2017 CRUISE TRAINING PROGRAM

Department of Marine Transportation

MARINE TRANSPORTATION PORTION FOURTH CLASS SEA TERM

A Second 100 Years of Maritime Excellence

2017 Training Voyage of the USTS KENNEDY

Manual # _____

Cadet _____

2017 Version **Division** _____

Dept of Marine Transportation **Berthing Location** _____

COURSE
ST-0999D - Sea Term I (Deck Portion)

CREDITS
6 academic credits

COURSE DESCRIPTION
Sea Term I is a common sea term for freshmen USCG license track majors. All cadets will stand bridge and engine room watches and receive training in basic deck and engine skills. All cadets will participate in maintenance of the vessel: deck, engine, and stewards. Cadets will also have the opportunity to visit foreign and domestic ports.

Sea Term I (Deck Portion) is a component of Sea Term 1 for USCG license track majors.

PREREQUISITE
All Cadets MUST HAVE PASSED Engineering Systems and Safety (EN-1112), Vessel Familiarization and Basic Safety Training(MT-1111), and Algebra and Trigonometry (SM-1111) to be eligible to participate in Sea Term II.

STCW KNOWLEDGE-BASED LEARNING OBJECTIVES
Completion of this course will demonstrate knowledge and understanding of the following STCW elements:

- AB-D-A1.1 Ability to communicate with the officer of the watch
- AB-D-C1.1 Function and uses hoists, cranes, booms, and related equipment
- RFPNW-X1.1 Use of magnetic and gyro-compasses
- RFPNW-X1.2 Helm orders
- SA-X1.1 Basic working knowledge of maritime security terms and definitions
- SA-X1.2 Basic knowledge of international maritime security policy
- SA-X1.2 Responsibilities of Governments, companies and persons
- SA-X1.3 Basic knowledge of maritime security levels and their impact on security measures and procedures aboard ship and in port facilities
- SA-X1.4 Basic knowledge of security reporting procedures
- SA-X1.5 Basic knowledge of security-related contingency plans
- SA-X2.1 Basic knowledge of techniques used to circumvent security measures
- SA-X2.2 Basic knowledge enabling recognition of potential security threats, including elements that may relate to piracy and armed robbery
- SA-X2.3 Basic knowledge enabling recognition of weapons, dangerous substances and devices
- SA-X2.3 Awareness of the damage that weapons, dangerous substances and devices can cause
- SA-X2.4 Basic knowledge in handling security-related information and security-related communications
- SA-X3.1 Basic knowledge of training, drill and exercise requirements
- T-OPS-X2.3 Understanding of information on a Material Safety Data Sheet (MSDS)

STCW PRACTICAL ELEMENT LEARNING OBJECTIVE (See Section 2)
Completion of this course may demonstrate proficiency in the following skills:

- ABDE-3-1A Demonstrate crane and hoist signals

COURSE CONDUCT

- Course conduct will be in accordance with the MMA regimental system and T.S. Kennedy rules.
- All Cadets shall wear the appropriate uniform to each class.
- The MMA honor code will be strictly followed.

COURSE INTRODUCTION

The Fourth Class Deck Training Program is intended to build upon skills achieved in STCW Basic Training and STCW Personal Survival (MT1121), to continue your training towards being a Junior Officer aboard ship, and to ensure professional competency in the following areas:

A. Personnel safety, lifesaving and social responsibilities
B. Fire prevention and equipment
C General Seamanship
D. Watchkeeping, at sea and in port
E. Introduction to elements of navigation

We are very fortunate to have the training opportunity afforded by the *T.S. KENNEDY*. What we accomplish on her over the next few months towards achieving the Marine Transportation Department's training objectives and your personal cruise goals will be largely up to you. You will be expected to use every opportunity that the vessel affords to make yourself professionally the best. We want you to learn, but to also have an enjoyable cruise. The basic goal of the Marine Transportation Department's Training Program for the Fourth Class Cadets is to raise your knowledge of going to sea to an entry level shipboard crewmember. You will be expected to pay attention to your instructors and senior cadets and try your hand at these new skills.

Profiles of training lectures which each of you will experience on this cruise and which will address certain watch-station qualification requirements are included as Section 3.

COURSE REQUIREMENTS

All Fourth Class Cadets will be required to participate and complete all aspects of Deck Training and the Deck Training Rotation. They must also satisfactorily demonstrate knowledge and competency in proper crane signaling techniques.

TRAINING MATERIAL AND EQUIPMENT:

The following equipment and textbooks will be required to complete the Fourth Class Deck Training Program:

- Marine Fire Fighting - Brady There are plenty of copies in the ship's library
  Take one out just before your deck training cycle, and return it after your exams
- Cornell Manual for Lifeboatmen, Able Seaman and QMED
- Dept. of Marine Trans. 2017 Cruise Training Manual for Fourth Class – (this manual).
- Work Gloves, Hard Hat, Safety Glasses / Goggles,
- Flashlight (with red lens cover if possible)
- Pocket Knife
- Personal Calculator
- Accurate timepiece (watch)

ANY OTHER EQUIPMENT AS REQUIRED BY THE COMMANDANT OF CADETS SEA BAG REQUIREMENTS.

RECOMMENDED ADDITIONAL BOOKS (NOT REQUIRED)

- American Merchant Seaman's Manual
- Merchant Marine Officer's Handbook
- Modern Seamanship - Knights

None of the above items will be provided by the Academy except for this training manual although publications may be available in the library.

COURSE/CRUISE GRADING POLICY

The following grading policy applies to all cadets participating in the Deck Portion of Sea Term I – Freshman Cruise Deck training.

- Successful completion of the Sea Term is a prerequisite for graduation.
- In accordance with the Mass Maritime Academy academic policy, the minimum passing grade for Sea Term I, ST-0999 is 70%.
- Grades will not be scaled.
- The + - system will be used.
- Final grades for Sea Term I will be based on the following percentage values:

50% Marine Transportation Fourth Class Cruise Component

- Written Examination* 75%
- Maintenance (Provided by Chief Mate) 25%
- Participation in lectures and watch rotation

*One written examinations will be administered at the end of your Deck Training cycle either during the Mid-term Examination day of 26 January (Group A Cadets) or during the Final Examination day of 17 February (Group B Cadets).during the cruise training cycle.

**Cadets will also be required to pass the written "Crane Signal" assessment that will be given as part of your Deck Training written exam. See Section 2.

If you fail the Crane Signals exam, you will receive an INCOMPLETE for Sea Term I.

50% Fourth Class Cruise Engine Training Grade Component

ROTATIONS

Fourth class cadets have been broken into 4 divisions, with each division being broken down into 2 smaller groups: A & B. All Fourth Class Cadets, Engineering or Deck, will take the same courses: Those listed within this manual are courses taken under the Deck Training (DT) program portion of your sea term. There are seven other components as well: Deck Watches (DW), Engineering Training (ET), Engineering Watches (EW), Deck Maintenance (DM), Engine Maintenance (EM) Deck Utility (DU) and Engine Utility (EU).
REFER to the Long Term Training Schedule printed in Section 4 of this manual.
NOTE: **ONLY Deck Training is covered by this manual.**

Beyond the initial breakdown of all fourth class cadets into divisions and A and B sections, During the first 12 training days of this sea term, Sections 3A, 2A, 1A and finally 4A will each receive three days of Deck Training, in that order. Sections 3B, 2B, 1B and 4A will receive their Deck Training in the last half of the sea term.

Deck Training will further break you down into BLUE and GOLD sections. You will be informed as to which group you are in at the beginning of Deck Training. Once in either, you will remain with that group for the duration of your Deck Training.

DEPARTMENTAL TRAINING SCHEDULES

Cadets are advised to consult the Fourth Class Deck Long Term Training Schedule (Section 4) to determine subjects and locations of daily training evolutions. A Daily Training Schedule will be posted at 1900 each evening to update the Long Term Training Schedule to reflect last minute changes resulting from ship operational requirements, weather or other circumstances.

The Daily Training Schedule will be posted in the following locations:

1. Deck Training Office
2. Main Deck Stbd Side Mess Deck
3. Library Bulletin Board
4. Forward House Rate Bulletin Board
5. Cadet Berthing Upper Tween
6. Cadet Information Bulletin Board outside Machine Shop
7. Deck Training Classrooms

Make sure you see a copy of the next day's training schedule if you have training the next day.

The Daily Training Schedule will take precedence over the long-term schedule.

Cadets will be held accountable for its contents and must report for all classes as scheduled.

Cadets failing to meet a class as scheduled, leaving a class without the permission of the instructor, or returning late from a Fire/Abandon Ship or other drill will be placed on report. Students who are unsure of the use of the Long Term Training schedule or any of the contents of this publication or may have questions relating to your Deck Training Program should see the Deck Training Coordinator at the Deck Training Office for clarification or assistance. Ignorance of the schedule is not an excuse for missing classes or examinations. If you miss an exam it is up to the professor teaching to decided if you will receive a retest or not.

Massachusetts Maritime Academy is committed to providing reasonable accommodations to students with documented disabilities. Students who believe they may need accommodations in this class are required to contact the Sea Term Director of Disability Compliance, within the first two weeks of classes.

A great deal of effort has been made in providing you with insight into the contents of each lecture which you are scheduled to attend. It is your responsibility to familiarize yourself with the contents of the lecture profile found in Section 3 for your scheduled class prior to your attending that session. **You will be held accountable for the reading material assigned in the lecture profile and for providing any equipment specified in the lecture profile required to carry out the session.** Cadets failing to report to a scheduled class without the required publications and or equipment necessary to complete the scheduled class or evolution will be placed on report.

Mentor Designation and Acknowledgement:
A First Class Deck cadet has been assigned to you as a mentor for the duration of the cruise. The list of mentors will be posted outside the Deck Training Office. Seek out this individual or any Deck Training Officer if you need help or further guidance in any aspect of the cruise or your individual cruise responsibilities. In the space provided below, write your name and berthing location and the name of the mentor assigned to you. Have this individual initial and date this text box. You are expected to meet with this individual at least several times throughout the cruise. Contact him/her if you have any questions, problems or concerns. These people have been assigned to help you through the cruise.

Manual Owner's Name _____ Berthing Location _____

Mentor Assigned _____ Mentor met and initialed _____

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SECTION 1

Vessel Safety Familiarization

SAFETY FAMILIARIZATION

All individuals assigned to a vessel must meet the following international minimum competencies before being assigned. The minimum training requirement and expected outcome for STCW Basic Training, which you have received, is indicated below. Receiving a grade of at least a C- in MT 1121 is indicative that you have fulfilled these requirements. Primary emphasis of the Fourth Class Deck Training Program will be to dramatically increase your skill above these minimum levels.

VESSEL SAFETY FAMILIARIZATION

Be able to understand:
Understand safety information symbols, signs and alarm signals.
Must be able to speak, read and understand English. Safety information symbols, signs and alarm signals are correctly interpreted. Safety instructions are clearly understood. Orders are carried out and properly complied with.

Know what to do if:
The fire and emergency signal is sounded. *Actions taken during relevant drills or actual emergency situations are appropriate to the circumstances and in accordance with emergency procedures or safety regulations. The type and scale of emergency must be promptly identified. Initial actions are appropriate to the urgency of the situation.*

Be able to identify:
Identify muster and embarkation stations and emergency escape routes. *Actions taken during relevant drills or actual emergency situations are appropriate to the circumstances and in accordance with the station bill, emergency procedures or safety regulations.*
The distress or emergency signals are immediately recognized. Reports to designated station properly dressed wearing life jacket or immersion suit, ready to carry out duties on command.

Emergency procedures and safety regulations:
Read and demonstrate an understanding of T.S. KENNEDY's emergency procedures and safety regulations for:

A. At-sea fire control plan
B. In-port fire control plan

Actions taken during relevant drills or actual emergency situations are appropriate to the circumstances and in accordance with emergency procedures or safety regulations. The type and scale of emergency must be promptly identified. Actions are appropriate to the urgency of the situation.

Be able to raise the alarm:
Raise the alarm and have a basic knowledge of the use of portable fire extinguishers.
Actions taken during relevant drills or actual emergency situations are appropriate to the circumstances and in accordance with emergency procedures or safety regulations. The type and scale of emergency must be promptly identified. Makes a preliminary assessment of the situation and then raises the alarm. Proper portable fire extinguisher and suitable extinguishing agents are selected and utilized for various classes of fire.

Be able to locate:
Locate and explain how to operate fire-fighting equipment; fire monitoring systems, alarm activating points, general alarm bells, fire extinguishers, fire hydrants, fire axes and hoses. *Actions taken during relevant drills or actual emergency situations are appropriate to the circumstances and in accordance with emergency procedures or safety regulations. Demonstrate the ability to access and utilize fire-fighting equipment in a timely manner.*

Be able to locate:
Locate, close and open the fire (flame screen), watertight doors, and weather tight doors fitted aboard, other than those for hull openings.
Actions taken during relevant drills or actual emergency situations are appropriate to the circumstances and in accordance with emergency procedures or safety regulations. Demonstrate the ability to access and utilize fire-fighting equipment in a timely manner.

