

Fisheries · Navigation · Mechanics

Continuing Education and Training



École des pêches et de
l'aquaculture du Québec
Cégep de la Gaspésie et des Îles

Courses offered for
2021-2023

Section Fisheries



| Course title | Length | Brief description | Target clientele | Number of participants (min./max.) |
|---|-----------|---|---|------------------------------------|
| 1. Net-mending | 150 hours | <p>This course teaches fishing net mending. Participants learn the following</p> <ul style="list-style-type: none"> - To calculate the resistance and weight for ropes and netting; - Tying fishing nets; - Knots and Splices; - Repairing tears on the interior of nets; - Adding a section to the inside of netting; - To repair tears that occur on straight and angled edges of netting, as well as adding a section to the edges of netting. | This course is intended for captains and crew members | 7 / 12 |
| 2. Introduction to different splices | 14 hours | <p>This course will allow students to master the following splices using 3-strand synthetic cabled ropes:</p> <p>1. Back splice; 2. Eye splice; 3. Short splice; 4. Long splice.</p> | This course is intended for captains, fishing, commercial and pleasure craft crew members | 7 / 12 |
| 3. Steel cable splices | 12 hours | <p>Students will learn how to do the following:</p> <ul style="list-style-type: none"> - An eye splice on covered 6 - strand steel cables - An eye splice on stripped 6 - strand steel cables - Add a section to a 6 - strand steel cable - Join two sections of 6 - strand steel cable | This course is intended for captains, fishing, commercial and pleasure craft crew members | 6 / 6 |

| Course title | Length | Brief description | Target clientele | Number of participants (min. /max.) |
|--|----------------------------|---|---|-------------------------------------|
| 4. Mobile gears assembly * • Types of gears assembled: depends on the requirements of the client | 120 hours | This course will teach students to assemble mobile fishing gears (trawlers and dredgers). It will also allow them to <ul style="list-style-type: none"> - Choose the type of mobile fishing gear; - Choose materials and accessories to build fishing gears; - Cut sections and parts; - Join sections and attach mobile gears; - To make and fit strengthened edges; - To prepare and fit head ropes to trawlers; - Fit floats; - Prepare footgear; - Prepare and install selection devices; - Also to prepare for shellfish dredging. | This course is intended for captains and crew members | 7 / 12 |
| 5. Fixed gears assembly * • Types of gears assembled: depends on the requirements of the client | 90 hours | This course allows students to learn to assemble fixed fishing gears by choosing the type of fixed gear to be used, as well as the materials and accessories to build the gear by calculating the openings in the mesh, buoyancy and ballast of the right net. Whilst in class, students will be able to cut nets and assemble various fixed gears, such as, gillnets, pots, long-lines, lines (according to client requirements), and prepare tracking devices. | This course is intended for captains and crew members | 7 / 12 |
| 6. Onboard safety management systems | 15 hours | Technical assistance to implement an onboard safety management system for fishing vessels. | This course is intended for captains and crew members | 7 / 12 |
| 7. Apprentice-fisher | 630 hours (2 semesters) | This course leads to a certificate issued by the <i>Bureau d'accréditation des pêcheurs et des aides-pêcheurs du Québec</i> (BAPAP) and is made up of the following units: <ul style="list-style-type: none"> - Emergency situations at sea - 60 hr - Net-mending - 120 hr - Fixed gears assembly - 75 hr - Introduction to the profession - 90 hr - Habitat and life cycle of marine organisms - 30 hr - Preparing for fishing trips - 30 hr - Mobile gears assembly - 90 hr - Code of conduct - 75 hr - Means of communication - 30 hr - Handling and preservation of marine products - 30 hr | Admission Criteria: <ul style="list-style-type: none"> • Secondary School Diploma (DES) or • Be at least 24 years old and have passed French, English and Math Grade 9 or • Have completed an equivalent recognised by the <i>Ministère de l'Éducation, Sport et Loisir</i> (MELS) | 7 / 12 |
| 8. General Deck Work | 240 hours | This certificate comprises the following courses: <ul style="list-style-type: none"> - Handling and preservation of marine products - 30 hr - Emergency situations at sea - 60 hr (Health and Safety + Marine Emergency Training Duties Program (METDP) + basic first aid at sea) - Net-mending 1 (gillnets) - 90 hr - Net-mending 2 (tapered nets) - 60 hr | This training course is intended for deckhands who work in the fisheries and aquaculture industries that want to increase their proficiency. | 7 / 12 |

Section Fisheries

Training programs



The training modules presented on this page, depending on the fishing techniques concerned, could be delivered at the ÉPAQ or in a given community in the case that participant numbers are sufficient.

