

CHIEF MATE/MASTER (CMM) PROGRAM COURSES

❖ **CMM-ADVSTB - Advanced Stability (Duration: 5-Days)**

Advanced Stability is required for individuals wishing to upgrade their U.S. Coast Guard license to the Chief Mate/Master (CMM) level. Through this course, senior deck officer trainees will become proficient in stability and trim theory and its practicable applications. The attendee will satisfy required competencies that are detailed in STCW-95, Table A-II/2. The course objectives are aimed at providing senior officers with the knowledge necessary to make full use of the stability booklet, which is required for vessels by 46 CFR 170.110. This course requires the trainee to have a fundamental understanding of basic stability and trim theory, as well as basic math and trigonometry. It is a fast-paced course; therefore there is not enough time to go over these areas in detail. Prior to taking this course, trainees must have successfully completed the National Cargo Bureau (NCB) Self-Study course on stability or MITAGS' Basic Stability course or have equivalent basic stability training from a Maritime Academy. This course is a pre-requisite for MITAGS' Cargo Handling and Stowage (CMM-CHS I and CMM-CHS-II) course. In addition, course attendees must possess a minimum of a Third Mate's License.

❖ **CMM-ADVWX - Advanced Meteorology and Ocean Science (Duration: 5-Days)**

Advanced Meteorology and Ocean Science is required for individuals wishing to upgrade their license to Chief Mate/Master (CMM). This five-day course satisfies the STCW-95 competencies for Meteorology, as defined in Table A-II/2, and as outlined in U. S. Coast Guard National Maritime Center (USCG-NMC) Policy Letter # 04-02, dated January 11, 2002. The course also meets the meteorological training and learning objectives to "Plan and Conduct a Passage" and "Determine Position." It also meets the assessment requirements for Chief Mate and Master Licenses applicable to vessels greater than 3,000 gross tons. In addition, the course also satisfies assessment task # M-6-1A and # M-6-2A. Please note that basic maritime weather is reviewed on the first day of class. Through this course, attendees will gain the knowledge and skill necessary for weather forecasting; including tropical weather systems, wave motion theory, weather interaction with vessel dynamics, major weather phenomena, tide and current predictions, and the use of facsimile and computer programs for minimizing the destructive effects of weather on ship operations. Course attendees must possess basic marine weather knowledge that is equivalent to that taught in a U.S. Coast Guard approved Basic Marine Weather course.

❖ **CMM-CHS I - Cargo Handling and Stowage - Week One (Duration: 5-Days)**

Week one of the Cargo Handling and Stowage (CMM-CHS-I) course is thirty-five hours in duration. The program presents the material necessary to meet the assessment of competence for an individual wishing to upgrade to Chief Mate/Master (CMM). The course includes information on cargo gear, cargo stress, cargo products, care of cargo during transit, containership operations, RO/RO vessel operations, dangerous cargo regulations, grain rules, and other information on dry, bulk, or containerized cargos.

When this course is combined with Cargo Handling and Stowage – week two (CMM-CHS-II), all of the cargo handling training requirements are met for an individual wishing to upgrade to Chief Mate/Master. Both CMM-CHS I and CMM-CHS II must be completed within the period of one year to receive “Advanced Cargo Operations” certification. MITAGS’ Advanced Stability (CMM-ADVSTB) course is a mandatory pre-requisite for the Cargo Handling and Stowage (CMM-CHS-I) course. Furthermore, course attendees must possess a minimum of a Third Mate's License.

❖ **CMM-CHS II - Cargo Handling and Stowage - Week Two (Duration: 5-Days)**

Week two of the Cargo Handling and Storage course is thirty-five hours in duration. The course presents the material necessary to meet the assessment of competence for an individual wishing to update to Chief Mate/Master. The program covers information on tankers and tanker operations, liquefied gas tanker operations, ships construction, dry-docking, and surveys. When combined with Week one, all of the cargo handling training requirements are met for individuals wishing to update to Chief Mate/Master. Both CMM-CHS I and CMM-CHS II must be completed within the period of one year to receive “Advanced Cargo Operations” certification. The Advanced Stability (CMM-ADVSTB) course is a mandatory pre-requisite for the Cargo Handling and Stowage course. Course attendees must possess a minimum of a Third Mate's License.