Be able to locate:
Locate fixed CO_2 and Halon bottle rooms, and control valves. Explain how to operate fixed fire-fighting systems:
Actions taken during relevant drills or actual emergency situations are appropriate to the circumstances and in accordance with emergency procedures or safety regulations. The type and scale of emergency must be promptly identified. Demonstrate the ability to access and utilize fire-fighting equipment in a timely manner.

Be able to locate:
Locate and explain the operation of the emergency fire pump. *Actions taken during relevant drills or actual emergency situations are appropriate to the circumstances and in accordance with emergency procedures or safety regulations. Demonstrate the ability to access and utilize fire-fighting equipment in a timely manner.*

Be able to locate:
Locate the damage control lockers, breathing apparatus and fire fighter's outfits.
Actions taken during relevant drills or actual emergency situations are appropriate to the circumstances and in accordance with emergency procedures or safety regulations. The type and scale of emergency must be promptly identified. Demonstrate the ability to access and utilize fire-fighting equipment in a timely manner.

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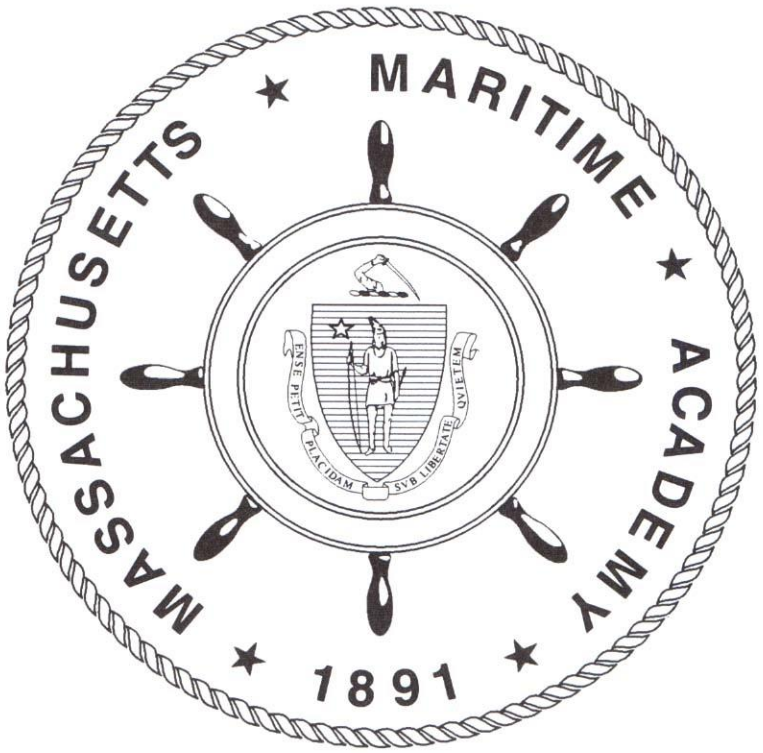

SECTION 2
STCW ASSESSMENT

STCW Assessment Procedures

Fourth class cadets are required to demonstrate their knowledge of Crane and Hoist Signals.

The end-of-training exam will include a section on crane and hoist signals where cadets will be able to demonstrate their knowledge to the assessor (examination administrator). One of the training lectures will involve training in crane and hoist signals to ensure proficiency. This assessment must be passed in order to pass Sea Term I.

Should you need to be re-assessed, there will be one additional exam day which will occur on February 20 (final exam day). If you need re-assessment, it is your responsibility to ensure scheduling with the Deck Training Coordinator, Captain Craig Dalton in the Deck Training Office, in 6 Hold Training Area or in Forward Cabin F105.

ABDE-3-1A

Demonstrate crane and hoist signals

Function: Controlling the operation of the ship and care for persons on board at the support level

Competence	Knowledge, Understanding & Proficiency	Task
Contribute to the safe operation of deck equipment and machinery	D-C1.1 Knowledge of deck equipment, including: 1. function and uses of valves and pumps, hoists, cranes, booms, and related equipment 2. function and uses of winches, windlasses, capstans and related equipment 3. hatches, watertight doors, ports, and related equipment 4. fibre and wire ropes, cables and chains, including their construction, use, markings, maintenance and proper stowage 5. ability to use and understand basic signals for the operation of equipment, including winches, windlasses, cranes, and hoists 6. ability to operate anchoring equipment under various conditions, such as anchoring, weighing anchor, securing for sea, and in emergencies	Demonstrate crane and hoist signals

Assessed in: ST-0999D Sea Term I (Deck Portion)
Note: Also satisfies equivalent requirement for AB-Engine

Condition
Aboard ship or in a laboratory

Behavior
Demonstrate the basic signals for crane operation including

- Hoist/Lower
- Stop /Emergency Stop
- Move slowly
- Raise/Lower Boom
- Dog everything

Standard
- Correct signals are demonstrated
- No safety violations are observed

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SECTION 3

Cruise Lecture Profiles and Information

4th CLASS CRUISE LECTURE PROFILES

	Lecture	Subject	Page #
Piloting	Piloting I	Terrestrial Lines of Position	17
Security Awareness	Safety V	Security Awareness	18
Shipboard Safety and Lookout	Lifesaving I	Emergency Signals	19
	Lifesaving II	Lifeboats	28
	Lifesaving III	Liferafts	29
	Lifesaving IV	Liferaft Davits	30
	Lifesaving V	Lifesaving Equipment	31
	Lifesaving VII	Line-Throwing Appliance	32
	Lifesaving VIII	Survival Craft Devices	33
	Nav General I	Lookout	34
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JHAs, MSDSs, & Fall Protection	Safety I	Safety Introduction	47
	Safety IV	Safety Procedures Aboard TS Kennedy	48
	HAZMAT 1	Accident Recognition	49
Firefighting	Firefighting I	Fire Theory	50
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Merchant Marine	Merchant Marine	Introduction	56
Marine Weather	Nav General V	Marine Weather	57
Watch	Watch Standing I	Introduction to Deck Watch Standing	58
	Watch Standing III	Bridge Intro	59
	RADAR 1	RADAR Watch	60

LECTURE TITLE: PILOTING 1

TRAINING SUBJECT: INTRODUCTION TO CHART NAVIGATION

SPECIAL REQUIREMENTS:

- Chart Tables
- Plotting equipment
- Chart (Mercator) 13218 or 13205 and one in east longitude

TRAINING LECTURE OBJECTIVE:

A. To familiarize student with elements of piloting

B. To familiarize students with instruments used in piloting

DISCUSS:

A. Mercator charts and chart symbols (Basic)
B. Magnetic and gyro compasses and errors- variation / deviation
C. Direction – True / Compass
D. Bearings, track, dead reckoning, speed, distance, soundings.
E. Latitude, longitude

SHOW/DEMONSTRATE:

A. How to lay down a track with parallel rulers or navigational protractors.

B. How to lay down bearings; obtain fix, and determine vessel's position in terms of latitude and longitude.

READING ASSIGNMENT:

American Merchants Seaman's Manual Ch. 16 (1-52)

MISCELLANEOUS:

TEST QUESTIONS:

- How is distance measured on a Mercator chart?
- What is the latitude and longitude of the Block Island Southeast light?
- What is chain of soundings?
- Where is variation found?

WATCHSTATION/GENERAL TRAINING REF:

- Navigation Assistant
- All Fourth Class
- Navigation at the support level
- Navigation at the operational level

LECTURE TITLE: SAFETY V

TRAINING SUBJECT: VESSEL SECURITY OFFICER / SECURITY AWARENESS

SPECIAL REQUIREMENTS:

- TS Kennedy Safety Manual
- Copies of Permits

TRAINING LECTURE OBJECTIVE:

A. To familiarize cadets with the purpose of the Vessel Security Officer and the importance of safety aboard a vessel

DISCUSS:

A. VSO, CSO
B. IMO – ISPS Code
C. Piracy and Terrorism
D. MTSA
E. MARSEC Levels
F. HSAS
G. Security Tools used aboard a vessel

SHOW/DEMONSTRATE:

A. Purpose of proper watch standing
B. Methods of prevention and detection

READING ASSIGNMENT:

A: T.S. KENNEDY SHIPBOARD SAFETY MANUAL

MISCELLANEOUS:

TEST QUESTIONS:

- As per course professor

WATCH/STATION GENERAL TRAINING REF:

LECTURE TITLE: LIFESAVING I

TRAINING SUBJECT: EMERGENCY SIGNALS

SPECIAL REQUIREMENTS:

- Class Room
- Lifeboat / Survival Craft
- Life Jackets
- *T.S. KENNEDY Bridge Procedures Manual*

TRAINING LECTURE OBJECTIVE:

A. Familiarize students with all Emergency signals
B. Familiarize students with travel (traffic) pattern
C. Familiarize students with all emergency procedures

DISCUSS:

A. Abandon Ship Signal
B. Fire and Emergency Signal
C. Man Overboard Signal
D. Mustering areas and alternate mustering areas
E. Travel Patterns
F. Emergency Boat Crew

SHOW/DEMONSTRATE:

A. Travel Patterns
B. Mustering areas and equipment required at boat station
C. Use of *T.S. KENNEDY Bridge Procedures Manual*
D. Stand Up, Listen Up, Shut Up
E. Lifeboat / Survival Craft equipment requirements and test procedures

READING ASSIGNMENT:

Cornell Lifeboat Manual

T.S. KENNEDY Bridge Procedures Manual

MISCELLANEOUS:

Handout Provided

TEST QUESTIONS:

- What is the Abandon Ship Signal?
- What is the Man Overboard Signal?
- What is the signal for dismissal from abandon ship?

WATCHSTATION/GENERAL TRAINING REF:

- Operating Lifesaving appliances
- Navigation at the Support Level
- Prevent, control and fight fires on board

Emergency Signals

Application

The use of emergency signals is the most effective way to convey to all hands that there is an emergency situation or drill on board. The station bill sets forth the various emergency signals to be used for the calling of the crew to their stations and for giving instructions while at their stations. The signals listed below will be sounded in the event of a drill or actual emergency on board. All hands are required to respond promptly to the drill or emergency signals by proceeding to their assigned station and carrying out their assigned duties, or as otherwise directed by the officer-in-charge. All hands should be alert for follow-on public address announcements during drills and/or actual emergencies.

Definitions

The term ***"Whistle"*** means the vessel's approved whistle which is an approved sound signaling appliance capable of producing the prescribed blasts and which complies with the specifications in Annex III of the Navigation Regulations.

1. The term ***"Short blast"*** means a blast of about one (1) seconds' duration.
2. The term ***"Prolonged blast"*** means a blast of from four (4) to six (6) seconds' duration.
3. The term ***"Long blast"*** means a blast of from eight (8) to ten (10) seconds' duration.

The term ***"General Alarm Tone"*** means the vessel's U.S. Coast Guard approved sound signal generated tone that is an approved sound signaling appliance capable of producing the prescribed tones in lieu of general alarm bell signals.

Fire and Emergency Signal

The fire and emergency signal shall be a continuous blast of the whistle for a period of NOT LESS THAN ten (10) seconds supplemented by the continuous sounding of the general alarm tone for NOT LESS THAN ten (10) seconds.

1. ***One (1) short blast*** direct the Squad to Muster Station No. 1, Forward Muster Area. (Main Deck, No. 2 Hatch, Frame 1-55-0)
2. ***Two (2) short blasts*** direct the Squad to Muster Station No. 2, Midship Muster Area. (Main Deck, Quarter Deck, Frame 1-110-0)
3. ***Three (3) short blasts*** direct the Squad to Muster Station No. 3, Aft Muster Area. (Main Deck, Aft of Cadet Mess, Frame 1-194-0)

Dismissal from Fire and Emergency Stations

The general alarm shall be sounded three (3) times supplemented by three (3) short blasts of the whistle. Note the ship's whistle and general alarm tone are used for this signal.

Abandon Ship Signal

The signal for boat stations or boat drill shall be a succession of MORE THAN six (6) short blasts followed by one (1) long blast of the whistle supplemented by a comparable signal on the general alarm.

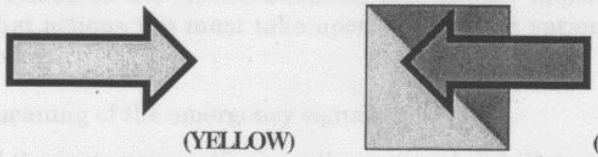
Where whistle signals are used for the handling of survival craft, they shall be as follows:

1. ***Lower Boats*** - One (1) short blast of the whistle (whistle only).
2. ***Stop Lowering Boats*** - Two (2) short blasts of the whistle (whistle only).
3. ***Dismissal from Boat Stations*** - Three (3) short blasts of the whistle (whistle only).