Introduction to the profession: 175 h

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| Fishing methods; (inshore, mid-shore and deep-sea) | 7 hr |
| Seamanship; (net-mending, splices and knots, mooring) | 35 hr |
| Fishing vessel; (basic understanding of machinery and fishing equipment) | 42 hr |
| Vessel maintenance; (mechanical, hydraulic, electrical and welding) | 70 hr |
| Operating the vessel (basic principles) | 21 hr |

Gillnet Fisheries: 105 h

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|------------------------------|--------|
| Bottom-set nets | 3,5 hr |
| Surface nets | 3,5 hr |
| Preparing nets | 56 hr |
| Fishing Operations | 21 hr |
| Conserving the catch | 14 hr |
| Processing and sale of catch | 7 hr |

Trap (Pot) Fisheries: 105 h

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|------------------------------|--------|
| Lobster traps | 3,5 hr |
| Crab traps | 3,5 hr |
| Preparing traps | 56 hr |
| Fishing Operations | 21 hr |
| Conserving the catch | 14 hr |
| Processing and sale of catch | 7 hr |

Hook and line and Long-line fisheries : 105 hr

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|------------------------------|--------|
| Hook and line | 3,5 hr |
| Long-line | 3,5 hr |
| Preparing hooks and lines | 28 hr |
| Preparing long-lines | 28 hr |
| Fishing Operations | 21 hr |
| Conserving the catch | 14 hr |
| Processing and sale of catch | 7 hr |

Shrimp trawl fishery: 210 h

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|------------------------------|-------|
| Shrimp trawl | 14 hr |
| Advanced net-mending | 56 hr |
| Trawl repairs | 98 hr |
| Fishing Operations | 21 hr |
| Conserving the catch | 14 hr |
| Processing and sale of catch | 7 hr |

Professional Certification (Fisheries)

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|--------------------------|--------|
| Small Vessel Operator | 30 hr |
| Fishing Master Class IV | 559 hr |
| Fishing Master Class III | 810 hr |

Section Navigation



| Course title | Length | Brief description | Target clientele | Number of participants (min. /max.) |
|--|-----------|--|---|-------------------------------------|
| 9. Electronic map systems (FUGAWI, Nobeltec, Maxi-Sea and Olex) | 30 hours | Candidates will learn how to use all aspects of the software in order to use electronic chart and map systems proficiently. | This course is intended for owners and crewmembers of small fishing vessels and pleasure craft. | 7 / 12 |
| 10. Fishing Master (Class IV) | 559 hours | The holder of the Fishing Master certificate, Fourth Class may take the role of captain aboard a fishing vessel with a gross tonnage of not more than 100 (tons) that operates in near coastal waters. (Transports Canada, TP2293F, 07/2007, p. 269) | Candidates must have acquired at least 12 months of service at sea in the form of deck duties on board one or several vessels of at least 12m. (<i>Règlement sur le personnel maritime</i> , SOR/2007-115, octobre 2009, p. 58) | 8 / 12 |
| 11. Fishing Master (Class III) | 810 hours | The holder of the Fishing Master certificate Third Class may take the role of captain aboard a fishing vessel of any gross tonnage that operates in near coastal waters [...]. (Transports Canada, TP2293F, 07/2007, p. 265) | Candidates must have acquired or be about to acquire: a) At least 24 months of service at sea in the form of deck duties on one or several fishing vessels with a gross tonnage of at least 25 b) Or a minimum of 12 months as holder of the Fishing Master Class IV certificate (<i>Règlement sur le personnel maritime</i> , SOR/2007-115, octobre 2009, p. 57) | 8 / 12 |

