2013 CRUISE TRAINING PROGRAM

Department of Marine Transportation

THIRD CLASS

A Second 100 Years of Maritime Excellence

2013 TRAINING VOYAGE OF THE U.S.T.S. KENNEDY

Prepared By:
Captain Tim Brady
Deck Training Coordinator
Department of Marine Transportation

Cadet _____
Division_____
Berthing Location _____

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INTRODUCTION

The Third Class Deck Training Program is intended to build upon skills achieved in all previous Departmental Programs to attain professional competency level in the following STCW /USCG areas:

A. Navigation at the Operational Level
B. Ship Maneuvering and Handling
C. Cargo Operations-Dry Cargo Vessels
D. Personal safety, lifesaving and social responsibilities
E. Fire prevention and equipment
F. General Seamanship
G. Watchkeeping
H. Meteorology

We are 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 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.

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 4.

All Third Class Cadets will be required to complete a VOYAGE PLAN piloting project during the Third Class cruise. Detailed procedures for completing this project and minimum content requirements for the project will be provided in a VOYAGE PLAN package format provided by Captain Dalton at the start of this Sea Term. The Third Class Voyage Plan project will comprise 30% of your cruise grade. It is expected that it will be completed in a professional manner in accordance with published time frames. If you are experiencing difficulty with any aspect of the Third Class Voyage Plan, see the Deck Training Coordinator for assistance.

CRUISE GRADING PROCEDURES

Successful completion of the Sea Term is a prerequisite for graduation. Two written examinations will be administered during the cruise training cycle. Examinations will be scheduled as follows:

MID TERM

ALL DIVISIONS
1 FEBRUARY

FINAL

ALL DIVISIONS
23 FEBRUARY

LOOKOUT ASSESSMENTS ALL DIVISIONS 1 FEBRUARY

FINAL SEA TERM GRADE
The final Sea Term Grade will be based on the following formula:

Written Examinations	25%
Voyage Plan Project	30%
Bridge Watchstanding	25%
Maintenance (Provided by Chief Mate)	15%
STCW Quals	5%

You will be evaluated for your performance on the bridge while performing the roles of **Cadet Helmsman, **Cadet Quartermaster and Cadet Assistant Navigator**. These grades will be assigned daily by the bridge watch officer with comments from the bridge training officer to give you your Bridge Watchstanding grade component. An explanation of the evaluation process is contained in the Watch Evaluation Procedures Section 3.

AN INCOMPLETE GRADE WILL BE GIVEN FOR SEA TERM IF YOU FAIL TO COMPLETE THE FOUR PRACTICAL ASSESSMENTS (STCW) THAT ARE ATTACHED TO YOUR THIRD CLASS SEA TERM.

TRAINING MATERIAL AND EQUIPMENT
The following equipment and textbooks will be required to complete the Third Class Deck Training Program:

1. MARINE FIREFIGHTING, Brady - To be taken from ship's library for your training
2. LIFEBOATMAN'S MANUAL - Cornell Maritime Press
3. Rules of Road Manual - USCG
4. T.S. KENNEDY SAFETY MANUAL
5. Personal calculator
6. (2) Navigation triangles, dividers, and drawing compass
7. Pocket knife, flashlight and work gloves

Any other equipment required by Com Cad Sea Bag Requirements.

Recommended additional books (not required)
1. AMERICAN MERCHANT SEAMAN'S MANUAL
2. AMERICAN PRACTICAL NAVIGATOR, NAVPUB #9
3. MARINE CARGO OPERATIONS - Sauerbier
4. AMERICAN MERCHANT MARINE OFFICER'S HANDBOOK
5. NAV PUB 1310 - RADAR NAVIGATION MANUAL
6. MODERN SEAMANSHIP - Knights
7. WEATHER FOR THE MARINER
8. SEAMANSHIP NOTES - MODIC
9. DUTTONS

None of the above items will be provided by the Academy. Students will be provided a sextant from the instructor prior to any class requiring them. Sextants may be retained only during that class unless special permission is received from the training officer. Cadets losing or damaging a sextant through inattention or negligence will be charged for its replacement value.

A cruise grade will not be forwarded to the Registrar until this bill is paid.

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. 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 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.

DEPARTMENTAL TRAINING SCHEDULES

Cadets are advised to consult the Third Class Deck Long Term Training Schedule (Section 5) to determine subjects and locations of weekly 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. CADET CHARTROOM BULLETIN BOARD (Fwd and Aft Nav Labs)
2. BULLETIN BOARDS OUTSIDE CLASSROOMS 6-2 AND 6-4
3. CENTRAL LADDERWELL MIDSHIPS STBD SIDE
4. DIVISION BULLETIN BOARDS
5. SHIP'S LIBRARY

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 with any misunderstanding of use of any of these schedules or any other questions relating to your Deck Training Program should see the Deck Training Coordinator at the Deck Training Office for clarification or assistance.

Our practical goal for you for this Sea Term is to ensure that you have progressed to a professional Able Seaman competency. If you need assistance at any time, please seek out the Deck Training Coordinator or any Deck Training Officer. Do not wait until the end of the training cycle to achieve these performance skills. You will be tested during the mid-cruise exam period and at the end of cruise to determine your progress in meeting these performance standards. To a large extent, your cruise grade will be determined by your demonstrated proficiency in all Third Class Cadet watch station requirements.

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SECTION 1

Safety Familiarization

SAFETY FAMILIARIZATION

All individuals assigned to a vessel and who commence training after August 2, 1998 must meet the following international minimum competencies before being assigned to the vessel. The minimum training requirements and expected outcomes for the Vessel Safety Familiarization Training which you have received is indicated below. Primary emphasis of the Third 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.