These signals are sounded on the whistle only because all hands should be on deck at lifeboat stations.

Man Overboard Signal

The man overboard signal shall be a succession of three (3) prolonged blasts of the whistle supplemented by a comparable signal on the general alarm; immediately followed by one (1) short blast of the whistle to indicate the man is overboard to starboard (®) or, two (2) short blasts of the whistle to indicate the man is overboard to port (⟨) supplemented by a comparable signal on the general alarm.



(YELLOW) (RED)

* *Three prolonged blasts and/or dashes is the Morse code character for the signal letter "O". The single letter signal "O" may be sent by any method of signaling to indicate "Man Overboard".*

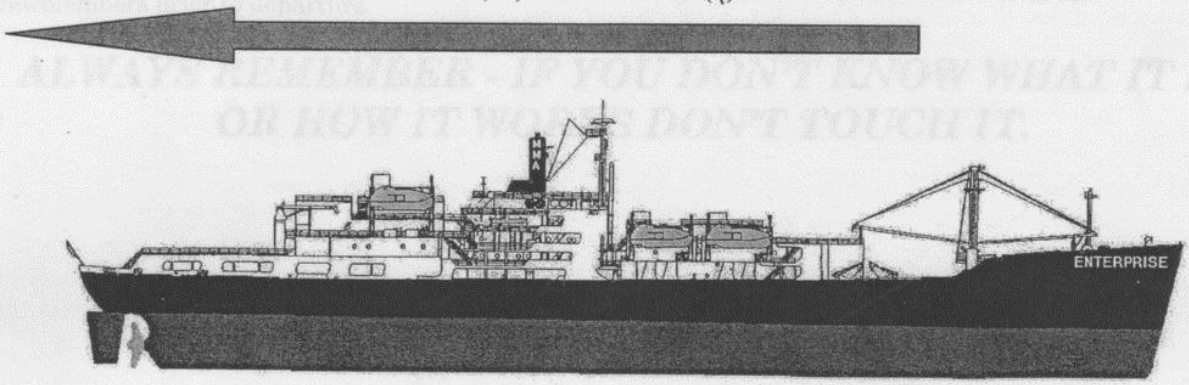
Dismissal or Stand-down from Man Overboard Stations will be passed over the public address system by direction from the officer-in-charge.

Vessel Emergency Traffic Patterns

Order will be maintained during every drill or actual emergency; all hands will promptly proceed to their assigned duty stations adhering to the following traffic flow pattern:

1. PROCEED UP AND FORWARD ON THE STARBOARD SIDE OF THE VESSEL
2. PROCEED DOWN AND AFT ON THE PORT SIDE OF THE VESSEL
3. KEEP TO THE RIGHT-HAND SIDE OF PASSAGEWAYS AND LADDERS

PROCEED DOWN (™) AND AFT (⟨) ON THE PORT SIDE



PROCEED UP (©) AND FORWARD (®) ON THE STARBOARD SIDE

KEEP TO THE RIGHT-HAND SIDE (Φ) OF PASSAGEWAYS/LADDERS

WHEN THE ALARM SOUNDS - GO TO YOUR STATION

46 CFR 199.180--Training and Drills

§199.180 (b) Familiarity with emergency procedures. Every crewmember with emergency duties assigned on the muster list must be familiar with their assigned duties before the voyage begins.

The information provided on the station bill/billet card is very important to everyone aboard the vessel. It instructs you on what actions you must take upon hearing the various alarm signals. In addition, take the time to do the following:

- ☑ Learn the meaning of the emergency signals.
- ☑ Understand the instructions given on the station bill/billet card.
- ☑ Learn your assigned emergency duties before the voyage begins.
- ☑ Know the location of your lifejacket, and how to use it.
- ☑ Know the location of your immersion/anti-exposure suit or thermal protective aid (TPA) and how to use it.
- ☑ Know the location of lifeboats, liferafts and other life-saving equipment.
- ☑ Know the location of fire extinguishers and other fire fighting equipment.
- ☑ Know the location of your emergency stations.
- ☑ Learn two emergency escape routes for getting out of your living and working spaces in the event of emergency situations; know how to exit these spaces in the dark.
- ☑ Know the main dangers to survivors.

The alarms will be demonstrated during a safety orientation and emergency drills conducted by a licensed crewmembers prior to departure.

ALWAYS REMEMBER - IF YOU DON'T KNOW WHAT IT IS OR HOW IT WORKS DON'T TOUCH IT.

PERSONAL SURVIVAL

THE SEVEN STEPS FOR SURVIVAL

STEP 1 ***Situation Recognition***	▪ Situation recognition is one of the key factors in survival. o Admit that your life is in danger. o Acknowledge that in a life-threatening situation if you fail to act you could die. ▪ Take action. Don't wait until it's too late. Call for HELP! o Initiate survival procedures immediately. o Prioritize the threats. If necessary, do first aid and fire fighting as soon as possible.
STEP 2 ***Inventory***	▪ Decide what can help and/or hurt you in this situation! Prioritize your problems and analyze the condition of your critical systems. ▪ Inventory items you've got with you that will help you cope with this emergency.
STEP 3 ***Shelter***	▪ Shelter yourself quickly; the ship/boat is your best shelter. o Prevent the ship/boat from sinking. Use the bilge pump, a bailer, and/or a bucket. o Stay in, on, or with the ship/boat as long as it floats. ***"Don't abandon the ship until the ship abandons you!"*** o Do not launch survival craft until you are ready to board. Stay together as a pod/group. o Climb up on floating objects or the ship/boat if it is flooded or capsizes until it sinks. ▪ Keep from drowning. o Don your life preserver (PFD), or immersion/anti-exposure suit as soon as possible. o Hold-on to anything that floats. Get as much extra buoyancy as possible. ▪ Prevent Hypothermia. Hypothermia is the greatest cause of death at sea in emergency situations. ***Cold Kills!*** o DO NOT go into the water. Stay dry and out of the water for as long as possible. If you get wet, try to dry yourself. o Preserve body heat with insulating materials. Use a Thermal Protective Aid (TPA). ▪ Cover-up! Body heat is lost 25 times faster in water than in air at the same temperature.
STEP 4 ***Signals***	▪ Call for HELP immediately. Alert anyone who can help you. ***A signal is anything that makes you bigger, brighter or different from your surroundings.*** Attach retroreflective tape to outerwear. Wear bright contrasting colors on deck. Attract attention to yourself with a whistle, flashlight or strobe. ▪ Help rescuers find you. Only use distress signals when they can be seen or heard. o Use the VHF-radio or cellular telephone to establish contact immediately. ▪ See International/Inland Rules of the Road, Rule 37, *Distress Signals* below.
STEP 5 ***Water***	▪ Administer water rations to the sick and injured immediately if they are conscious. Otherwise, commence water rationing after the first 24-hours. Find a safe source of fresh water. ▪ NEVER DRINK SALT WATER, URINE, BLOOD, ALCOHOL, OR FISH JUICE!
STEP 6 ***Food***	▪ Follow the water and food rationing instructions printed on the survival ration containers. DON'T eat food if you don't have water.
STEP 7 ***Play***	▪ Keep a positive mental attitude. Stay busy. Review survival procedures. ▪ *Decide to stay alive.* You can do it! Survive because you will never allow yourself to give-up! ▪ Those who fail to plan, you plan to fail. Develop a contingency plan. Plan for the *What If* situations.

In a survival situation, the decisions you make will be far more important than the equipment you carry with you. You must train yourself to: Look, Think, Act and then Monitor the results. Caution and creativity are your best friends. Use them to survive!

Motion Sickness (Seasickness)

"The deck was deserted, and he crawled to the extreme end of it. There he doubled up in limp agony. The surge and the screw combined to sieve out his soul. His head swelled, his body seemed to lose weight he was fainting from seasickness. The roll of the ship tilted him over the rail. A low, gray mother wave swung out of the fog pulled him down and away. The great green sea closed over him and he went quietly to sleep." From *CAPTAIN'S COURAGEOUS* by Rudyard Kipling.

Seasickness aboard ship is not generally a problem for experienced mariners, though everyone has experienced seasickness at sometime in their career. In survival craft, seasickness is a serious problem. Lifeboats, rescue boats and liferafts have a motion that can make even the most seasoned mariners become seasick. Seasickness induces projectile vomiting which results in a significant loss of body fluid. Inevitably, dehydration results in incapacitation and even death. Seasickness also destroys the will to live, a critical concern in any survival ordeal.

Causes of motion sickness (Seasickness)

Motion sickness (seasickness) occurs when there is an imbalance between visual images and the portion of the middle ear, which senses motion. Mental and physical stress, as well as the rolling or pitching motion of a vessel, contributes to motion sickness. Reading, chart work, looking through binoculars, writing the log or other tasks that require close visual attention can stimulate the onset motion sickness. Going below deck for extended time periods, stagnant air and foul odors often trigger seasickness.

Symptoms

People don't die from motion sickness, but if you've ever been really seasick, at first, you think you're going to die, and then you wish you could. The motion of the vessel, especially when the vessel's heading produces a rolling or pitching motion, can cause the typical symptoms of nausea and vomiting. The primary symptoms of seasickness are:

- ✓ Nausea and vomiting
- ✓ Increased salivation
- ✓ Unusual paleness
- ✓ Sweating
- ✓ Drowsiness, yawning
- ✓ Overall weakness
- ✓ Unsteadiness
- ✓ Stomach discomfort

Children under the age of 12 are generally more susceptible than adults. But according to a recent poll, motion sickness has been experienced by half the adult population at one time or another, including many who never go to sea. Women are more likely than men to suffer from seasickness and appear to be at higher risk just before and during menstruation. Susceptibility to motion sickness normally diminishes with age.

Prophylactic Medications
Cautions/Restrictions

Anti-motion medication must not be given under the following circumstances:

- Without medical supervision
- Within 12 hours of alcohol consumption
- To pregnant crew members

Some anti-motion medications may cause drowsiness. Consult a medical professional to determine if other alternatives are available.

Motion sickness can often be prevented or made less severe with different kinds of anti-motion medications including over the counter medications like: Dramamine, Marezine, Bonine, Phenegran, Dextroamphetamine and Sturgeron. Sturgeron (cinnarizine) is an antihistamine, as is dimenhydrinate (Dramamine), diphenhydramine (Benadryl), meclizine (Bonine, and Dramamine II), and promethazine (Phenergan), (though this last is also a phenothiazine, centrally acting antiemetic). If you are going to try one or the other you might want to start with Marezine, since it is the least likely to cause drowsiness.

Scapolamine or Tranderm Scop, a patch worn behind the ear contains scopolamine, is available only by prescription and also can be taken in tablet form. When taken through a patch, the drug is released slowly over time. Scopolamine is not recommended for children or for those with glaucoma, difficulty urinating, or an allergy to it or other belladonna alkaloids. Scapolomine is probably the most effective and its effects also last the longest, about 72 hours.

Note

While some people swear by one or the other of these remedies, there is no one drug that has proven to be ideal for everybody. Crewmembers who are especially susceptible to motion discomfort should be alert for weather and sea conditions that are likely to cause seasickness. None of the pills work immediately and all must be taken before the onset of motion sickness symptoms occur.

Non-medicinal Remedies

Though widely used, non-medicinal remedies are of unproven benefit. They include gingerroot capsules and acupressure wristbands.

Nature's Way has a preparation called "Motion Mate" that contains ginger root powder, meadow sweet, peppermint, red raspberry leaves, and hyssop. These herbs are powdered, in a capsule. Other companies have a standardized ginger extract that is in gel-caps. Research has shown that ginger is as effective as the antihistamine anti-nausea drugs like Dramamine, without the side effects. Cosmonauts are issued a ginger preparation for motion sickness. The primary advantage of the ginger is it's easy to obtain and had no known side effects.

Acupressure, which puts pressure between the flexor tendons on the wrists, is a remedy that some people swear by and others swear at. Exactly what the wrists have to do with the brain and stomach isn't clear. If it works for you, acupressure can be simple and effective. You can buy or make seasickness bands. They are merely elastic straps you wear around the wrists that press an acupressure point at the flexor tendons. A recent study finds a positive result from the acupressure bands. The principle advantages of wristbands are that they can provide some relief after the onset of seasickness symptoms, and they do not cause drowsiness or dehydration.

Besides taking medication, there are other prophylactic actions that will help you prevent or better manage seasickness.