Section Navigation

| Course title | Length | Brief description | Target clientele | Number of participants (min. /max.) |
|---|----------|--|--|-------------------------------------|
| 12. Small Vessel Operator Proficiency (SVOP) | 30 hours | <p>This course allows participants to acquire</p> <ul style="list-style-type: none"> - A basic understanding of the risks in a marine environment, the risks in the operation of their vessel and the prevention of shipboard incidents. - The knowledge and skills necessary to safely operate a small vessel other than a pleasure craft in sheltered waters or near to the shore in normal operating conditions, including darkness and reduced visibility. - Additional information on navigation aids and seamanship that will improve basic knowledge. <p>(Transports Canada, TP14692F, juillet 2007, p. 4)</p> | <p>This course is intended for small commercial vessel operators other than tugs and fishing vessels of a gross tonnage of not more than 5 that operate in near coastal waters, class 2 or in sheltered waters. It is also intended for fishing vessels of a gross tonnage of not more than 15, or an overall length of not more than 12m, that operate in near coastal waters, class 2[...] (Transports Canada, TP14692F, juillet 2007, p. 4)</p> | 8 / 12 |
| 13. Domestic Vessel Safety (DVS) | 26 hours | <p>This course was developed to comply with the requirements of the Marine Personnel Regulations on training in personal survival techniques and fire fighting for Canadian seafarers sailing on board passenger vessels, workboats or fishing vessels engaged on a voyage in Canadian waters. It also replaces the old MED A1 and MED A2 courses. (Transport Canada, TP4957E, Marine Emergency Duties Training courses, 2nd Edition, Dec. 2016, p. 29.)</p> | <p>The Domestic vessel safety course is a requirement for all crew personnel onboard small fishing and commercial vessels and for captains and crew members of passenger vessels. This course is also designed for seafarers working in the tourism industry</p> | 8 / 12 |
| 14. Small Non-Pleasure Domestic Vessel Basic Safety (SDV-BS) | 10 hours | <p>Basic training in survival and fire-fighting techniques for seafarers working aboard the following types of vessel:</p> <ul style="list-style-type: none"> - Vessels of 24 m in length and less navigating in sheltered waters only; - Vessels of 24 m in length and less navigating in domestic waters; - Fishing vessels of 24 m in length and less navigating in domestic waters. <p>(Transport Canada, TP4957E, Marine Emergency Duties Training courses, 2nd Edition, Dec. 2016, p. 54.)</p> | <p>This course replaces the previous MED A3 course, and is intended for masters and crew of passenger vessels</p> | 8 / 12 |

| Course title | Length | Brief description | Target clientele | Number of participants (min. /max.) |
|---|-----------|--|---|-------------------------------------|
| 15. Restricted Operator's Certificate - Maritime Commercial (ROC-MC) | 24 hours | <p>This course allows students to learn</p> <ul style="list-style-type: none"> - The general principles and basic features of the mobile maritime service; - The Global Maritime Distress and Safety System Regulations (GMDSS); - The practical knowledge, operational characteristics and ability to use the GMDSS sub-system equipment of a ship station; - The distress, safety and routine communications procedures in the GMDSS. <p>(Industrie Canada, CIR-25, avril 2008, p. 8-9)</p> | This course is intended for captains and crew members that have responsibility for deck watch | 8 / 12 |
| 16. Simulated electronic navigation (SEN limited) | 60 hours | <p>This course will allow students to acquire</p> <ul style="list-style-type: none"> - An understanding of the basic principles and functions for usage; - As well as the skills necessary to correctly use the kinds of equipment generally found aboard a coastal vessel. <p>(Transports Canada, TP4958F, juin 2008, p. 50)</p> | This course is intended for captains and crew members | 8 / 12 |
| 17. Chartwork and Pilotage 1 (Class IV) | 120 hours | <p>In this course the candidate will develop</p> <ul style="list-style-type: none"> - An understanding of how charts are made and used; - Knowledge and skills required to use these publications; - The competency to determine the position of a vessel using landmarks, navigational aids, as well as lighthouses, beacons and buoys, to estimate navigation taking into account wind, tides, currents and the forecast speed, and to record these in the ship's log and compass error log book. <p>(Transports Canada, TP2293F, juillet 2007, p. 186-187)</p> | This course is intended for crew members who have already begun a Class IV course and have not yet completed it (max. 5 years) who have not taken the course Chartwork and Pilotage 1 | 8 / 12 |
| 18. Meteorology 1 (Class III) | 90 hours | <p>This course allows students to develop their understanding of the characteristics of various meteorological conditions, transcribing and registration systems. This course also allows participants to develop the ability to use and interpret information obtained from onboard meteorological instrumentation, as well as to interpret and use available meteorological information in a practical way.</p> <p>(Transports Canada, TP2293F, juillet 2007, p. 144 -147)</p> | This course is intended for students who wish to complete a certificate of which Meteorology 1 is a part | 8 / 12 |

