (Classroom and Field): 12 weeks

Sector(s): Aquaculture

Cost: \$125

Unique Features: This course is geared toward those with an interest in becoming mariculture entrepreneurs and involves 24 hours of classroom teaching along with 24 hours of hands-on instruction.

<https://carteret.edu/corporate-and-community-education/continuing-education-classes/cced-aquaculture/>

Lake Erie Sport Fishing Course

Mission Statement/Goal: To give participants detailed information and background in technical concepts used by anglers

Funding Source(s): Ohio Sea Grant

Location(s): Stone Lab at Ohio State University

Organizing/Coordinating Group(s): Stone Lab, NOAA Fisheries, Ohio State University, and Ohio Sea Grant

Organizer(s) Name(s): Tory Gabriel

Organizer(s) Contact Info: gabriel.78@osu.edu

Frequency: Biannual

Year Range Running: 2005 to present

Prerequisites: Applicants must obtain an Ohio fishing license and complete a 1-year high school biology course.

Age Range of Participants: High school and older

Average Number of Participants per Course: Four to 12

Duration (Classroom and Field): 1 week with lectures and fishing field trips

Sector(s): Recreational

Cost: For Ohio residents, the course is \$596, and room and board is \$500; for non-Ohio Residents, course \$1,847, room and board \$500. Alternatively, the course can be taken as a workshop for no credits at a cost of \$425.

Unique Features: The program is offered as a college course to upper level high school students, college students, or those who are interested, but it is also offered as a workshop (a more in-depth experience than the listed workshop).

<https://ohioseagrant.osu.edu/education/stonelab/courses/3rpec/lake-erie-sport-fishing>

Lake Erie Sport Fishing Workshop

Mission Statement/Goal: To give participants a background in technical concepts used by anglers, with a focus on the fishing experience

Funding Source(s): Ohio Sea Grant

Location(s): Stone Lab at Ohio State University

Organizing/Coordinating Group(s): Stone Lab, NOAA Fisheries, Ohio State University, and Ohio Sea Grant

Organizer(s) Name(s): Tory Gabriel

Organizer(s) Contact Info: gabriel.78@osu.edu

Frequency: Multiple workshops throughout the year for the sport fishing seasons

Year Range Running: 2005 to present

Prerequisites: Applicants must be high school graduates and possess an Ohio fishing license.

Age Range of Participants: 18+

Average Number of Participants per Course: Four to 12 (tends to receive fewer participants than the course)

Duration (Classroom and Field): 3 days

Sector(s): Recreational

Cost: \$500

Unique Features: It focuses mostly fishing experiences with fewer lectures than the course due to shorter time limit.

<https://ohioseagrant.osu.edu/education/stonelab/courses/6i44m/lake-erie-sport-fishing-workshop>

Ohio Charter Captain Conference

Mission Statement/Goal: To gather Ohio charter captains to educate them in changing rules and regulations, new fishing techniques, business lessons, and more

Funding Source(s): Ohio Sea Grant

Location(s): Stone Lab at Ohio State University

Organizing/Coordinating Group(s): Stone Lab, NOAA Fisheries, Ohio State University, and Ohio Sea Grant

Organizer(s) Name(s): Tory Gabriel

Organizer(s) Contact Info: gabriel.78@osu.edu

Frequency: Annual

Year Range Running: 1981 to present

Prerequisites: The program is open to the public but is meant for charter captains and their businesses; all participants must complete preregistration.

Age Range of Participants: 18+

Average Number of Participants per Course: About 150 captains per year, plus their families and the interested general public (attendance by public and families is not monitored closely)

Duration (Classroom and Field): 1 day

Sector(s): Recreational

Cost: Free (Online)

Unique Features: Four captains win the cost of their Ohio Lake Erie Fishing Guide License as a door prize.