DO

- ✓ Keep busy
- ✓ Stay above deck in the cool fresh air
- ✓ Go to a location where the motion is easiest like the berthing areas
- ✓ Looking out over the water and focus on the horizon or shoreline
- ✓ Drink only enough water to prevent dehydration
- ✓ Keep the stomach full. Eat dry foods like dry toast, saltine crackers or ginger snaps.
- ✓ Keep your mouth fresh by chew gum or sucking on hard candy or mints
- ✓ If all else fails, lie down on your back and close your eyes. Try and relax. Sooner or later you will get your "sea legs"

DON'T

- ✗ Avoid high motion locations onboard like the bow, stern and high upper decks
- ✗ Avoid stuffy confined spaces
- ✗ Avoid spaces with foul odors like the garbage room or heads
- ✗ Avoid concentrating on the movement of the vessel
- ✗ Avoid foods that are hard to digest like greasy, spicy or rich entrées
- ✗ Avoid liquids like milk, coffee/tea, fruit juices and carbonated soda
- ✗ Avoid smoking
- ✗ Avoid alcohol and drug use

INLAND NAVIGATION RULES

ANNEX IV

33 CFR 87

DISTRESS SIGNALS

§ 87.1 NEED OF ASSISTANCE

The following signals, used or exhibited either together or separately, indicate distress and need of assistance:

a. A gun or other explosive signal fired at intervals of about a minute;
b. A continuous sounding with any fog-signaling apparatus;
c. Rockets or shells, throwing red stars fired one at a time at short intervals;
d. A signal made by radiotelegraphy or by any other signaling method consisting of the group • • • • • • • • • • • • (SOS) in the Morse Code;
e. A signal sent by radiotelephony consisting of the spoken word "Mayday";
f. The International Code Signal of distress indicated by N.C.;
g. A signal consisting of a square flag having above or below it a ball or anything resembling a ball;
h. Flames on the vessel (as from a burning tar barrel, oil barrel, etc.);
i. A rocket parachute flare or a hand flare showing a red light;
j. A smoke signal giving off orange-colored smoke;
k. Slowly and repeatedly raising and lowering arms outstretched to each side;
l. The radiotelegraph alarm signal;
m. The radiotelephone alarm signal;
n. Signals transmitted by emergency position-indicating radio beacons;
o. Signals transmitted by radio communication systems, including survival craft radar transponders meeting the requirements of 47 CFR 80.1095.
p. A high intensity white light flashing at regular intervals from 50 to 70 times per minute.

LECTURE TITLE: LIFESAVING II

TRAINING SUBJECT: LAUNCH / RECOVER LIFEBOAT OR COMPETENCY DEMONSTRATION

SPECIAL REQUIREMENTS:

- Access to Lifeboat
- Lifejackets
- All PPE (hard hat, gloves, safety shoes, extra clothing)

TRAINING LECTURE OBJECTIVE:

A. Instruct students in the proper procedures for preparing a lifeboat for launching
B. Instruct students in proper launching and recovery of lifeboat
C. Prepare students for USCG Lifeboatman Examination

DISCUSS:

A. Parts of a Lifeboat
B. Parts of a Davit
C. Lowering Procedures
D. Hoisting Procedures
E. Securing for Sea
F. Safety Precautions

SHOW/DEMONSTRATE:

A. Student to lower lifeboat to embarkation deck
B. Student to hoist, test limit switches, recover boat and secure for sea
C. Proper procedures for passing frapping lines and gripes

READING ASSIGNMENT:

AMSM, Chapter 10, pages 7-21.

T.S. KENNEDY Bridge Procedures Manual

MISCELLANEOUS:

If used for survival craft competency demonstration, provisions of STCW Table A-II/ 1 (m) apply

TEST QUESTIONS:

- When should the tracing pennant be released?
- What is the abandon ship signal?
- Name four types of davits
- What types of locating and communicating devices should be brought to the survival craft?
- Who is responsible for bringing them?

WATCHSTATION/GENERAL TRAINING REF:

- Boatswain Mate of the Watch
- Fourth Class Lifesaving Fundamentals
- Operate Life Saving Appliances

LECTURE TITLE: LIFESAVING III

TRAINING SUBJECT: LIFE RAFTS

SPECIAL REQUIREMENTS:

- Life raft
- Life Jackets
- All PPE Gear (Gloves, Hard Hat, Safety Shoes and Extra Clothing)

TRAINING LECTURE OBJECTIVE:

A. Instruct Students on inflating and launching a life raft

DISCUSS:

A. How life rafts are secured and stowed
B. Ways to release a life raft
C. Weak Link
D. Hydrostatic Release
E. Sea Painter
F. Parts of a raft
G. Life raft equipment and provisions
H. Co2 gas build up or leaks
I. Procedures for entering the raft

SHOW/DEMONSTRATE:

A. Life raft aboard the T.S. KENNEDY

READING ASSIGNMENT:

AMSM, pages 10-21 through 10-26

T.S. KENNEDY Bridge Procedures Manual

MISCELLANEOUS:

STCW Table A-II/1 competency demonstration requirements apply

TEST QUESTIONS:

- How is the sea anchor released?
- How are the lights turned on in a raft?
- What is the advantage of a double floor?
- What precautions should you take against Co2 poisoning in the raft?
- Where should the SART be placed in the life raft to secure maximum effectiveness?

WATCHSTATION/GENERAL TRAINING REF:

- Boatswain Mate of the Watch
- Fourth Class Life Saving Fundamentals
- Operating Life Saving Appliances

LECTURE TITLE: LIFESAVING IV

TRAINING SUBJECT: GRAVITY LAUNCHED LIFERAFT DAVIT

SPECIAL REQUIREMENTS:

- Notify Chief Mate and Officer of the Watch that you will be conducting exercise
- Access to Life Raft
- Students to wear all necessary PPE gear

TRAINING LECTURE OBJECTIVE:

A. Instruct students or determine competency in launching and boarding an inflatable life raft

DISCUSS:

A Nomenclature of life raft or davit
B. Raymond Releasing Hook
C. Davit crew responsibilities
D. Loading personnel into raft
E. Davit winch operation
F. Lowering
G. Retrieving hook
H. Bowsing lines
I. Release procedures

SHOW/DEMONSTRATE:

A. Launch Life Raft

READING ASSIGNMENT:

T.S. KENNEDY Bridge Procedures Manual

MISCELLANEOUS:

STCW Table A-II/ i (m) competency demonstration requirements apply.

TEST QUESTIONS:

- What color is the brake handle?
- What are bowsing lines?
- How do you release the Raymond Release Hook?

WATCHSTATION/GENERAL TRAINING REF:

- Boatswain Mate of the Watch
- Operating Lifesaving Appliances

LECTURE TITLE: LIFESAVING V

TRAINING SUBJECT: MISCELLLANEOUS LIFESAVING APPLIANCES

SPECIAL REQUIREMENTS:

- Life Ring
- Life Jackets
- Immersion Suit and Thermal Protection Aids
- Smoke Float, Parachute Flares, Hand-held Flares

TRAINING LECTURE OBJECTIVE:

A. To instruct student in the proper use and care of personal lifesaving appliances
B. To instruct student in the proper use of survival craft lifesaving appliances
C.

DISCUSS:

A. Use and care of Personal Flotation Devices
B. Use and care of life rings and attached waterlights
C. Thermal protective aids
D. Use of flares and replacement requirement
E. Use of smoke floats and replacement requirements

SHOW/DEMONSTRATE:

A. Hand-held flares
B. Rocket Parachute Flares
C. Procedures for using a Thermal Protective Aid
D. Procedures for donning an Immersion Suit

READING ASSIGNMENT:

AMSM, Chapter 10-29

T.S. KENNEDY Bridge Operations Manual

MISCELLANEOUS:

Inform Chief Mate and Officer of the Watch that evolution will be taking place and when the evolution has been completed

TEST QUESTIONS:

- How often must hand-held distress signals be replaced?
- Where is the nearest TPA located?
- What is the requirement of the vessel to carry immersion suits for crew members of ocean going vessels?

WATCHSTATION/GENERAL TRAINING REF:

- Boatswain Mate of the Watch
- Emergency Squad / Fire Party Member
- Navigation at the Support Level

LECTURE TITLE: LIFESAVING EQUIPMENT VII

TRAINING SUBJECT: LINE THROWING APPLIANCES

SPECIAL REQUIREMENTS:

- Hand held shoulder launched, impulse projected rocket propelled line throwing appliance
- Trolley Block
- 8" Snatch block with shackles
- 400' 3/8" Manila line
- 200' 3" Manila line
- Breeches buoy placard

TRAINING LECTURE OBJECTIVE:

A. Provide students with the regulatory and operational parameters of line throwing appliances.
B. Demonstrate the rigging and use of a Breeches Buoy.

DISCUSS:

A. Regulatory requirements for carriage of line throwing apparatus.
B. Components.
C. Rigging procedures.
D. Safety Precautions.
E. Rigging and use of a Breeches buoy to remove personnel from a stranded vessel.
F. Hand signals.

SHOW/DEMONSTRATE:

A. Demonstrate the necessary procedures for the safe and accurate firing of a hand held impulse projected rocket propelled line throwing apparatus
B. Rig a Breeches Buoy and demonstrate its use in ship to ship or ship to shore rescue operations
C. Necessary safety precautions.
D. Hand signals.

READING ASSIGNMENT:

46 CFR 94.45

American Merchant Seaman's Manual, P. 20-23, 24

Merchant Marine Officer's Handbook , P. 17-16, 17, 18

MISCELLANEOUS:

- Inform Chief Mate and Officer of the Watch that evolution will be taking place.
- Have bridge make necessary pipes prior to firing.
- Conduct safety inspection of all gear and potential fire hazards prior to firing.

TEST QUESTIONS:

- Describe the line throwing apparatus required of cargo vessels in ocean service.
- Ref: CFR. 46 CFR 94.45, 97.15-25
- Prepare log entry for test of line throwing appliance.

WATCHSTATION/GENERAL TRAINING REF:

Operate life saving appliances; Table A-II/1 (m)

LECTURE TITLE: LIFESAVING EQUIPMENT VIII

TRAINING SUBJECT: SURVIVAL CRAFT RADIO LIFESAVING APPLIANCES

SPECIAL REQUIREMENTS:

- Survival craft hand held VHF transceiver
- EPIRB
- SART

TRAINING LECTURE OBJECTIVE:

A. Expose cadets to the parameters and operational procedures of survival craft radio lifesaving appliances.

DISCUSS:

A. Survival craft VHF radio operation and communications procedures.
B. Search and Rescue Radar Transponder (SART) operation, testing, and maintenance procedures.
C. Electronic Positioning Indicating Beacons (EPIRB).
D. Power sources.
E. Rigging of equipment in deployed in survival craft.
F. COPAS/SARSAT satellite system.
G. False Alerts, Registration, battery maintenance, logging requirements etc.

SHOW/DEMONSTRATE:

A. Operation and test procedures under dummy load conditions for each unit discussed
B. Installation requirements

READING ASSIGNMENT:

Navigation Publication No. 9, (1995) , Articles, 2802, 2808

The Cornell Manual for Lifeboatmen, Able Seaman and QMED , P. 55-56

MISCELLANEOUS:

- This session partially addresses requirements of STCW Table A-II/l (m).
- It should be conducted by a GMDSS licensed radio station operator.
- Particular emphasis should be placed on preventing false alerts in handling 406 MHz EPIRBs and other locating devices. Instructor and students should tour ship locating each device.

TEST QUESTIONS:

- What channels does the survival craft VHF transceiver operate on?
- How many hours of operation are survival craft VHF radios batteries rated?
- Where is the EPIRB located and how does it work?
- How often is the EPIRB tested?
- How is the EPIRB tested?
- How long will a SART function once actuated?
- How will survival craft occupants know that a rescue vessel is nearby?

WATCHSTATION/GENERAL TRAINING REF:

Navigation at the support level; Table A-II/4 (d)

Operate life saving appliances; Table A-II/1 (m)

LECTURE TITLE: NAVIGATION GENERAL I

TRAINING SUBJECT: LOOKOUT PROCEDURES

SPECIAL REQUIREMENTS:

- Look-out watch station requirements
- 7x50 Binoculars
- Copy of rule 5
- Signal Flags
- Look-out Watch Station Requirements
- Telescopic Alidade and Azimuth Circle

TRAINING LECTURE OBJECTIVE:

Instruct students on the proper look-out procedures under normal and emergency situations, so that cadets can be expected to meet all look-out watch qualification requirements.

DISCUSS:

A. Reporting of contacts / targets
B. Typical flag hoists
C. Changing concepts of the term “lookout”
D. Man overboard procedures
E. use of Alidade, binoculars

SHOW/DEMONSTRATE:

A. contact reporting using relative bearing and true bearing
B. Williamson turn procedures
C. Signal flags
D. Use of water lights and lifesaving appliances use in man-overboard situations.

READING ASSIGNMENT:

Guide to The Collision Avoidance Rules, A.N Cockcroft p. 32-40.

The Cornell Manual for Lifeboatmen P. 61-63,119-120, fig. 41 p. 121

American Merchants Seaman’s Manual fig. 12-1, pages 13-4 to 13-7

Handout – Duties of a lookout.

MISCELLANEOUS:

A. USTS Kennedy bridge procedures manual

TEST QUESTIONS:

- How many degrees relative is “Broad on the Starboard bow”?
- What signal flag is hoisted when a man is overboard?
- What are the duties of the Look-out?