Section

Navigation

| Course title | Length | Brief description | Target clientele | Number of participants (min. /max.) |
|---------------------------------------|-----------|--|--|-------------------------------------|
| 19. Master, Limited (-60 tons) | 180 hours | <p>This course enable students to</p> <ul style="list-style-type: none"> - Show good knowledge of the sector for which the certificate will be valid; - Learn to manoeuvre the vessel; - Operate the propulsion system and all other systems of the vessel; - Deal with emergency situations; - Precautions and fire-fighting; - Mooring and performing related seamanship tasks; - Prevent pollution; - Maintain the stability of the vessel; - Ensure the safety of passengers and use safety and lifesaving equipment; - Carry out necessary checks and inspections to ensure the vessel has all required certificates and documents; - Ensure safe navigation and prevent collisions; - Use nautical charts and publications to carry out and execute a voyage; - Use a magnetic compass to take readings and to steer; - Use the Canadian Buoyage system; - Use the radar to navigate safely; - Use electronic aids to determine the vessel's position; - Carry out radio communication; - Carry out towing operations. <p>(Transports Canada, TP2293F, juillet 2007, p. 190 - 197)</p> | This course is intended for candidates who wish to captain passenger vessels (-60 tons) or tugs (-60 tons) | 8 / 12 |

Section Mechanics

| Course title | Length | Brief description | Target clientele | Number of participants (min./max.) |
|-------------------------------|-----------|--|---|------------------------------------|
| 20. Marine Engineering | 210 hours | This certificate is composed of the following courses: <ul style="list-style-type: none"> - Hydraulics and propulsion - 30 hours - Marine engines and auxiliaries - 140 hours - Electrical systems - 40 hours | This course is intended for captains and crew members who are responsible for engineering onboard a vessel and recreational boaters | 7 / 12 |
| 21. Marine Engines | 90 hours | The Marine engines course allows students to develop the skills to maintain marine engines. More specifically, the course enables students to <ul style="list-style-type: none"> - Correct the oil and coolant levels; - Carry out an oil change; - Observe changes in oil and coolant; - Carry out preventative work on the injection system; - Correct the density and quality of the coolant; - Maintain the air-intake system of the motor; - Interpret changes in the running of the motor; - Take apart, build and adjust components. | This course is intended for captains and crew members who are responsible for engineering onboard a vessel and recreational boaters | 7 / 12 |
| 22. Hydraulics | 75 hours | The Hydraulics course will allow students to <ul style="list-style-type: none"> - Explain the basic principles of hydraulic systems; - Interpret hydraulic diagrams; - To plan a hydraulic circuit schema; - To use appropriate materials and tools; - Identify the failures in a hydraulic circuit; - Become aware of the safety rules that apply to hydraulic usage. | This course is intended for captains and crew members who are responsible for mechanics onboard a vessel | 7 / 12 |

Other courses that meet client requirements.

Section

Fisherman - Mariculturist



BLUE MUSSEL AQUACULTURE FOR FISHERMAN

This course is intended for fishermen who are interested in starting small-scale mussel farming on either an individual basis, or with other producers or fisherman. The course is comprised of 6 training modules. The times of the year that these courses will be offered will be specified by the EPAQ. Candidates will be able to choose the order and the number of modules that best suit their needs.

| Course title | Length | Brief description | Target clientele | Number of participants (min./max.) |
|-----------------------------|----------|--|---|------------------------------------|
| 23. Blue Mussel aquaculture | 5 hours | Module A - Introduction to the profession: This part of the course presents the labour market and the business environment: permits, regulations, funding, and the organisation of the industry. Students will get an overview of the sector, by learning about the conditions, tasks, and skills that are involved. | Asynchronous (2.5 hr) Synchronous (2.5 hr) | 7 |
| | 12 hours | Module B (Part 1) - Aquaculture Techniques (theory): Module B will cover the life cycle of the mussel and the instigation of parallel production systems (seed collection, cultivation using the longline method, harvest period) and the aquaculture equipment necessary. The range of forces, the calculations necessary to have the right quantity of buoys to achieve floatability, as well as the organisation of wires will also be covered. | Synchrone (12 hr) | 7 |
| | 40 hours | Module B (Part 2) - Aquaculture techniques (practical): This part of the course requires student participation at the site of an aquaculture operation: Setup and anchoring of lines, adjusting tension and aligning lines, installing collectors, socking, sample-taking and harvesting. | In person (class-based) (40 hr) | 7 |
| | 6 hours | Module C - Planning the operational season: This part of the course allows students to establish a baseline for the operational season, as well as the production objectives. | Synchronous (6 hr) | 7 |
| | 15 hours | Module D - Starting a business: In this part of the course students will learn about the requirements linked to applying for a permit, and the elements necessary in a business plan. A list of funding possibilities, financial partners, and financial aid programs will also be presented and summarized. | Asynchronous (5 hr) Synchronous (10 hr) | 7 |
| | 12 hours | Module E - Managing an operation and sale of the product: The last part of the course will allow students to learn about aquaculture operation management and infrastructures, risk management, product preservation and market requirements. The concepts of finance and economics will also be explained in this section. | Synchronous (12 hr) | 7 |

