

Maritime Industry Merit Badge

Proposed Requirements and Digital Resources

1. Maritime Basics. Do the following:

(a) Five Parts of the Industry. Identify five major parts of the maritime industry and explain what each one does. Choose from this list: merchant shipping, pilots, tugboats, ports and terminals, shipbuilding and repair, inland waterways, offshore energy, fisheries, ferries, marine science, maritime logistics.

[Careers in Maritime](#) | [U.S. Committee on the Marine Transportation System](#)
[Elements of the Maritime Industry](#) | [Port Economics, Management and Policy](#)
[About Us](#) | [Maritime Administration](#)

(b) From Farm or Factory to You. Choose two things you used and two things you ate in the last week. Trace how the maritime industry helped get each one to you, from factory or farm to your door, including how ships connect with trucks, trains, warehouses, and pipelines.

[Understanding Marine Terminal Operations](#) | [Long Beach Container Terminal](#)

(c) Maritime Impact on Daily Life. Explain three ways maritime activity affects daily life, such as food, fuel, consumer goods, energy, emergency response, or jobs. Describe one way life in your community would change if maritime trade stopped for a month.

[Facts and Figures](#) | [Port of Los Angeles](#)
[10 Things You Use Every Day Are Shipped by Cargo Ships](#) | [Marine Insight](#)
[Ports Fast Facts](#) | [NOAA Office for Coastal Management](#)

(d) Ports and Sea Routes. Using a map, identify one major U.S. port, one inland waterway or Great Lakes route, and one international sea route important to trade.

[Ports](#) | [Maritime Administration](#)
[Navigation Locks](#) | [U.S. Army Corps of Engineers](#)
[List of Ports in the United States](#) | [SeaRates](#)

2. Ships, Ports, and Marine Operations. Do the following:

(a) Vessel Types. Identify six types of vessels and explain what each does. Examples include containerhips, tankers, bulk carriers, towboats and barges, ferries, research vessels, dredges, pilot boats, offshore service vessels, and Military Sealift Command ships.

[Ship Inventory](#) | [Military Sealift Command](#)
[Every Type of Cargo Ship Explained](#) | [Machine Explained](#)
[Ships of NOAA](#) | [NOAA Office of Marine and Aviation Operations](#)
[Dredging 101](#) | [U.S. Army Corps of Engineers, Galveston District](#)

(b) Shipboard Roles. Explain the basic roles of the people who operate a vessel, including deck, engine, steward, navigation, communications, cargo handling, and shoreside support. Identify one role you would want to try and one you would not, and explain why.

[My Maritime Career](#) | [Seafarers International Union](#)
[Deck: Ship's 3rd Mate, Third Officer on a Car Carrier](#) | [Joe Franta](#). [Ship](#)
[Engine: Day in the Life of a Mega-ship Marine Engineer](#) | [JeffHK](#)
[Steward: Cooking for the Crew of a 1,000-Foot Freighter](#) | [Great Lakes Now](#)

(c) Port and Terminal Operations. Describe how a port or terminal works, including four of the following: docks, cranes, pilots, tugboats, customs, security, warehouses, rail connections, truck gates, dredging, environmental controls, emergency response.

[First Person View of Port Terminals | Port of Los Angeles](#)

[Captain Explains How He Docks the World's Biggest Cruise Ship | The Wall Street Journal](#)

[Understanding Marine Terminal Operations | Long Beach Container Terminal](#)

(d) Shipyards and Repair. Describe how shipyards and repair facilities support the maritime industry, and identify one skilled trade used in a shipyard that interests you.

[How is a Cruise Ship Repaired? MSC Magnifica | Damen Shipyards](#)

[The Value of Youth Apprenticeships: The Apprentice School at Newport News Shipbuilding | Jobs for the Future](#)

[Shipbuilding and Shipyard Data and Reports | Maritime Administration](#)

[Marine & Boating Industry Careers | Boat Michigan](#)

[Career Guidance for Marine Tradespeople | Marine Trades Jobs](#)

(e) Buoyancy. Float several household objects in a basin of fresh water and record which float best and which do not. Repeat the test using salt water, and explain what the difference shows about how a loaded ship sits in fresh water compared with at sea.

[Why Do Ships Float? | Let's Talk Science](#)

[Do Ships Float Higher in Saltwater? | Maritime Page](#)

(f) Do ONE of the following:

(1) Track a real ship. Using a free vessel-tracking website, choose a merchant ship bound for a U.S. port. Record its type, flag, length, and last port, and determine what it is most likely carrying. Follow it for three days and report where it went and how fast.

[MarineTraffic](#)

[VesselFinder](#)

(2) Build a model. Build a model commercial vessel (tanker, containership, bulk carrier, or towboat) and show on it the hull, superstructure, cargo space, propulsion, and where the crew lives and works.

(3) Design a terminal. Draw a working plan of a container terminal showing how a single container gets from a ship's hold to a truck or a rail car, and label every place it is handled.