LOOKOUT PROCEDURES

DUTIES & RESPONSIBILITIES OF THE LOOKOUT

International and Inland Navigation Rule 5, *Lookout* states: "Every vessel shall at all times maintain a proper lookout by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision, stranding and other hazards to navigation." The primary responsibility of the deck watch is the proper keeping of the lookout. Lookout is the fundamental building block upon which all other watchkeeping skills are built. The principle duties of the lookout are sighting, identifying, and accurately reporting to the responsible authority all objects or sounds detected.

46 CFR 97.27-5 MASTER'S AND OFFICER'S RESPONSIBILITY

(a) Nothing in this part shall exonerate any master or officer in command from the consequences of any neglect to keep a proper lookout or to maintain a proper fire watch or from any neglect of any precaution, which may be required by the ordinary practice of seamen or by the special circumstances of the case. When circumstances require it, additional watches shall be maintained to guard against fire or other danger and to give an alarm in case of accident or disaster.

The lookout's initial report should indicate:

1. What - object (ship, light, buoy, distress signal, whales, wreckage)
2. Where - bearing (relative or true)
3. How far off - (hull-down, on the horizon, hull-up, close aboard)

Sample lookout report: *"Bridge, this is the bow lookout. There is a white light broad on the starboard bow close aboard."*

Lookout reports can be amplified with contact identification, direction of movement, bearing drift, speed, color, sound or light characteristics when discernible.

DETECTION AND REPORTS

Lookout (s) shall detect and report sightings of:

1. Distress signals
2. Persons in distress (Man overboard, shipwrecked survivors, calls for help)
3. Vessels and/or aircraft in distress
4. Derelicts, wreckage, floating or partially submerged debris
5. Pollution incident (oil spill, a sheen on the water)
6. Vessel traffic and/or aircraft
7. Aids to navigation (navigation buoys and lights)
8. Danger to the vessel or hazards to navigation (land, sighting or hearing breaking serf, obstructions, discoloration of the water)
9. Reduction in visibility due to fog, mist, falling snow, heavy rainstorms, sandstorms, or any other similar cause.
10. Change in weather

11. Hearing other vessels or aids to navigation (e.g. bell, gong, fog horn or maneuvering signals)
12. Ice
13. Unusual sightings or any unreported change in the field of view or sector
14. Sightings of marine life in compliance with the Endangered Species Act/Marine Mammal Protection Act (50 CFR 222). (Examples: Humpback or North Atlantic right whales, stellar sea lions or sea turtles)

LOOKOUT PRINCIPLES

In applying these principles, the following shall be observed:

1. Whoever is keeping the lookout must be able to give full attention to that task and no duties shall be assigned or undertaken which would interfere with the keeping of a proper lookout.
2. The duties of the person on lookout and helmsman are separate and the helmsman shall not be considered the person on lookout while hand steering.
3. There may be circumstances in which the officer of the watch could be the sole lookout in daylight. This practice will not be followed aboard the training vessel.
4. Lookouts shall be posted as low down and far forward as possible with an unobstructed, all-round view.
5. Lookouts must proceed to and from lookout stations on the leeward side of the vessel.
6. Remain alert. Give your full and undivided attention to lookout.
7. Stay on your feet. Do not sit or lounge about. You are expected to stand your watch.
8. Do not talk to others except as required by your lookout duties while on watch.
9. When making lookout reports, speak in a loud, clear voice using proper procedures and phraseology on the sound powered telephone system.
10. Continue to repeat all lookout reports until acknowledged by the watch officer.
11. Before reporting to your lookout station, be sure that you understand your duties. If you do not understand your duties or any instruction, which you have been given, ask for a clarification from the person assigning the duties.
12. Call the bridge immediately whenever you are in danger or when the vessel starts to ship spray (white water). This is especially important during periods of darkness or reduced visibility when the lookout cannot be clearly observed from the bridge.
13. Exchange the following information when the lookout is relieved:
    a. the location of any object(s) in sight,
    b. object(s) previously reported
    c. the present and past weather
    d. any special instructions or safety precautions
    e. brief description of your watch activities
    f. the status of the navigation lights.

You are an essential member of the navigational watch team. Your lookout reports are critical to the safe navigation of the training ship. Report everything. It's your job!

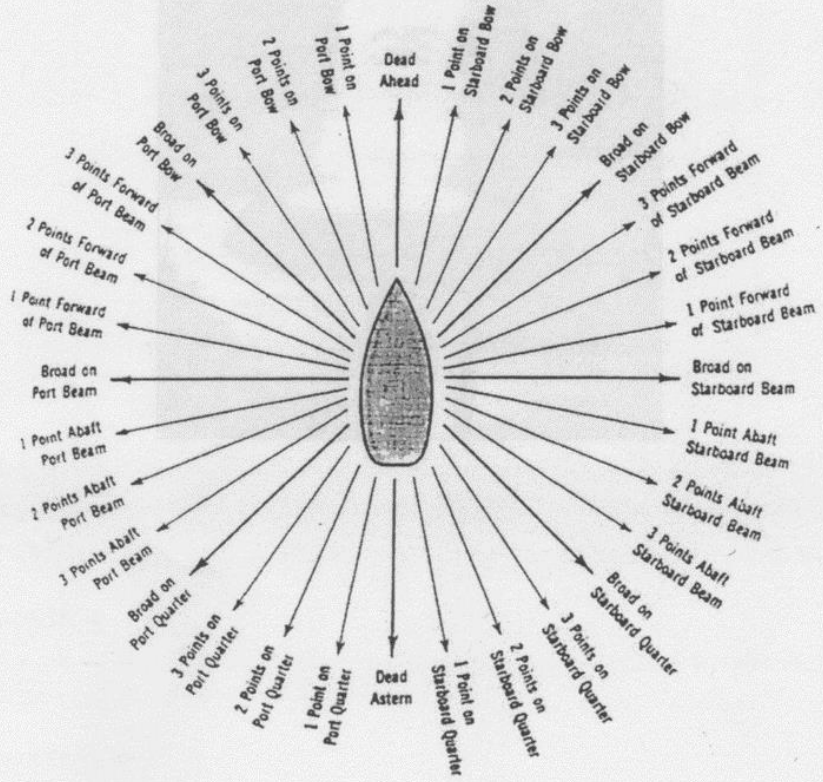
LOOKOUT REPORTING METHODS – RELATIVE BEARINGS

Relative bearings are expressed as an angular distance from the heading or bow of the vessel toward the object.

1. Relative bearings are the angular difference between an object and the ship's head. Relative bearings are usually measured clockwise thought 360° from the ship's heading.

2. A relative bearing may be expressed as a number of points from the bow as pictured below. Relative bearings may be measured from zero degrees (000°) or Dead Ahead either clockwise (+) or counterclockwise (-) through 180° when designated as right/left or Port/Starboard.

3. An even more general indication of relative bearing may be given by such directions as:
   a. Ahead (↑)
   b. On the port (↖) or starboard (↗) bow
   c. On the port (←) or starboard (→) beam
   d. On the port (↙) or starboard (↘) quarter
   e. Astern (↓)

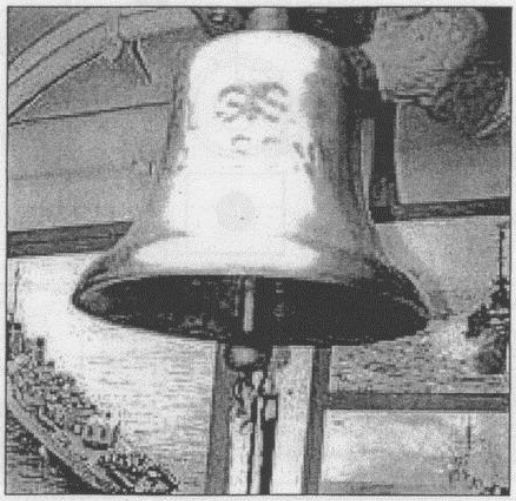


LOOKOUT REPORTS - UTILIZING THE SHIP'S BELL

The ship's bell is located on the forecastle head aft of the anchor windlass. The ship's bell is only used to make lookout reports when the sound powered telephone system (1-JV) is inoperative or when it is required by the Master and/or Watch Officer.

When ship's bell is used for Lookout reports, they shall be as follows:

1. *Object or vessel observed on the starboard side* (↗).
   Watch Bell Report: One (1) ring or stroke of the ship's bell.
2. *Object or vessel observed on the port side* (↖).
   Watch Bell Report: Two (2) rings or strokes of the ship's bell.
3. *Object or vessel observed dead ahead* (↑).
   Watch Bell Report: Three (3) rings or strokes of the ship's bell.



LOOKOUT ASSESSMENT

In conformance with Table A-II/4
Competence: Keeping a proper look-out by sight and hearing.
KUP: Responsibilities of a look-out, including reporting the approximate bearing of a sound signal, light or other object in degrees or points

Performance Objective	Condition For Assessment	Performance Measures	Performance Standards	Assessment Date	Assessor's Initials
Knowledge of general duties of lookout	Verbal Assessment	Performs the duties of ship's look-out	Describes general duties of look-out, including: Reporting all lights, sounds, objects, land, water discoloration, reporting own ship's nav lights burning.		
			Describes the differences between lume and light.		
			Describes the difference in sound of bell, whistle and gong.		
		Relieves the look-out properly	Describes the process of look-out relief, including: adjusting eyes for night vision, proper protective gear		
		Responds properly to Man Overboard Situation	Describes procedure for look-out when Man Overboard occurs, including: 1. Keeping man in sight, 2. Pointing to man, 3. Reporting man overboard to bridge on which side, 4. Throws lifering, 5. Remain on station until properly relieved or ordered otherwise		
			Describes Man overboard signals for Training vessel: Three prolonged blasts (4-6 seconds) on the whistle and general alarm bell followed by one short blast of the whistle to indicate overboard to stbd or two short blasts to indicate the person is overboard to port, supplemented by same signal on the general alarm bells		
		Reports sightings to bridge in proper manner.	Describes methods of reporting to bridge: 1. Voice 2. Sound powered phone 3. Walkie-talkie 4. Bell.		

Page 1 of 2

Lookout Assessment Mk1 12/31/03

CADET NAME _____ SS#_____

Performance Objective	Condition For Assessment	Performance Measures	Performance Standards	Assessment Date	Assessor's Initials
Knowledge of general duties of lookout	Practical Demon--stration	Reports sightings to bridge in proper manner.	1. Demonstrates proper use of sound powered phone. 2. Identifies closest sound powered phone to: After Lookout Station Forward Lookout Station 3. Describes proper signals for reporting by bell		
		Uses binoculars in correct fashion .	Demonstrates ability to identify four bearings (designated by assessor) by the point system		
			Demonstrates ability to adjust binoculars to look-outs eyes. 1. Uses center adjustment for unadjustable eye and individual adjustment for other eye. 2. On twin eye adjustables, adjusts each to own best vision.		
	Verbal Assessment		Describes power and field of vision indicated on binoculars. 7 Power, 50 Field of vision less power but wider field of vision than 8 X 35		
			Describes proper care of binoculars. 1. Keep dry, 2. Clean lenses with proper material, 3. Keep straps around neck, 4. Put in case when done, 5. Don't leave loose on table, 6. Keeps out of direct sunlight.		
		Can Identify distress signals.	Lists ten of the 16 International distress signals: 1. Red Star Shells, 2. Continuous sounding of fog horn, 3. Flames on Vessel, 4. Gun Fired at 1 minute intervals 5.Orange background with black ball and square, 6. SOS, 7. Parachute Red Flare, 8. Dye marker, 9. Code Flags N over C, 10. Square Flag over Ball, 11. Waving of arms, 12. Radio Telegraph alarm, 13.Radio telephone alarm, 14. EPIRB, 15.Smoke, 16. Mayday on radio,		
	Practical Demon--stration	Can utilize bearing circle for taking bearings	Demonstrates taking bearing of designated object. 1. Circle carefully placed on repeater. 2. Circle turned to proper direction by finger pins or ring, not by vanes, 3. Cadet used proper vane to sight through. 4. Cadet keeps circle level by using both bubbles. 5. Bearing should be within one degree of what assessor shoots.		

LECTURE TITLE: NAVIGATION GENERAL II

TRAINING SUBJECT: STEERING SYTEMS & ENGINE ORDER COMMANDS

SPECIAL REQUIREMENTS:

- Power and access to ADG 6000 steering console, course recorder, rudder angle indicators and tachometers
- Power and access to steering engine room

TRAINING LECTURE OBJECTIVE:

A. Prepare cadets to properly give and respond to helm and engine orders.
B. Familiarize cadets with various steering components.
C. Familiarize students with Engine Order Telegraph and engine monitoring devices on the bridge.
D. Introduce students to Steering Engine Room and equipment

DISCUSS:

A. Proper helm and engine orders.
B. Importance of compass comparisons.
C. Emergency procedures/steering change over.
D. Course recorder operation.
E. Standard procedures for switching steering gear
F. Rate of Turn Indicators.
G. Standard procedures for testing gear - pre-departure, pre-arrival
H. Use of autopilot - adjustments, cautions

SHOW/DEMONSTRATE:

A. ADG 6000 Steering console operation and change from manual to automatic mode.
B. Rudder angle and rpm indicators.
C. Course to steer and gyro error board.
D. NFU System.
E. Course recorder operation and routine maintenance.

