

PILOT TRAINING MATRIX



MARITIME INSTITUTE OF TECHNOLOGY AND GRADUATE STUDIES - PACIFIC MARITIME INSTITUTE

MITAGS & PMI are the leading providers of pilot training programs in the United States. The training modules listed below can be organized into a custom cluster of seminars / courses.

Please visit www.mitags.org for more information on our operational research and ship / database simulation modeling.

Pilot Course/Seminars Available

AUTOMATIC IDENTIFICATION SYSTEMS (AIS-1)

(Classroom Based)

This one-day seminar is designed to provide the pilots with knowledge of the technologies that make up the AIS, and to expose them to the advantages / problems associated with this equipment. The AIS portion of the course has been developed using both government and manufacturer technical data.

Duration: 1 Day *This seminar can be combined with 2-day ECDIS-ENAV for Pilots, and / or the 2-day PPNS for Pilots.*

Pre-Requisite: There are no pre-requisites for this course.

AUTOMATIC RADAR PLOTTING AIDS (ARPA-4)

(Simulation Based)

This STCW-95 required course is designed to train deck officers and plots in the proper use of Automatic Radar Plotting Aids (ARPA). The curriculum exceeds International Maritime Organization (IMO) requirements. "Hands-on" simulation is conducted on a number of different ARPA's.

Duration: 4 Days *Pre-Requisite: Attendees are strongly advised to practice radar plotting prior to the start of class.*



ACTUAL PHOTO



SIMULATED IMAGE

AZIPOD (AZIPOD)

(Simulation Based)

Duration: 2 Days

The two-day, Azipod Control Systems course has been designed to introduce pilots and masters to the unique maneuvering techniques and characteristics of the Azipod Propulsion Systems (A three-day version, at MITAGS, includes the Kamewa® Controls).

Both courses include extensive simulator orientation to the transit mode (active rudders), the independent maneuvering mode, and the joystick mode. Simulation exercises are used to provide a realistic transition from one mode to the next during all phases of maneuvering that are from "berth to berth."

Pre-Requisite: Both courses are for experienced maritime pilots or licensed mariners who have extensive shiphandling experience.

ADVANCED COLREGS FOR PILOTS

(Classroom)

Duration: 1 Day

This 1-day classroom seminar is design to enhance masters and pilots understanding of the application of the U.S. Inland and International Rules for the prevention of collisions at sea. The seminar demonstrates, through interactive presentations, the importance of a thorough knowledge and understanding of the collision regulations including their application and intent in complex multi-ship situations.

Pre-Requisite: There are no pre-requisites for this course.

ADVANCED COLREGS FOR PILOTS

(Simulation Based)

Duration: 1 Day

This 1-day seminar focuses on areas where the application of the Rules may lead to misunderstanding or confusion. It assists pilots and ship masters in recognizing borderline situations and determining the best course of action, from a legal and safety standpoint.

The seminar is similar to the classroom version, but takes advantage of full-mission simulation. Attendees will use the simulator to recreate four different scenarios made up from past casualties. Following each scenario, there will be a debriefing and discussion session. While the legal implications of various courses of action will be presented, this is not an admiralty law class. It is a practical course with useful information for anyone that directs the movement of vessels (pilots, masters, and vessel traffic service).

Pre-Requisite: There are no pre-requisites for this course.



BRIDGE RESOURCE MANAGEMENT FOR PILOTS (BRMP)

(Classroom)
Duration: 2 Days

This two-day course covers the principles and practices of Bridge Resource Management for Pilots (BRMP), as defined by the American Pilots' Association (APA). Topics covered include an overview of Bridge Resource Management, Regulatory / Industry Initiatives, Situational Awareness, Communication, the Master-Pilot Information Exchange, Risk Assessment, Error Detection, Culture and Diversity, Developments in Technology Automation, Vessel Traffic Systems and Technology, and Human Performance. The curriculum has been approved by the American Pilots' Association, as satisfying the guidelines for renewal courses in Bridge Resource Management for marine pilots.

Pre-Requisite: This course is specifically designed for maritime pilots.

CONTINGENCY PLANNING WORKSHOP (CONT-PLNG-WKSH)

(Classroom)
Duration: 1 Day

This one-day seminar introduces attendees to the concepts of contingency planning and emergency management using the National Fire Protection Association (NFPA) 1600 Standard on Disaster/Emergency Management and Business Continuity Workshops.

Attendees successfully completing the Contingency Planning Workshop will be able to list the steps in the emergency management process, describe methods to mitigate potential risks, list the components of preparedness, describe necessary actions when responding to an emergency, and describe considerations in the recovery process.

Pre-Requisite: There are no pre-requisites for this course.