<https://ohioseagrant.osu.edu/news/calendar/2022/03/05/ys2x6/charter-captains-conference>

Applied Shellfish Farming Course

Mission Statement/Goal: To teach both aspiring shellfish farmers and aquaculture professionals the ins-and-outs of commercially growing oysters, quahogs, scallops, and mussels

Funding Source(s): Roger Williams University

Location(s): Bristol, Rhode Island

Organizing/Coordinating Group(s): Roger Williams University

Organizer(s) Name(s): Dale Leavitt

Organizer(s) Contact Info: dleavitt@rwu.edu or appliedshellfishfarming@gmail.com

Frequency: Annual

Year Range Running: 2003 to present

Prerequisites: Applicants must have a desire to start a shellfish farm.

Age Range of Participants: 18+

Average Number of Participants per Course: N/A

Duration (Classroom and Field): 15 evening lectures over 4 months

Sector(s): Aquaculture

Cost: \$100 for the whole course; drop-in basis is \$10 per class meeting

Unique Features: The program is offered in-person or online; aspects of the program are required for the Recreational Aquaculture Permit.

<https://appliedshellfishfarming.org/>

<https://appliedshellfishfarming.org/applied-shellfish-farming-course/>

Commercial Fisherman Apprenticeship Program

Mission Statement/Goal: To provide a crew training program designed and offered by the East Farm Commercial Fisheries Center of Rhode Island

Funding Source(s): Real Jobs Rhode Island

Location(s): Point Judith and Kingston, Rhode Island

Organizing/Coordinating Group(s): East Farm Commercial Fisheries Center, the University of Rhode Island Fisheries Center, U.S. Coast Guard, Rhode Island Department of Environmental Management, local fishermen, and shoreside fisheries

Organizer(s) Name(s): Shaye Rooney (assistant director)

Organizer(s) Contact Info: shayerooney@cfcri.org

Frequency: Annual

Year Range Running: 2016 to present

Prerequisites: Applicants must be at least 18, have a driver's license, pass background and drug tests, and commit to 4 weeks.

Age Range of Participants: 18+

Average Number of Participants per Course: 16

Duration (Classroom and Field): 4 weeks (3 days at sea)

Sector(s): Commercial

Cost: Free; apprentices receive a \$1,000 stipend and \$15/day for meals

Unique Features: Students get to select two types of fishing experiences for their 3 days at sea (gillnetting, lobster/ fish pots, trawling, scalloping, or rod and reel). Upon completion, there is a commitment from vessels to hire each student as a crew member.

<https://www.cfcri.org/apprenticeship.html>

Appendix 1: Tips and Tricks from Program Organizers

National Shellfish Initiative: Prioritize communication to keep the public, fishermen, seafood businesses, and fisheries management interested and supportive.

FishBiz: Consider marketing to be an important factor, especially if a program will have an online presence.

California Commercial Fishing Apprenticeship Program: Ensure the fishermen will sponsor the apprentice; work with the fishermen to create the relationships; generate marketing funding and extra funds to act as incentives for fishermen involvement; and create the program to be adaptive.

Florida Friendly Fishing Guide Certification: Implement more marketing funds to promote the program.

Cape Cod Fishermen Training Program: Get started sooner; it took about 2 years to get this program running.

Introductory Fisheries Science for Stakeholders (IFISSH): Allow for Q&A during course meetings; offer field trips.

Introductory North Carolina Marine Fisheries Management for Fishermen: Offer a hybrid format or recordings to reach more anglers.

Lake Erie Sport Fishing Course: Invest in taking trips on a fishing vessel, rather than a research vessel, to create the most realistic experience possible for the students.

Lake Erie Sport Fishing Workshop: Try to offer the course during major fishing seasons (large sport-fishing seasons).

Ohio Charter Captain Conference: Ask the captains to take a survey after the conference so they can provide feedback on how the conference went and what they would like to see next year.

Applied Shellfish Farming Course: Offer online and in-person formats to broaden the reach to both national and international students; bring in guest speakers if possible.



Photo by David Hay Jones

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