READING ASSIGNMENT:

American Merchant Seaman's Manual P. 9-1 - 9-12

Navigation Pub. No. 9 (1995) , Articles 626- 630

Modern Seamanship , Knight, *Sections 9.17 & 9.18*

MISCELLANEOUS:

- *KENNEDY Bridge Procedures Manual*, P. 42-45, Orders to the helm

TEST QUESTIONS:

- What is the lubber's line?
- Why is it important to compare and record magnetic and gyro compass headings frequently?

WATCH/STATION GENERAL TRAINING REF:

Navigation at the support level Table A-II/4 (a)

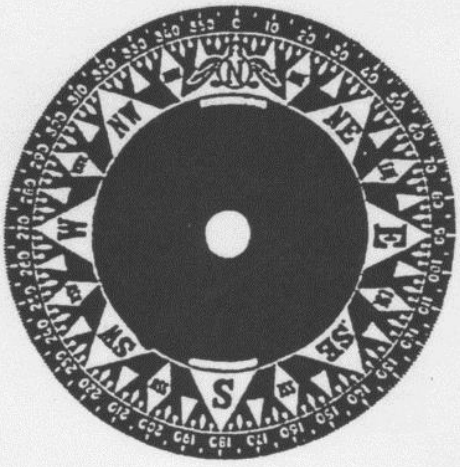
Navigation at the support level Table A-II/4 (c)

POINTS OF THE COMPASS

NORTH TO EAST			SOUTH TO WEST		
DIRECTION	*POINT*	*DEGREES*	*DIRECTION*	*POINT*	*DEGREES*
North	N	000°	South	S	180°
North by East	N x E	011-1/4°	South by West	S x W	191-1/4°
North North East	NNE	022-1/2°	South South West	SSW	202-1/2°
North East by North	NE x N	033-3/4°	South West by South	SW x S	213-3/4°
North East	NE	045°	South West	SW	225°
North East by East	NE x E	056-1/4°	South West by West	SW x W	236-1/4°
East North East	ENE	067-1/2°	West South West	WSW	247-1/2°
East by North	E x N	078-3/4°	West by South	W x S	258-3/4°
East	E	090°	West	W	270°

EAST TO SOUTH			WEST TO NORTH		
DIRECTION	*POINT*	*DEGREES*	*DIRECTION*	*POINT*	*DEGREES*
East	E	090°	West	W	270°
East by South	E x S	101-1/4°	West by North	W x N	281-1/4°
East South East	ESE	112-1/2°	West North West	WNW	292-1/2°
South East by East	SE x E	123-3/4°	North West by West	NW x W	303-3/4°
South East	SE	135°	North West	NW	315°
South East by South	SE x S	146-1/4°	North West by North	NW x N	326-1/4°
South South East	SSE	157-1/2°	North North West	NNW	337-1/2°
South by East	S x E	168-3/4°	North by West	N x W	348-3/4°
South	S	180°	North	N	360°

The Cardinal Points of the Compass are: North, East, South, and West
The Intercardinal Points of the Compass are: Northeast, Southeast, Southwest, and Northwest



There are 32 point of the compass. One point is equal to 11-1/4°

ORDERS TO THE HELM

STEERING PROCEDURES

Standard maritime phraseology governing orders to the helmsman is required so that the conning officer's orders will be understood and promptly executed by the helmsman. The conning officer must give helm orders in a loud and distinct manner so that all concerned will hear and understand the helm orders.

When changing course, the conning officer shall:

1. Visually verify that the direction and path of the intended course change are clear and unobstructed.
2. Use proper phraseology when giving rudder commands.
3. Whenever a helm order is given, the conning officer should point in the direction of the desired course change.
4. When ordering rudder, instruct the helmsman what the final course will be.
5. Watch the helmsman turn the wheel. Make sure it is in the ordered direction.
6. Verify the rudder position utilizing the Rudder Angle Indicator.
7. Observe the gyro compass and rate of turn indicator to ascertain the direction and rate of turn.
8. Insure that overswing is avoided. When swinging to a new course, bring the rudder amidships a number of degrees before reaching the desired course equal to one half the rudder angle being used. Example: When using 20° of rudder angle, order the rudder amidships 10° before the desired course.

STEERING PROCEDURES/HELM ORDERS

The helmsman shall:

1. **Repeat Order:** Repeat each helm order, word-for-word.
2. **Execute Order:** Properly execute the helm order
    a. apply appropriate amount of rudder to actuate controllable turn rate
    b. approach ordered course, recognize turn rate
    c. check swing, apply counter rudder as necessary
    d. steady-up on ordered course
3. **Report Order:** Report when the order and/or action has been completed.
4. **Command Conflicts:** The master's orders are to be obeyed whenever conflict arises between members of the bridge team.

STANDARD ORDERS TO THE HELM

"RIGHT/(LEFT) _____ DEGREES RUDDER"

The order is normally followed by a new course to steer such as *"Right 15° rudder, steady on course 025°"*. The helmsman shall reply: *"The rudder is right 15° rudder, steady on course 025°, Sir"*.

If no course is given, the helmsman shall reply: *"The rudder is right 15°, Sir, no new course given"*.

"RIGHT/(LEFT) FULL RUDDER"

Normally 30° rudder is applied in the direction ordered. The helmsman shall reply: *"The rudder is right/(left) full rudder, Sir"*.

"HARD RIGHT/(LEFT) RUDDER"

Maximum rudder is applied in the direction ordered, normally about 35°. The helmsman shall reply: *"The rudder is hard right/(left) rudder, Sir"*.

"INCREASE THE RUDDER TO RIGHT/(LEFT) ____ DEGREES"

Increase the rudder angle to the specified angle. For example, if the rudder is at right 10°, the conning officer might give the order *"Increase your rudder to right 20°"*. The helmsman shall reply: *"The rudder is increased to 20° right rudder, Sir"*.

"EASE THE RUDDER TO RIGHT/(LEFT) ___ DEGREES"

Decrease the rudder angle to the specified angle. For example, if the rudder is at right 30°, the conning officer might give the order, *"Ease the rudder to right 15°"*. The helmsman shall reply: *"The rudder is eased to 15° right rudder, Sir"*.

"RUDDER AMIDSHIPS"

Position the rudder on zero rudder angle. The helmsman shall reply: *"The rudder is amidships, Sir"*.

"STEADY" OR "STEADY AS YOU GO"

Steer and report the course that the vessel is heading when the order is given. If the vessel is turning, the helmsman notes and reports the heading and brings the vessel back to that course. The helmsman should attempt to establish a fixed range ahead to steer by whenever possible. The helmsman shall reply: *"Steady, steering course 000°, checking 014°, Sir"*.

"SHIFT THE RUDDER"

Move the rudder through amidships to the same angle in the opposite direction from where it is presently set. The helmsman shall reply: *"Shift rudder, Sir"*.

"MEET HER"

Use the rudder as necessary to check, but not stop, the ship's swing. The helmsman shall reply: *"Meet her, Sir".*

"NOTHING TO THE RIGHT/(LEFT)" OR "NOTHING TO THE RIGHT /(LEFT) OF ____ DEGREES"

Do not let the ship's head swing to the right or left of the course indicated. The helmsman shall reply: *"Nothing to the right/(left) of course 000°, Sir".*

"MIND YOUR RUDDER (HELM)"

A warning to mind the helm and steer more precisely. The helmsman shall reply: *"Mind the helm, Sir".*

"VERY WELL"

Reply by the conning officer after receiving a report from the helmsman. The helmsman shall not respond to this reply.

"BELAY THAT ORDER" OR "BELAY MY LAST"

Any order from the conning officer to the helmsman to disregard the command given and continue as before. The helmsman shall reply: *"Belay your last, Sir".*

STEERING PROCEDURES/COMPASS COMPARISON

Compare gyro compass repeaters in order to determine any discrepancies between the Master gyro heading, steering and miscellaneous gyro repeaters. Synchronize all gyro repeaters as required. Verify the Master gyro heading, steering repeater heading, and standard compass heading as well as the gyro course, gyro error, local variation, and heading deviation. Throughout the watch the gyro compass heading is to be compared with the standard magnetic compass at least once every hour by the OOW and COOW, every thirty (30) minutes by the Quartermaster, and every fifteen (15) minutes by the helmsman. The OOW, COOW and Quartermaster comparisons are to be entered into the compass record book. Whenever the course is changed, the new comparisons for the gyro, standard and steering compasses are to be noted in the compass record book and entered in the Deck Logbook as well as indicated on the Bridge Status Board.

STEERING PROCEDURES/HELM WATCH RELIEF

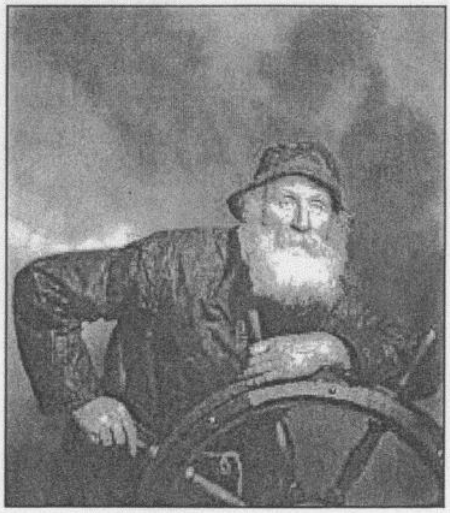
Prior to authorizing a change in helmsman the officer of the navigational watch will require both the relieving and relieved helmsman to report:

1. The mode of operation (hand, auto-pilot, NFU)
2. Steering unit in use (port or starboard steering unit)
3. Vessel's heading:
    a. True course (T)
    b. Gyro course (pgc)
    c. Magnetic compass course (psc)
4. The amount of helm carried to maintain a steady course, when appropriate

The helm shall be relieved with no rudder on and under no circumstances will the wheel be relieved during a maneuver. Ensure that the helmsmen check the course recorder chart at the completion of their trick on the wheel whether steering by hand, autopilot or non-follow-up unit (NFU).

USE OF AUTOMATIC PILOT

The officer of the navigational watch must bear in mind the need to station the helmsman and to put the steering into manual control in sufficient time to allow any potentially hazardous situation to be dealt with in a safe manner. With a vessel operating in automatic steering, it is highly dangerous to allow a situation to develop to the point where the watch officer watch is without assistance and has to break the continuity of the lookout in order to take emergency action. The changeover from automatic to manual steering and vice-versa shall be made by, or under the supervision of, a responsible officer. At least once each watch, require a change in steering modes from hand steering mode to gyro mode in order to instill familiarization with the system and to be able to shift over quickly in an emergency situation.