❖ **CMM-ECDIS - Electronic Chart Display and Information Systems (Duration: 5-Days)**

The Electronic Chart Display and Information Systems (ECDIS) course is a mandatory part of the Advanced Navigation requirement for individuals wishing to upgrade to Chief Mate/Master. This U.S. Coast Guard approved course, when combined with MITAGS’ Voyage Planning and Electronic Navigation (VPEN) course, results in successful satisfaction of the assessments required for Advanced Navigation. Note that course attendees must be licensed officers. This program is designed to enhance the safety of navigation by providing the skills that are necessary to fully utilize ECDIS. Conforming to IMO Performance Standards, the course incorporates live marine ECDIS equipment that is networked with interactive blind bridge simulators. Class size is limited, so there is only one mariner per workstation, and no more than two mariners working in rotation on the ECDIS bridge simulator. This course utilizes Transas Marine NaviSailor software, which includes additional functions; such as the integration of AIS targets; the display of tide, current, and wind data; weather information options; and military information layers. MITAGS’ ECDIS simulators receive position, heading, speed, ARPA, and AIS data input. Attendees will become proficient operating the ECDIS equipment in navigational contexts of increasing challenge. Guided by task performance measures, students demonstrate their skills in the validity of sensor data; potential errors of interpretation; selecting operational settings and alarms for route monitoring; use, installation, and correction of electronic charts; route planning and scheduling; navigational calculations; accessing ship’s log and data playback functions; and ARPA, AIS, and trial maneuver functions. Course attendees must be certified in coastal navigation, basic piloting, and intermediate computer operations. Attendees will benefit from prior experience with collision avoidance on ARPA and Radar (strongly recommended), Shiphandling, Bridge Resource Management, and Chart Portfolio Management.

❖ **CMM-MPP - Marine Propulsion Plants (Duration: 5-Days)**

The Marine Propulsion Plants course is thirty-five hours in duration. The course will give attendees an understanding of the operation of remote controls for marine commercial propulsion plants, engineering systems, and attendant service systems. This course also provides knowledge in the operation of Marine power plants, ship's auxiliary machinery, and marine engineering terms. At the completion of the course, the attendee is expected to demonstrate a management knowledge of diesel engine theory, steam turbine systems, gas turbine theory, propellers and propeller shafting, bridge control, distillation, fresh-water systems, pumps and pumping systems, steering gear equipment, generators, alternators and electrical distribution, refrigeration, air conditioning and ventilation, sewage treatment plants, oily-water separators and oil filtering equipment, incinerators, deck machinery, and hydraulic systems. This course is directed at qualified Third and Second Mates who are upgrading to Chief Mate/Master. However, there is no restriction on anyone wishing to take this course.

❖ **CMM-SHMGT-I - Ship Management - Week One (Duration: 5-Days)**

The thirty-five hour Ship Management course (week one) complies with the training requirements of National Maritime Center Policy Letter # 04-02 "Ship Management" and STCW-95, Table A-II/2. The course focuses on Maritime Business and Law. Please note that this session can be taken independently of Ship Management (week two - CMM-SHMGT-II). However, a "Ship Management" certificate will not be issued unless both sessions have been completed within one year of each other. Course attendees will gain knowledge and understanding in the areas of maritime business practices, as well as maritime law that is necessary to operate a vessel at the management level. Attendees will be able to demonstrate an understanding of certificates and documents, the International Safety Management Code, SOLAS, Articles of Agreement, STCW-95, manning and work hours, vacation and holidays with pay (including leave and repatriation), and catering for crews onboard (including accommodation regulations). This course is designed for qualified Third and Second Mates wishing to upgrade to Chief Mate/Master. However, there is no pre-requisite training or qualifications necessary to take this course.

❖ **CMM-SHMGT-II - Ship Management - Week Two (Duration: 5-Days)**

This course is thirty-five hours in duration and complies with the training requirements of National Maritime Center Policy Letter # 04-02 "Ship Management" and STCW-95, Table A-II/2. The program focuses on crew training techniques, employee counseling and evaluations, safety, and shipboard medical care. Note that this course may be taken independently of Ship Management (week one - CMM-SHMGT-I). However, a Ship Management certificate will not be issued unless both sessions are completed within one year of each other. The course is specifically designed for qualified Third and Second Mates wishing to upgrade to Chief Mate/Master. However, there is no pre-requisite training or qualifications necessary to take this course. In addition, successful completion of Ship Management (week two - CMM-SHMGT-II) will earn the attendee an equivalency for Vessel Personnel Management.

❖ **CMM-SHS-ADV-I - Advanced Shiphandling - Week One (Duration: 5-Days)**

The Advanced Shiphandling course is designed to meet the shiphandling standard of competence for a Master or Chief Mate on vessels of 500 or more gross tonnage (ITC) and the National Assessment Guidelines for STCW-95, Table A-II/2. The Advanced Shiphandling course is divided into two, one-week modules (CMM-SHS-ADV-I and CMM-SHS-ADV-II). Each week of the Advanced Shiphandling course is independent of the other. Students who have only completed one of the two weeks will be issued an "Interim Completion Certificate." Both weeks must be completed within one year before a final STCW-compliant certificate will be issued. During week one, course attendees will demonstrate knowledge and understanding in shiphandling on a Full-Mission Simulator. A Basic Shiphandling course or equivalent experience through sea service is a mandatory pre-requisite for this course. Please note that Shiphandling courses may be scheduled for either a morning or late afternoon starting time. Attendees will be assigned a starting time upon arrival at MITAGS. In addition, Shiphandling course attendees should not make plans to depart the Institute until the morning following course completion.