[Understanding Marine Terminal Operations | Long Beach Container Terminal](#)

(4) Investigate an incident. Choose a real grounding, collision, cargo fire, piracy attack, or cyber attack on a port. Explain what went wrong, who responded, and what changed afterward.

[Safer Seas Digest | National Transportation Safety Board](#)

[Incident Reports: Collisions & Allisions | Maritime Safety Innovation Lab](#)

3. Maritime Safety and Stewardship. Do the following:

(a) Safety Practices. Describe basic safety practices around vessels, docks, terminals, shipyards, and waterways, including restricted areas, situational awareness, weather, emergency procedures, and personal protective equipment.

[Aquatics Safety Resource Material: Safe Swim Defense and Safety Afloat | Scouting America](#)

(b) Signaling. Demonstrate how a mirror can be used to attract attention on the water. With your counselor's supervision and a partner standing about 30 feet away, use a hand mirror to reflect sunlight toward a target your partner holds. Explain why a signal mirror is carried in a survival kit, and explain why reflected sunlight must never be directed at anyone's eyes.

[Visual Distress Signals | BoatUS Foundation for Boating Safety and Clean Water](#)

(c) Environmental Responsibilities. Explain three environmental responsibilities connected to maritime activity, such as spill prevention, ballast water management, emissions reduction, marine debris, habitat protection, invasive species, or stormwater management.

[NOAA Marine Debris Program](#)

[Ballast Water | National Invasive Species Information Center, USDA](#)

[Commercial Vessel Discharge Standards | U.S. EPA](#)

(d) MARPOL. Explain what MARPOL is, why nations agreed to it, and identify one thing it restricts.

[MARPOL Annex VI and the Act to Prevent Pollution from Ships | U.S. EPA](#)

[International Convention for the Prevention of Pollution from Ships | International Maritime Organization](#)

(e) Balancing Priorities. Discuss how maritime professionals balance keeping commerce moving, staying safe, protecting the environment, and keeping waterways open to the public.

[Seaports: Social and Environmental Value | Port Economics, Management and Policy](#)

[Ports and Blue Highways | Waterfront Alliance](#)

(f) Do TWO of the following:

(1) Filter an oil spill. Mix cooking oil with water. Filter the mixture through wire mesh, cheesecloth, a coffee filter, and one material of your own choosing. Record which leaves the least visible oil, and explain why real spill response is harder than your experiment.

[Oil Spill Science Education Resources | NOAA Office of Response and Restoration](#)

(2) Test the detergent. Pour an oil-and-water mixture over old toys or cloth. Wash one with dish soap and the others with different soaps. Report which worked best, and find out why wildlife rescuers choose the one they do.

[Find the Best Way to Clean Oil off Bird Feathers | NOAA Office of Response and Restoration](#)

(3) Test what breaks down. Run a biodegradability experiment on several materials over two weeks. Use your results to explain why dumping trash overboard is restricted at sea.

[NOAA Marine Debris Program](#)

(4) Follow a discharge story. Find two news reports about a sewage, ballast water, or fuel discharge incident in U.S. waters. Summarize what happened, who responded, and what rule or practice changed afterward.

[MARPOL Annex VI and the Act to Prevent Pollution from Ships | U.S. EPA](#)

4. Maritime Education and Service Pathways. Do the following:

(a) Licensed and Unlicensed. Explain the difference between a licensed officer (a mate or an engineer) and an unlicensed crew member such as an Ordinary Seaman, oiler, wiper, or Able Seaman. Explain what each is responsible for aboard, and explain how an unlicensed mariner builds sea time and moves up.

[National Able Seafarer Checklist | U.S. Coast Guard National Maritime Center](#)

[My Maritime Career | Seafarers International Union](#)

(b) Deck, Engine, and Steward. Explain what each of the three shipboard departments does. Identify one licensed job and one unlicensed job in each, and explain which department interests you and why.

[Deck Department: Hierarchy and Ranks Onboard a Ship | MaritimeX](#)

[Engine Department: Shipboard Chain of Command and Rank Badges | MaritimeX](#)

[My Maritime Career | Seafarers International Union](#)

(c) At Sea and Ashore. Describe how a rotation schedule works for a mariner who works at sea. Explain how having room and board provided while aboard affects what a mariner is able to save, and identify two maritime jobs where a person is home most nights. Compare the trade-offs of an at-sea career with a shore-based one.

[Mariner Life at Sea: Seaman and Tankerman | Crowley](#)

[MSC Sets a New Standard for Time Off in 2025 | gCaptain](#)

[A Day in the Life of a Port Engineer | Ingram Barge Company](#)

[Careers | National Cargo Bureau](#)

[Who Are Marine Pilots? | Australasian Marine Pilots Institute](#)

[What We Do | Florida Harbor Pilots Association](#)

[About the APA | American Pilots' Association](#)

(d) Who Mariners Work For. Identify three different kinds of organizations a merchant mariner might work for, such as a private shipping or towing company, a labor union hiring hall, a state or local port authority, or a federal agency such as the Maritime Administration (MARAD) or Military Sealift Command (MSC). Explain that most U.S. merchant mariners are civilians, not members of the armed forces, even when their work supports national defense, strategic sealift, military logistics, or disaster response.