LECTURE TITLE: **SAFETY I**

TRAINING SUBJECT: **SHIPBOARD SAFETY INTRODUCTION AND TOUR**

SPECIAL REQUIREMENTS:

- Watch keeping guide

TRAINING LECTURE OBJECTIVE:

A. FAMILIRIZE CADETS WITH IMPORTANT SHIPBOARD AREAS

B. WATCH KEEPING TRAINING

DISCUSS:

A. Personal Shipboard safety and equipment
B Launching of lifeboats/rafts
C. Anchor windlass/ winches
D. Line Lockers
E. Proper watch standing procedures
F. 4/c Duties on watch – lookout duties

SHOW/DEMONSTRATE:

A. Tour of TS Kennedy
B. True vs. Relative Bearings – Points of compass
C. Launching of life raft and life boats
D. Proper use of sound powered phones
E. importance of exhaust vents being open in paint and line lockers while occupied

READING ASSIGNMENT:

A: WATCH KEEPING GUIDE
B: TS KENNEDY BRIDGE STANDING ORDERS

MISCELLANEOUS:

A. SPLIT GROUP IN HALF AND HAVE HALF DO A TOUR WHILE THE OTHER HALF GOES OVER THE 4TH CLASS WATCH KEEPING DUTIES

TEST QUESTIONS:

-
-
-
-

LECTURE TITLE: SAFETY IV

TRAINING SUBJECT: SAFETY PROCEDURES

SPECIAL REQUIREMENTS:

- T.S. Kennedy's MSDS Manual
- T.S. Kennedy's Safety Manual
- Copies of Permits
- Gas Meter from Chief Mate

TRAINING LECTURE OBJECTIVE:

A. To prepare cadets for proper procedures in permitting and safe operations of:
Enclosed Space Entries
Hazardous Atmospheres
Lock Out / Tag Out
Working Aloft
Respiratory Protection
Hearing Protection

B. To prepare cadets for safety duties normally found on merchant ships as 3rd mate.

DISCUSS:

A. Safety Equipment Inspections
B. Permitting Procedures on Enterprise
C. Safety of Enclosed spaces
D. Slips, Trips, Falls
E. Use of MSDS
F. Lock out tag out

SHOW/DEMONSTRATE:

A. Proper method of checking safety equipment
B. Do sample permits
C. Demonstrate awareness of dangers on board

READING ASSIGNMENT:

A: T.S. KENNEDY SHIPBOARD SAFETY MANUAL

MISCELLANEOUS:

TEST QUESTIONS:

- How long do MSDS sheets need to be kept on board?
- Who can remove a lock out Tag Out

WATCH/STATION GENERAL TRAINING REF:

LECTURE TITLE: HAZMAT I

TRAINING SUBJECT: ACCIDENT RECOGNITION AND PREVENTION

SPECIAL REQUIREMENTS:

- Handout – *Eighteen Clues to Potential Accident Recognition in the Marine Workplace*
- Form: ACCIDENT POTENTIAL RECOGNITION SURVEY

TRAINING LECTURE OBJECTIVE:

A. Enable the student to see the BIG PICTURE instead of focusing on specific hazards.
B. Introduce the concept of potential hazard recognition
C. Introduce JSA Form

DISCUSS:

A. The concept of accident potential and root causes
B. Accident potential recognition is the first step to controlling hazards and accident prevention
C. JSA results and recommend actions

SHOW/DEMONSTRATE:

A. How Potential Accident Recognition Survey form is completed
B. Conduct practice walk-around and record results
C.

READING ASSIGNMENT:

T.S. KENNEDY Safety Training Manual

MISCELLANEOUS:

T.S. KENNEDY Bridge Procedures Manual

TEST QUESTIONS:

- Where did you locate a potential tripping hazard while on the survey?
- Where did you locate a potential fire or electrical hazard while on the survey?
- Did you locate any areas where a potential back or eye injury could occur?

WATCHSTATION/GENERAL TRAINING REF:

- Boatswain Mate of the Watch
- Prevent, Control, and fight fires on board
- Monitor the loading, stowage etc. of cargo

LECTURE TITLE: FIREFIGHTING I

TRAINING SUBJECT: FIRE THEORY AND SHIPBOARD DETECTION SYSTEMS

SPECIAL REQUIREMENTS:

- Access to Bridge
- Access to Co2 Room

TRAINING LECTURE OBJECTIVE:

A. Common Sense approach to fire extinguishment
B. First by prevention and use of a proper medium or agent
C. Introduce students to various smoke and fire detection systems aboard T.S. KENNEDY

DISCUSS:

A. Fire Triangle and Tetrahedron – Emphasize that vapors burn (even from solids).
B. Knowledge of contents of a compartment and knowledge of your ship are priceless.
C. Emphasize Fire Prevention. A clean ship is less likely to be a fire statistic
D. Classes of Fires
E. Procedures for dewatering and prevention of reflash
F. Various smoke and fire detection systems in use aboard the T.S. KENNEDY
G.

SHOW/DEMONSTRATE:

A. Extinguishment procedures and agents for Class A, B, C, D Fires
B. Show that if burning Class A materials can be thrown overboard, then no fire
C. Discuss procedures for monitoring systems for smoke or mechanical /electronic failure
D. Test procedures and log requirements

READING ASSIGNMENT:

Marine Fire Fighting, Brady Part I, Chapter I and 2; Part II, Chapters 4 and 5

T.S. KENNEDY Bridge Procedures Manual

MISCELLANEOUS:

Students should read all bridge and smoke detection system instruction placards

TEST QUESTIONS:

- Fire Prevention, Fire Triangle and Tetrahedron
- Knowledge of Vessel, Equipment Required
- Fire Prevention (Galley, Rags, Paint Locker, Improperly used smoking materials)
- Improper / Insufficient Ventilation

WATCHSTATION/GENERAL TRAINING REF:

- Boatswain Mate of the Watch
- Emergency Squad or Fire Party Member
- Navigation at the Support Level
- Prevent, control and fight fires on board

LECTURE TITLE: FIREFIGHTING II

TRAINING SUBJECT: FIREFIGHTING EQUIPMENT - PRIMARY

SPECIAL REQUIREMENTS:

- Access to bridge and fixed systems locations
- Fire Pump on Line
- Fire Hose
- Nozzle
- Applicator

TRAINING LECTURE OBJECTIVE:

A. Location of primary firefighting equipment.
B. Operational procedures for use of various fixed firefighting systems.
C. Maintenance, testing and logging procedures.

DISCUSS:

A. Smoke Detecting and heat sensing systems
B. Operation of CO_2 and Halon fixed systems
C. Test of Sensing/Extinguishing Lines for CO_2, Halon, and Steam Smothering Systems
D. Draining fire lines (on Deck)
F. Exterior sprinkling systems

SHOW/DEMONSTRATE:

A. Emergency jumper for damaged section of fire line using regular fire hose.
B. Smoke test of CO_2 line
C. Activation of CO_2 System - General and Selective
D. Simulate bulk Dry Chemical use

READING ASSIGNMENT:

Marine Firefighting, Brady, Part II, Chapter 9

MISCELLANEOUS:

- Discuss Regulations.
- Discuss required fire main pressure and how determined.
- Discuss placement of fire stations and why?
- Discuss required tests and maintenance.
- Discuss responsibilities under 46 CFR -Prevention of fire line freezing and heavy weather damage.

TEST QUESTIONS:

- Generate from lectures - Dwell on protection, maintenance and inspection of systems on a regular basis.
- What is the pilot valve for on the CO_2 fixed fire fighting system?
- How do you line up the CO_2 fixed system to flood only the engine room?

WATCHSTATION/GENERAL TRAINING REF:

- Prevent, control and fight fires on board; Table A-II/1 (l)

LECTURE TITLE: FIREFIGHTING VI

TRAINING SUBJECT: BREATHING APPARATUS - SCOTT

SPECIAL REQUIREMENTS:

- Access to Emergency Gear Locker
- Self-Contained Breathing Apparatus as carried in vessel:
- Fresh air mask
- Scott Air Pack
- Personal Escape Hood

TRAINING LECTURE OBJECTIVE:

A. To familiarize cadets with the contents of the Emergency Gear Locker
B. To familiarize cadets with the operation of self contained breathing apparatus and their recharging and maintenance requirements.

DISCUSS:

A. All components of designated apparatus
B. Donning of apparatus
C. Operational limitations
D. Provisions for emergency use (Buddy-Breathing)
E. Differences between various self-contained breathing units
F. Fresh Air Mask - danger to hose feed from heat and flame
G. Fresh Air mask - pump unit placed up wind and operating before equipment is worn
H. Discuss all equipment within the locker

SHOW/DEMONSTRATE:

A. Donning apparatus
B. Clearing mask of foreign material before donning
C. Emergency use
D. Proper cleaning and storage

READING ASSIGNMENT:

Marine Firefighting Manual, Brady : Part III, Chapter 15

MISCELLANEOUS:

- Emphasize why gas masks are not suitable for firefighting
- Emphasize breathing control under stress

TEST QUESTIONS:

WATCHSTATION/GENERAL TRAINING REF:

Prevent, control and fight fires on board; Table A-II/1 (l)

LECTURE TITLE: SEAMANSHIP I

TRAINING SUBJECT: MARLINESPIKE SEAMANSHIP

SPECIAL REQUIREMENTS:

- 6' Piece of 1/2" diameter line (9 Thread)
- # 16 Needle
- Sail makers Palm
- 3' Piece of Sail Twine

TRAINING LECTURE OBJECTIVE:

A. To instruct students in the tying, practical use and safety considerations individual basic knots.

DISCUSS:

A. Knots:

Overhand	Square
Figure Eight	Half Hitch
Clove Hitch	Becket Bend
Bowline	Rolling Hitch

SHOW/DEMONSTRATE:

A. All the above knots and their practical application

READING ASSIGNMENT:

American Merchants Seaman's Manual, Chapter 1

MISCELLANEOUS:

TEST QUESTIONS:

- Make a double Becket bend
- Make a rolling hitch

WATCHSTATION/GENERAL TRAINING REF:

- Boatswain Mate of the Watch
- Seaman 1.2 (d.)
- All fourth Class

LECTURE TITLE: CARGO GEAR IV

TRAINING SUBJECT: APPLETON HYDRAULIC CRANE

SPECIAL REQUIREMENTS:

- Power to Appleton Crane
- Slings
- Unit to be lifted
- Permission of Chief Mate

TRAINING LECTURE OBJECTIVE:

A. To instruct students in the safe operation in lifting and lowering a weight with the Appleton hydraulic crane.

DISCUSS:

A. Start-up procedures
B. Hoist Preparation
C. Hand Signals
D. Slewing Boom
E. Sling and Boom SWL and capacities
F. Safety Procedures

SHOW / DEMONSTRATE:

A. Hand Signals
B. Control Panel
C. Control Levers
D. Lifting and Lowering
E. Slewing of Boom
F. Retracting of Boom
G. Extension of Boom
H. Topping of boom

READING ASSIGNMENT:

MISCELLANEOUS:

TEST QUESTIONS:

WATCHSTATION / GENERAL TRAINING REFERENCE:

- Boatswains Mate of the Watch
- All Cadet Deck Rates
- Monitor the loading, stowage etc. of cargo; Table A-II / 1 (i.)

Basic Crane Hand Signals

Hand Signals for Runner


Hoist Load

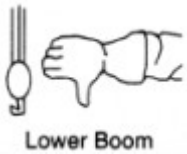

Lower Load


Hoist Load Slowly


Lower Load Slowly

Hand Signals for Boom


Raise Boom


Lower Boom


Stop


Emergency Stop


Dog Everything

LECTURE TITLE: THE MERCHANT MARINE INDUSTRY

TRAINING SUBJECT: MERCHANT MARINE CARRERS INTRODUCTION

SPECIAL REQUIREMENTS:

- Computer and Projector for power point presentation.

TRAINING LECTURE OBJECTIVE:

A. To introduce students to the various aspects of the industry.
B. To familiarize students with a career options in the merchant marine.

DISCUSS:

a. Where the industry started.
b. Where the industry is going.
c. What type of vessels graduates work on.
d. Average pay for a 3rd mate right out of school.
e. Normal work schedule for the industry.
f. Military job's taken by Marine Transportation graduates.
g. Shore side job's available.
h. Class schedule.

SHOW/DEMONSTRATE:

A. Power point presentation on marine Industry.

READING ASSIGNMENT:

MISCELLANEOUS:

TEST QUESTIONS:

-
-
-
-

LECTURE TITLE: NAVIGATION GENERAL V

TRAINING SUBJECT: INTRODUCTION TO WEATHER OBSERVATION

SPECIAL REQUIREMENTS:

- Power to Furuno fax machine
- NOAA ship's weather forms
- Basic shipboard meteorology equipment-physchrometer, barometer etc.
- NWS Observing Handbook 1

TRAINING LECTURE OBJECTIVE:

A. To accurately observe weather elements and record same for transmission by radio

B. Introduce students to the marine weather products available on the weather fax.

DISCUSS:

A. Importance of routine accurate weather reports.

B. Barometer, psychrometer, weather elements, determination of direction and velocity of true wind, and use of humidity tables.

C. Ship's weather observation form.

D. Radio weather messages.

E. Fax maps and synoptic charts.

SHOW/DEMONSTRATE:

A. Encoding of ship's weather for radio message.

B. Use of weather fax machine.

READING ASSIGNMENT:

National Weather Service Observing Handbook No.

Navigation Publication No. 9 (1995) Articles 3700-3800

American Merchant Seamen's Manual, P. 16-28, 1-30, P. 17-9, 17-17

MISCELLANEOUS:

Furuno Fax Machine Operation Manual

USTS Kennedy Bridge Procedures Manual, P. 104, 244-245 Navigating in Tropical Storm Area

TEST QUESTIONS:

- What is the reason for taking routine w4eather observations?
- What is relative wind?
- How many numbers must be in each coded group transmitted?
- What does a rising barometer indicate?
- Why must the wet bulb properly read lower than the dry bulb thermometer?
- How is a Pilot Chart used to assist in weather forecasting at sea?

WATCHSTATION/GENERAL TRAINING REF:

- Quartermaster of the Watch 1.14, 1.15, 1.16
- Navigation at the operational level; table A-II / 1 (a.)