EMERGENCY SHIPHANDLING / BRIDGE RESOURCE MANAGEMENT (SHS-ESH-BRMP)

(Simulation and Classroom)
Duration: 3 Days

The course incorporates the required principles of the American Pilots' Association's Bridge Resource Management for Pilots (BRMP) into full-mission simulation. The course makes ample use of case studies involving pilot casualties and other emergencies situations to improved decision-making skills when operating in a stressful environment.

Custom versions of this course can be set up using a specific pilotage area and casualty scenarios.

Pre-Requisite: This course is primarily geared towards experienced masters and pilots.



ECDIS / E-NAVIGATION FOR PILOTS & PORTABLE PILOTING NAVIGATION SYSTEMS (PPNS)

(Simulation and Classroom)

Duration: 2 Days

This course has been designed to afford pilots and senior officers with the opportunity to gain insight and knowledge into the recent advances in electronic navigation systems. Special emphasis is placed on how the technologies are being “integrated” onboard modern vessels, and the resulting consequences.

The seminar can be combined with the 1-Day AIS and / or serve as the theory portion of a custom PPNS Course.

Pre-Requisite: This course is primarily geared towards experienced maritime pilots and masters.

FATIGUE, SLEEP, AND MEDICATIONS SEMINAR (HF-FSM)

(Classroom)

Duration: 1 Day

This one-day seminar will assist attendees in understanding how medications, certain sleep patterns, and sleep disorders can decrease their effectiveness or even potentially increase the risk of errors during transits. Basic information on sleep and fatigue will be presented. Attendees will also review the effects of some prescription and over-the-counter medications on performance and fatigue. Additionally, positive and negative utilization of caffeine as a stimulant will be discussed in detail.

Pre-Requisite: There are no pre-requisites for this course.

HIGH-SPEED VESSEL HANDLING (SHS-HSPD)

(Simulation and Classroom)

Duration: 5 Days

This five-day course is designed to introduce attendees to the high-speed environment, examine the challenges associated with high-speed, and instill safe high-speed craft operating principles. Objectives of the program include understanding the need for a professional approach to watch-keeping at high-speeds, operating within a team environment, demonstrating familiarity with the typical maneuvering characteristics of high-speed vessels, constructing and using a passage plan as an aid to navigation, understanding the zone concept on high-speed routes, demonstrating the use of “north up” radar presentation at high speeds, and demonstrating the use of parallel indexing to gauge target movement.

Pre-Requisite: This course is specifically designed for maritime pilots, licensed deck officers, qualified military personnel, and other properly documented mariners.

PILOT TRAINING MATRIX



LEGAL ASPECTS OF PILOTAGE (LEG)

(Classroom)

Duration: Evening Seminar

A maritime attorney provides an overview of federal, state, and international regulations that pertain to pilots and pilotage. Topics covered include the background and relationship of the respective federal, state, and international regulatory jurisdictions; the role of the pilot; what to do after a casualty; and specific federal regulatory requirements. The instructor will make every attempt to tailor the course to meet the specific legal circumstances of the pilots.

Pre-Requisite: This course is specifically designed for state pilots.

LIQUEFIED NATURAL GAS AWARENESS (LNG-AWARENESS)

(Simulation and Classroom)

Duration: 1 Day

The one-day Liquefied Natural Gas Awareness course is intended to familiarize attendees with the operations and procedures of liquid natural gas tankers and terminal operations. Classroom training is augmented with opportunities for "hands-on" application using the LNG simulator. Successful completion of this course will enable attendees to have a basic understanding of the properties and hazards associated with liquefied gas, cargo containment systems, LNG tanker design, inert gas systems, tank environment control, safety precautions, and emergency procedures.

Pre-Requisite: There are no pre-requisites for this course. However, it is designed for personnel who are not expected to directly handle or transport LNG.

MEDIA RESPONSE WORKSHOP (MEDIA-RSP-WKSHP)

(Classroom)

Duration: 1 Day

This one-day seminar provides attendees with basic knowledge, skills, and abilities for successful interaction with the news media during and after a crisis event.

Attendees will be expected to participate in video-taped, mock interviews. Successful completion of the Media Response Workshop will give attendees the knowledge on how to successfully respond / communicate with the news media during crisis events.

Pre-Requisite: There are no pre-requisites for this course.

PORTABLE PILOTING NAVIGATION SYSTEMS (PPNS)
(Simulation)
Duration: 2 Days

This is a custom program tailor to the specific portable piloting navigation systems selected by the Pilots' Associations. Pilots have the opportunity to operate their own PPNS in a simulated environment. Current custom programs are available for the Raven®, ARINC®, Rosepoint®, and Transas® PPNS systems. However, virtually any system can be interfaced with the simulator using the portable pilot plug connection. Up to eight, simulation bridges are available for integrated and independent training.