❖ **CMM-SHS-ADV-II - Advanced Shiphandling - Week Two (Duration: 5-Days)**

The Advanced Shiphandling course is designed to meet the shiphandling standard of competence for Master or Chief Mate on vessels of 500 or more gross tonnage (ITC) and the National Assessment Guidelines for STCW-95, Table A-II/2. The Advanced Shiphandling course is divided into two, one-week modules (CMM-SHS-ADV-I and CMM-SHS-ADV-II). Each week of the Advanced Shiphandling course is independent of the other. Attendees who only complete one of the two weeks will be issued an "Interim Completion Certificate." Both weeks must be completed within one year before a final STCW-compliant certificate will be issued. During week two, course attendees will demonstrate knowledge and understanding on a Full-Mission Simulator. Upon completion of both courses, attendees will have met the requirements reflected in the following National Assessment Guidelines: M-3-1A, M-7-1A, M-7-2A, M-7-3A, M-7-3B, M-7-4A, M-7-5A, M-8-1A, M-8-2A, M-8-3A, M-8-4A, M-8-5A, M-8-6A, M-8-6B, M-8-7A, M-8-8A, and M-9-9A. A Basic Shiphandling course or equivalent experience through sea service is a pre-requisite for this course. Please note that Shiphandling courses may be scheduled for either a morning or late afternoon starting time. Attendees will be assigned a starting time upon arrival at MITAGS. In addition, Shiphandling course attendees should not make plans to depart the Institute until the morning following course completion.

❖ **CMM-VPEN - Voyage Planning and Electronic Navigation (Duration: 5-Days)**

This course is thirty-five hours in duration and provides the attendee with knowledge and understanding in the areas of appraising and planning an ocean or coastal voyage and using bridge electronics (such as GPS, GYRO, and Autopilot) when executing the plan. Voyage Planning and Electronic Navigation, when combined with an approved ECDIS course, meets the STCW-95 competencies for Advanced Navigation, as delineated in STCW-95, Table A-II/2, as specified in National Maritime Center Policy Letter # 04-02.

Again, when combined with an approved ECDIS course it meets the Advanced Navigation training and learning objectives that are necessary to Plan and Conduct a Passage and Determine Position, as well as the assessment requirements for Chief Mate/Master on vessels greater than 3,000 gross tons. The course also satisfies the following assessment task numbers: M-1-1A, M-1-1B, M-1-2G, M-1-2H, M-1-2I, M-2-1A, M-2-1D, M-2-1E, M-2-1F, M-6-3A, M-6-3B, and M-6-3C. If the course attendee completes this course and an approved ECDIS course within 1 year of each other, he/she will be issued a certificate stating they have satisfied the requirements for Advanced Navigation, as detailed in National Maritime Center Policy Letter # 04-02 and STCW-95, Table A-II/2. This course is specifically designed for qualified Third and Second Mates wishing to upgrade to Chief Mate/Master. Only individuals who possess maritime navigation experience should attend this course. In addition, attendees should have knowledge, understanding, and proficiency in Mercator, Great Circle Sailings, and Tide and Current calculations. In order to successfully complete this course, it is strongly recommend that you review these areas of navigation and become proficient in them prior to attending the course.

❖ **CMM-WKP - Advanced Watchkeeping (Duration: 5-Days)**

This course is thirty-five hours in duration. It is designed to provide experienced Deck Officers (Second Mate and above) with advanced training and understanding in the application of the U.S. Inland and International Rules for the prevention of collisions at sea. It also prepares attendees for organizing and managing a bridge team. Students will participate in eight simulation exercise scenarios on a Part-Task Simulator, which allows attendees to experience real-time, management level, decision-making. Upon completion of this course, attendees will be able to pass a fifty question, multiple-choice examination that is based on the U.S. Coast Guard Rules of the Road question pool; demonstrate a thorough knowledge and understanding of the collision regulations (including their application and intent in complex multi-ship situations); and demonstrate an understanding of Bridge Resource Management principals and techniques for organizing and motivating a bridge team. In addition, attendees will perform practical assessments that meet performance standards equivalent to the following U.S. Coast Guard Control Sheets: M-4-1A - Identify vessels by light configurations, M-4-1B - Identify vessels by Day Shapes, M-4-1C - apply Rules of the Road to avoid a collision, and M-5-1D - Bridge Resource Management. There are no pre-requisites for this course. The program is open to any individual who possesses a Third Mate, Unlimited, Deck Officer License with the Radar and ARPA endorsements or the STCW-95 endorsement as OICNW with one-year of sea time.