LECTURE TITLE: WATCHSTANDING I

TRAINING SUBJECT: INTRODUCTION TO DECKWATCHSTANDING

SPECIAL REQUIREMENTS:

- 7x50 Binoculars
- Azimuth / Bearing Circle
- Access to Bridge Wing repeaters, steering stand and course recorder
- Rules of the Road Pamphlet
- VHS "Lights and Shapes"

TRAINING LECTURE OBJECTIVE:

A. To introduce Fourth Class Cadets to the watchstation: Look-Out.
B. To introduce Fourth Class the watchstation: Helmsman

DISCUSS:

A. Reporting of visual objects
B. Lights/ shapes of vessels
C. Helmsman commands/ response
D. Bearing circle/ Risk of Collision
E. Fog signals
F. Course Recorder

SHOW/DEMONSTRATE:

A. Report of visual object by points, bells and degrees.
B. Use of binoculars to identify vessels.
C. Use of bearing/ azimuth circle and alidade.
D. Switch over of steering systems.
E. Release of water lights/ smoke and Williamson turn.

READING ASSIGNMENT:

A. *American Merchant Seaman's Manual* , P. 9-1 – 9-12, 10-31 – 10-34
P. 19-10 – 19-14
B. Handout- *Duties of a Lookout*
C. Handout- *Lights, Shapes and Sound Signals for Lookouts*
D. Handout- *Duties of the Helmsman*

MISCELLANEOUS:

Lookout instruction should include objects to report, reporting procedures, lights and shapes significance to the Rules of the Road as well as an introduction to determining risk of collision. Helmsman instruction should include complete overview of steering stand, rudder angle indicator, the course recorder steering commands and emergency procedures.

TEST QUESTIONS:

- How many degrees relative is a vessel "Broad off the starboard bow?"
- What does it mean if the compass bearing of a ship does not change?
- What do you do if you see a person fall overboard?
- What is the lubber's line?
- What is the spider?
- What command is given to the helmsman to stop the vessels swing?

WATCHSTATION/ GENERAL TRAINING REFERENCE:

- Look-out, Helmsman, Detex, Security
- Boatswain's Mate
- Navigation at the support level; Table A-II/4 (d.)
- Navigation at the operational level; Table A-II/1 (b.)

LECTURE TITLE: WATCH STANDING III

TRAINING SUBJECT: BRIDGE INTRODUCTION

SPECIAL REQUIREMENTS:

- Bearing Circle
- Charts
- Sound powered phone, operational.

TRAINING LECTURE OBJECTIVE:

A. Familiarize students about the basic operations of the bridge
B. Familiarize students with the bridge equipment.

DISCUSS:

A. Electronics
B. Radar (3cm / 10 cm)
C. Gyro's
D. GMDSS
E. Helm
F. Bow Thruster
G. Fire Panel
H. Fathometer
I. Lifesaving Equipment
J. Chart table
K. Barometer
L. Course recorder
M. ECDIS
N. Sound powered phone
O. Engine order telegraph
P. Navigation lights

SHOW/DEMONSTRATE:

A. How the sound powered phone is operated.
B. How to take a bearing.

READING ASSIGNMENT:

MISCELLANEOUS:

TEST QUESTIONS:

-
-
-
-

LECTURE TITLE: RADAR I

TRAINING SUBJECT: INTRODUCTION TO RADAR WATCHSTANDING

SPECIAL REQUIREMENTS:

- Live RADAR with traffic or RADAR simulator
- Grease pencils, speed sticks and RADAR log
- RADAR plotting sheets

TRAINING LECTURE OBJECTIVE:

A. Introduce students to principles of RADAR systems

DISCUSS:

A. True Motion and Relative Motion
B. Components of a basic pulse modulated RADAR
C. Stabilized and unstabilized displays
D. Principles of system operation
E. RADAR Indicator controls

SHOW/DEMONSTRATE:

A. Display Set-up and Tuning
B. EBL, VRM, and Cursor operation
C. Reflection Plotter Use

READING ASSIGNMENT:

T.S. KENNEDY Bridge Navigation Manual

Navigation Pub. No. 9 (1995) Article 1300-1315

MISCELLANEOUS:

Prepare students to meet Assistant RADAR Watch standing Qualifications

TEST QUESTIONS:

- What is STC used for?
- What is FTC used for?
- What is the sweep or trace?
- What is the performance monitor?
- What is the preferred marine RADAR system for collision avoidance purposes? Why?

WATCHSTATION/GENERAL TRAINING REF:

- RADAR Observer 1.5 through 1.9
- Assistant RADAR Observer
- Navigation at the Support Level
- Navigation at the Operational Level

2017 CRUISE TRAINING PROGRAM

Department of Marine Transportation

MARINE TRANSPORTATION PORTION FOURTH CLASS SEA TERM

SECTION 4

Cruise Calendar
Long Term Training Schedule

SEA TERM 2017 Watch, Maintenance, & Training Schedule

DRAFT SEA TERM 2017 Watch, Maintenance, Training & Utility Schedule

							Fourth Class				Fourth Class			
Date	Day	TD	D1	D2	D3	D4	1A	2A	3A	4A	1B	2B	3B	4B
30-Dec-16	FRI													
31-Dec-16	SAT													
1-Jan-17	SUN						Cadets Report Time & Date TBD							
2-Jan-17	MON													
3-Jan-17	TUE													
4-Jan-17	WED													
5-Jan-17	THU													
6-Jan-17	FRI						USCG Fire and Security Drills							
7-Jan-17	SAT													
8-Jan-17	SUN	SS	W	M	M	U	DEPART BUZZARDS BAY 0530							
9-Jan-17	MON	1	W	M	T	U	DW	DM	DT	DU	EW	EM	ET	EU
10-Jan-17	TUE	2	W	M	T	U	DW	DM	DT	DU	EW	EM	ET	EU
11-Jan-17	WED	3	W	M	T	U	DW	DM	DT	DU	EW	EM	ET	EU
12-Jan-17	THU	4	M	T	U	W	DM	DT	DU	DW	EM	ET	EU	EW
13-Jan-17	FRI	5	M	T	U	W	DM	DT	DU	DW	EM	ET	EU	EW
14-Jan-17	SAT	6	M	T	U	W	DM	DT	DU	DW	EM	ET	EU	EW
15-Jan-17	SUN	SS	M	M	U	W	Sunday At Sea							
16-Jan-17	MON	7	T	U	W	M	DT	DU	DW	DM	ET	EU	EW	EM
17-Jan-17	TUE	8	T	U	W	M	DT	DU	DW	DM	ET	EU	EW	EM
18-Jan-17	WED	9	T	U	W	M	DT	DU	DW	DM	ET	EU	EW	EM
19-Jan-17	THU		M	U	W	M	STCW/ Maintenance / Field Day							
20-Jan-17	FRI		OFF		W		*Aruba*							
21-Jan-17	SAT		OFF			W								
22-Jan-17	SUN		OFF	W										
23-Jan-17	MON	10	U	W	M	T	DU	DW	DM	DT	EU	EW	EM	ET
24-Jan-17	TUE	11	U	W	M	T	DU	DW	DM	DT	EU	EW	EM	ET
25-Jan-17	WED	12	U	W	M	T	DU	DW	DM	DT	EU	EW	EM	ET
26-Jan-17	THU	E-1	U	W	M	M	EXAM DAY #1							
27-Jan-17	FRI			W	OFF		*Barbados*							
28-Jan-17	SAT				OFF	W								
29-Jan-17	SUN		W		OFF									
30-Jan-17	MON	13	W	M	T	U	EW	EM	ET	EU	DW	DM	DT	DU
31-Jan-17	TUE	14	W	M	T	U	EW	EM	ET	EU	DW	DM	DT	DU
1-Feb-17	WED	15	W	M	T	U	EW	EM	ET	EU	DW	DM	DT	DU
2-Feb-17	THU	16	M	T	U	W	EM	ET	EU	EW	DM	DT	DU	DW
3-Feb-17	FRI		W	OFF			*St Thomas, USVI*							
4-Feb-17	SAT			OFF	W									
5-Feb-17	SUN			OFF		W								
6-Feb-17	MON	17	M	T	U	W	EM	ET	EU	EW	DM	DT	DU	DW
7-Feb-17	TUE	18	M	T	U	W	EM	ET	EU	EW	DM	DT	DU	DW
8-Feb-17	WED	19	T	U	W	M	ET	EU	EW	EM	DT	DU	DW	DM
9-Feb-17	THU	20	T	U	W	M	ET	EU	EW	EM	DT	DU	DW	DM
10-Feb-17	FRI		W			OFF	*Ft Lauderdale, FL*							
11-Feb-17	SAT			W		OFF								
12-Feb-17	SUN				W	OFF								
13-Feb-17	MON	21	T	U	W	M	ET	EU	EW	EM	DT	DU	DW	DM
14-Feb-17	TUE	22	U	W	M	T	EU	EW	EM	ET	DU	DW	DM	DT
15-Feb-17	WED	23	U	W	M	T	EU	EW	EM	ET	DU	DW	DM	DT
16-Feb-17	THU	24	U	W	M	T	EU	EW	EM	ET	DU	DW	DM	DT
17-Feb-17	FRI	E-2		W			EXAM DAY #2							
18-Feb-17	SAT					W	FIELD DAY - CAPE COD BAY							
19-Feb-17	SUN		W				ARRIVE BUZZARDS BAY 1636							
20-Feb-17	MON						*Buzzards Bay, MA*							
21-Feb-17	TUE													
22-Feb-17	WED													

Upperclass Legend: (M) Maintenance, (T) Training, (W) Watch, (U) Utility

4/c Legend: (DW) Deck Watch, (DM) Deck Maint., (DU) Deck Utility, (DT) Deck Training, (EW) Engine Watch, (EM) Engine Maint., (EU) Engine Utility, (ET) Engine Training

Number of days on each:	W	11	11	10	11
	M	8	8	8	8
	T	6	6	6	6
	U	7	7	7	7

FRESHMAN MARINE TRANSPORTATION *GROUP A*
SEATERM COURSES WINTER 2017

ALL DIVISIONS GROUP A *BLUE* TEAM

	Period 1 0800-0945	Period 2 1000-1130	Period 3 1230-1400	Period 4 1415-1545
Training Days 1, 4, 7, 10	SHIPBOARD SAFETY/ LOOKOUT RM: 6-5	SECURITY AWARENESS RM: 6-4	FIREFIGHTING RM: SEATORIUM	
Training Days 2, 5, 8, 11	CRANE SIGNALS RM: 6-4	SEAMANSHIP KNOTS RM: SEATORIUM	PILOTING RM: 6-2	
Training Days 3, 6, 9, 12	JHA/MSDS RM: 6-5	FALL PROTECTION RM: SEATORIUM	MARINE WEATHER INTRO RM: 6-5	MERCHANT MARINE RM: 6-4

ALL DIVISIONS GROUP A *GOLD* TEAM

	Period 1 0800-0945	Period 2 1000-1130	Period 3 1230-1400	Period 4 1415-1545
Training Days 1, 4, 7, 10	SECURITY AWARENESS RM: 6-4	SHIPBOARD SAFETY/ LOOKOUT RM: 6-5	PILOTING RM: 6-2	
Training Days 2, 5, 8, 11	SEAMANSHIP KNOTS RM: SEATORIUM	CRANE SIGNALS RM: 6-4	FIREFIGHTING RM: SEATORIUM	
Training Days 3, 6, 9, 12	FALL PROTECTION RM: SEATORIUM	JHA/MSDS RM: 6-5	MERCHANT MARINE RM: 6-4	MARINE WEATHER INTRO RM: 6-5

FRESHMAN MARINE TRANSPORTATION *GROUP B*
SEATERM COURSES WINTER 2017

ALL DIVISIONS GROUP B *BLUE* TEAM

	Period 1 0800-0945	Period 2 1000-1130	Period 3 1230-1400	Period 4 1415-1545
Training Days 13, 16, 19, 22	SHIPBOARD SAFETY/ LOOKOUT RM: 6-5	FALL PROTECTION RM: SEATORIUM	FIREFIGHTING RM: SEATORIUM	
Training Days 14, 17, 20, 13	CRANE SIGNALS RM: 6-4	SEAMANSHIP KNOTS RM: SEATORIUM	PILOTING RM: 6-2	
Training Days 15, 18, 21, 24	JHA/MSDS RM: 6-5	SECURITY AWARENESS RM: 6-4	MARINE WEATHER INTRO RM: 6-5	MERCHANT MARINE RM: 6-4

ALL DIVISIONS GROUP B *GOLD* TEAM

	Period 1 0800-0945	Period 2 1000-1130	Period 3 1230-1400	Period 4 1415-1545
Training Days 13, 16, 19, 22	FALL PROTECTION RM: SEATORIUM	SHIPBOARD SAFETY/ LOOKOUT RM: 6-5	PILOTING RM: 6-2	
Training Days 14, 17, 20, 13	SEAMANSHIP KNOTS RM: SEATORIUM	CRANE SIGNALS RM: 6-4	FIREFIGHTING RM: SEATORIUM	
Training Days 15, 18, 21, 24	SECURITY AWARENESS RM: 6-4	JHA/MSDS RM: 6-5	MERCHANT MARINE RM: 6-4	MARINE WEATHER INTRO RM: 6-5