The 2-day ECDIS-ENAV Course can be combined with the PPNS Course to provide more in-depth coverage of the underlying theories behind PPNS.

(For pilot groups still in the PPNS selection process, this course provides a platform to compare systems in a controlled simulated environment.)

Pre-Requisite: No prerequisites for this course.

RISK RESOURCE MANAGEMENT (RRM)
(Simulation and Classroom)
3 Days

Risk Resource Management for Pilots (RRM) goal is to enhance higher-level decision-making skills needed for optimal situational awareness; risk, task, and resource management.

Research has proven that reality is the ultimate learning environment and full-mission scenario based training attempts to get as close as possible to this ideal. The course incorporates the standards set by FAA for Scenario Based Training (SBT) and Learner Center Grading (LCG). Additionally, the course meets the American Pilots' Association (APA) recommendations for Bridge Resource Management for Pilots (BRM-P).

Pre-Requisite: There are no pre-requisites for this course.

RADAR OBSERVER RENEWAL (ROR-1)
(Classroom)
Duration: 1 Day

This one-day seminar has been specifically designed for those who need to renew their current Radar certificate. It can be scheduled for evening, weekends, or part of another training program.

Pre-Requisite: Original Radar Certificate.

SECURITY AWARENESS SEMINAR FOR MARINE PILOTS (SEC-PILOT)
(Classroom)
Duration: 4 Hours

Marine Pilots are led through an examination of the history of terrorism and the terminology critical to understanding and coping with potential terrorist acts. Terrorist practices are discussed, with a focus on situations that marine pilots may encounter in the performance of their day-to-day duties. Pro-active and re-active courses of action are suggested, as well as relatively simple means of changing daily routines to reduce vulnerability. Informational sources are identified and reporting responsibilities are also addressed.

Pre-Requisite: This course is specifically designed for maritime pilots.

TANKER LIGHTERING (SHS-LITE)
(Simulation and Classroom)
Duration: 3 Days

The three-day Tanker Lightering Course is designed to assist mooring pilots with improving and practicing lightering/shiphandling skills. Class subject areas include proper communications, vessel approaches, operating conditions, and vessel-to-vessel interaction. Attendees will conduct practical exercises with two interactive, own-ship full-mission simulators.

Pre-Requisite: This course is designed for experienced maritime pilots and licensed mariners who have extensive shiphandling experience.

TRAINING TOOLS MENTOR TRAINING FOR PILOTS

(Simulation and Classroom)
Duration: 1 Day

This one-day seminar provides senior pilots with the basic knowledge and understanding of their role as onboard trainers for apprentice pilots. Participants will learn basic adult learning theory and how to apply instructional techniques to onboard training situations. Classroom discussions will be followed by practical exercises in the simulator and will stress the importance of effective communication, motivation, conflict resolution, and the development of clear learning objectives.

Pre-Requisite: There are no pre-requisites for this course.

TRAINING TOOLS ASSESSOR SEMINAR

(Simulation and Classroom)
Duration: 1 Day

The primary goal of this seminar is to provide the knowledge and understanding of practical assessments. Following classroom discussion, participants are given the opportunity to practice performance assessments in a full mission bridge simulator. Additionally, this seminar provides a framework for improving an association's training program; maximizing trainee pilot performance, and improving the process for conducting and documenting pilot trainee assessments.

Pre-Requisite: There are no pre-requisites for this course.

TUG ESCORT TRAINING

(Simulation and Classroom)
Duration: 2 Days

The primary objective of the training is to improve teamwork and communication between pilots, ship masters and tugboat operators engaged in escort operations. The course scenarios make maximum use of multiple interactive own-ship simulation. Topics covered include:

- Escorting regulations and guidelines
- Tug Inventory and capabilities including winches
- Strength of bits and chocks
- Tug escort techniques
- Communications and terminology
- Master Pilot exchange
- Operating procedures
- Best practices
- Escort drills

Custom simulation scenario can be programmed that use own-ship simulator models based on actual vessels / tugs operating in their pilotage area.

Pre-Requisite: There are no pre-requisites for this course.

TRACTOR TUGS FOR PILOTS (TRACTUG-2)

(Simulation and Classroom)
Duration: 2 Days

The two-day Tractor Tugs for Pilots course provides knowledge and practical training in the theory, operation, and application of Voith Schneider and Z-Drive or "Reverse Tractors." The course covers a number of subject areas in the classroom and on the shiphandling simulator; including a review of the latest tractor techniques, chock and bit strength issues, comparing tractor performance with conventional tugs, tractor commands and standard definitions, elements of tractor design / performance, and the benefits of using the unique higher speed tractor tug maneuvers for ship assist and escort work.

Pre-Requisite: This program is specifically designed for marine pilots.