SCALLOP AQUACULTURE FOR FISHERMAN

This course is intended for fisherman who wish to familiarise themselves with small-scale scallop culturing, either on an individual basis or working with other producers or fisherman. There are four (4) modules in this course. The times of the year when these courses will be offered will be specified by the EPAQ. Candidates will be able to choose the order and the number of modules that best suit their needs.

| Course title | Length | Brief description | Target clientele | Number of participants (min./max.) |
|----------------------------------|----------|---|---|------------------------------------|
| 24. Giant scallop culture | 5 hours | Module A - Presentation of the profession: This part of the course presents the labour market and the business environment: permits, regulations, funding and how the industry is organised. Students will learn about the different types of activities undertaken here and elsewhere, as well as learning about the conditions, skills and different tasks that are involved. | Asynchronous (2.5 hr) Synchronous (2.5 hr) | 7 |
| | 15 hours | Module B (Part 1) - Culturing techniques (theory): This section of the course presents the developmental and production cycles of the scallop (seed collection, hatchery-based seed production, seed growth in the given system etc.), analysis of techniques, the different methods of culturing and the necessary infrastructure. | Synchronous (15 hr) | 7 |
| | 40 hours | Module B (Part 2) - Culturing techniques (practical): This module will focus on the aquaculture operations that the student will carry out; installing growing lines, site-marking, cleaning structures, sorting or separating scallops, support systems, monitoring, adjustment of flotation mediums, etc. | Presence-based (40 hr) | 7 |
| | 15 hours | Module C - Planning and organising the operational season activities: This section will allow students to understand the requirements for obtaining a permit and also to understand what needs to be done in the operational season. | Synchronous (15 hr) | 7 |
| | 15 hours | Module D - Managing harvesting operations: The last section of the course concentrates on the size and quality of the scallops that are destined for market, the requirements to store scallops in holding-tanks, as well as market regulations and requirements. | Synchronous (15 hr) | 7 |

MACROSCOPIC MARINE ALGAE HARVESTING AND CULTIVATION

| Course title | Length | Brief description | Target clientele | Number of participants (min./max.) |
|---|----------|--|--|------------------------------------|
| 25. Harvesting Macroscopic marine algae | 15 hours | This course provides for the harvesting of macroscopic algae by familiarising students with the characteristics of the algae: morphology, vertical distribution, regional distribution, and growth cycle. The student will become aware of sustainable harvesting practices, of requirements currently in effect, and also the processes to be applied following the harvest of the algae. | Asynchronous (10 hr) Synchronous (5 hr) Presence-based (15 hr) | 7 |
| 26. Introduction to macroscopic marine algae aquaculture | 20 hours | This course will cover the main operations linked to culturing macroscopic algae; spread of spores, capture and culture of spores, growth and sporeling attachment, plant growth in pools, ocean-based plant growth. | Asynchronous (5 hr) Synchronous (15 hr) | 7 |

- **Asynchronous courses** take place using a means of communication (computer) that does not require a simultaneous connection. They could include, for example, distance-learning platforms; Learning activities that can take place at different times depending on the choice of each student.
- In a **synchronous course** the instructor (with the group) teaches the class in real time, either by web conference, videoconference or another means.
- **Presence-based courses** are part of the traditional teaching methodology and use a common space such as a classroom or laboratory.

L'ÉPAQ, a dedicated team!

As a partner of the fisheries and aquaculture industries, the EPAQ, via its continuing education department, is proud to offer a diverse array of training courses for 2021-2023.

Contact Details

For information, or to enquire about possible adaptations or tailor-made programs please contact us.

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