[About Us | Maritime Administration](#)

[Civil Service Mariners | Military Sealift Command](#)

[CIVMAR Careers | Military Sealift Command](#)

[Careers: Seagoing and Terminal | Crowley](#)

[Overview: Jobs | Seafarers International Union](#)

[About Us | International Organization of Masters, Mates & Pilots](#)

[The Marine Engineers' Beneficial Association](#)

(e) Getting In. Do the following:

(1) Maritime Academies. Identify the federal maritime academy and the six state maritime academies, and name the one closest to where you live. Explain the difference between the federal academy and a state one, including who pays for the education, how long it takes, what a graduate comes out holding, and the service obligation that comes with the federal academy but not with a state one.

[Maritime Academies | Maritime Administration](#)

[United States Merchant Marine Academy](#)

(2) Alternate Paths In. Explain how someone joins a ship's crew without attending a maritime academy, including union apprenticeship programs, entry-level Merchant Mariner Credentials and the Transportation Worker Identification Credential, community and technical college programs, and Military to Mariner.

[Centers of Excellence for Domestic Maritime Workforce Training and Education | Maritime Administration](#)

[Apprentice Program Overview | Seafarers International Union](#)

[Military to Mariner | Maritime Administration](#)

[Transportation Worker Identification Credential | Transportation Security Administration](#)

[Merchant Mariner Credential | U.S. Coast Guard National Maritime Center](#)

[Maritime Career Pathways | Maritime Administration](#)

(3) Mapping a Route. For one licensed route and one unlicensed route, list the steps in order: the school or program you would attend, the credentials you would need, the training you would complete, and how you would find your first job.

[How to Join the Merchant Marine | Maritime Institute of Technology and Graduate Studies](#)

[Prospective Applicants | International Organization of Masters, Mates & Pilots](#)

(4) Compare and Discuss. Draw or write out both routes side by side, and discuss with your counselor which one fits you better and why.

[SIU Apprentice Program vs. Maritime Academy | Northwest Sailor](#)

5. Careers. Do the following:

(a) Do ONE of the following:

(1) Research a Career. Explore careers related to this badge. Research one career to learn about the training and education needed, costs, job prospects, salary, job duties, and career advancement. Your research methods may include, with your parent or guardian's permission, an internet or library search, an interview with a professional in the field, or a visit to a location where people in this career work. Discuss with your counselor both your findings and what about this profession might make it an interesting career.

[Captains, Mates, and Pilots of Water Vessels | My Next Move, U.S. Department of Labor](#)
[Water Transportation Workers | Occupational Outlook Handbook, U.S. Bureau of Labor Statistics](#)
[My Maritime Career | Seafarers International Union](#)
[Maritime Workforce | Maritime Administration](#)

(2) A Hobby or Healthy Lifestyle. Explore how you could use knowledge and skills from this badge to pursue a hobby or healthy lifestyle. Research any training needed, expenses, and organizations that promote or support it. Discuss with your counselor what short-term and long-term goals you might have if you pursued this.

[Sea Scouts](#)
[Coast Guard Auxiliary Youth Programs](#)

(b) Automation and the Job. Choose a maritime industry career, the same one you researched in 5(a) if you did option (1), or a different one, and research how automation and new technology are changing it. Explain one way that job is already changing because of new technology, then explain your own view on whether that job could someday be done mostly by machines, and why.

[Coast Guard: Approaches to Autonomous Ship Regulation | U.S. Government Accountability Office](#)
[The ILA's Fight Against Automation | International Longshoremen's Association](#)
[Longshore Deal Secures New Automation Language and Big Pay Bump | Labor Notes](#)

(c) Make Your Case. Create a short presentation, poster, model, map, infographic, video, or written report that could convince another Scout to consider a maritime industry career, and share it with your counselor, patrol, troop, ship, class, or community group.

(d) Do ONE of the following:

(1) Interview. Interview a maritime professional in person, by phone, by video call, or by email.

[7 Questions to Ask in an Informational Interview | Boys & Girls Clubs of America](#)

(2) Virtual Tour. Take a virtual tour of a vessel, port, museum, shipyard, academy, or training center, and report three things that surprised you.

[Maritime Museums Online | National Maritime Historical Society](#)
[Virtual Tours: A Day in the Life | USS Constitution Museum](#)
[Virtual Tour | Battleship USS Iowa Museum](#)

(3) Attend an Event. Attend a maritime education program or online event, live or recorded, and report what you learned.

[Coast Guard Auxiliary Youth Programs: Tech Talks](#)
[Maritime Museums Online | National Maritime Historical Society](#)
[Sea Scouts](#)

(4) Visit a Site. Visit a maritime site such as a port, marina, museum, shipyard, academy, or waterfront facility, under appropriate supervision.

[Sea Scouts](#)
[Maritime Museums Online | National Maritime Historical Society](#)