Be able to locate:
Locate and explain how to operate the emergency deck stop mechanism for the main engine, including other emergency stop valves.
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 the emergency deck stop mechanism for the main engine, including other emergency stop valves in a timely manner.

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SECTION 2

STCW ASSESSMENT REQUIREMENTS

STCW Assessment Procedures

Captain Mayhofer – STCW Cruise Officer

Scheduling and satisfactory completion of all 3/C STCW (cruise only) assessments are the sole responsibility of the individual third class deck cadet. It is each cadet's responsibility to satisfactorily complete all of the below listed third class cruise assessments on this cruise. Scheduled times available in which you may register to complete these assessments will be posted and explained on cruise.

Any questions regarding these Assessments come and see me immediately.

ASSESSMENT #	TASK NOTES		Course
OICNW-7-7A	**Read Barometric Pressure**		MT-2371 Sophomore Cruise
OICNW-1-3B	**Chart Selection**		MT-2371 Sophomore Cruise
OICNW-1-3C	**Route Planning IMO Resolution A.893(21)**		MT-2371 Sophomore Cruise
MMA - Soph 1	**Lookout Assessment**		MT-2371 Sophomore Cruise

STCW ASSESSMENTS RULES

- **All Cadets shall learn each assessment task and performance standard prior to commencement of any assessments.**
- **Each cadet shall inform the Assessor that he/she would like to be assessed on a particular assessment prior to performing each task.**
- **Once a particular assessment has been completed to the satisfaction of the assessor the assessment control sheets shall be signed/dated and a returned to the STCW Compliance Officer, Captain Mayhofer within 24 hrs of completion.**

Massachusetts Maritime Academy
TABLE A-II/1 Specification of Minimum Standard of Competence
OFFICER IN CHARGE OF A NAVIGATIONAL WATCH

Control Sheet

ASSESSMENT NO. OICNW-1-7A

FUNCTION: Navigation at the Operational Level

COMPETENCE: Plan and conduct a passage and determine position

KNOWLEDGE, UNDERSTANDING & PROFICIENCY: *Meteorology* -- Ability to use and interpret information obtained from on-board meteorological instruments

TASK: Read barometric pressure

PERFORMANCE CONDITION: On a vessel or in a laboratory.

PERFORMANCE BEHAVIOR: Determine the barometric pressure in millibars, inches or millimeters of mercury.

PERFORMANCE STANDARD:

1. The barometer is read and the appropriate corrections are applied.
2. The barometric pressure determined by the candidate is within .5 millibars; .02 inches or .4 millimeters of the assessor's corrected reading.

COURSE: MT 0625 Sophomore Cruise

Candidate _____ SSN _____

Assessor _____ Position _____

Vessel or Course _____ License No. _____ Date _____

Massachusetts Maritime Academy
TABLE A-II/1 Specification of Minimum Standard of Competence
OFFICER IN CHARGE OF A NAVIGATIONAL WATCH

Control Sheet

ASSESSMENT NO. OICNW-1-3B

FUNCTION: Navigation at the Operational Level

COMPETENCE: Plan and conduct a passage and determine position

KNOWLEDGE, UNDERSTANDING & PROFICIENCY: Thorough knowledge of and ability to use navigational charts and publications, such as sailing directions, tide tables, notices to mariners, radio navigational warnings and ship's routing information

TASK: Chart selection

PERFORMANCE CONDITION: On a ship, or in a navigational laboratory, given a voyage of at least 500 NM between the port of departure and the port of arrival, given the appropriate chart catalog.

PERFORMANCE BEHAVIOR: Identify the charts needed for the voyage.

PERFORMANCE STANDARD:

1. The name and number of the charts are correctly identified and recorded.
2. The charts selected are the largest scales appropriate for the area transited.
3. There is no gap in chart coverage for any portion of the voyage requiring coastal navigation and departure and arrival at any port.

COURSE: MT 0625 Sophomore Cruise

Candidate _____ SSN _____

Assessor _____ Position _____

Vessel or Course _____ License No. _____ Date _____

Massachusetts Maritime Academy
TABLE A-II/1 Specification of Minimum Standard of Competence
OFFICER IN CHARGE OF A NAVIGATIONAL WATCH

Control Sheet

ASSESSMENT NO. OICNW-1-3C

FUNCTION: Navigation at the Operational Level

COMPETENCE: Plan and conduct a passage and determine position

KNOWLEDGE, UNDERSTANDING & PROFICIENCY: Thorough knowledge of and ability to use navigational charts and publications, such as sailing directions, tide tables, notices to mariners, radio navigational warnings and ship's routing information

TASK: Route planning

PERFORMANCE CONDITION: On a ship, a full mission ship simulator, or in a navigation laboratory, when given three way points consisting of a position of departure, a position of arrival, and one other way point, with the total distance of more than 500 nm.

PERFORMANCE BEHAVIOR: Determine the appropriate courses and distances between way points and plot the intended courses on the charts selected.

PERFORMANCE STANDARD:

1. Courses and distances between waypoints were correctly calculated.
2. The route was the most direct.
3. The courses were plotted on the appropriately scaled charts noting the ETA at each way point, including the final way point.

COURSE: MT 0625 Sophomore Cruise

Candidate _____ SSN _____

Assessor _____ Position _____

Vessel or Course _____ License No. _____ Date _____

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.		

CADET NAME _____ SS# _____

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Lookout Assessment Mk1 12/31/03

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		
		.	Demonstrates ability to identify four bearings (designated by assessor) by the point system		
		Uses binoculars in correct fashion	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.		

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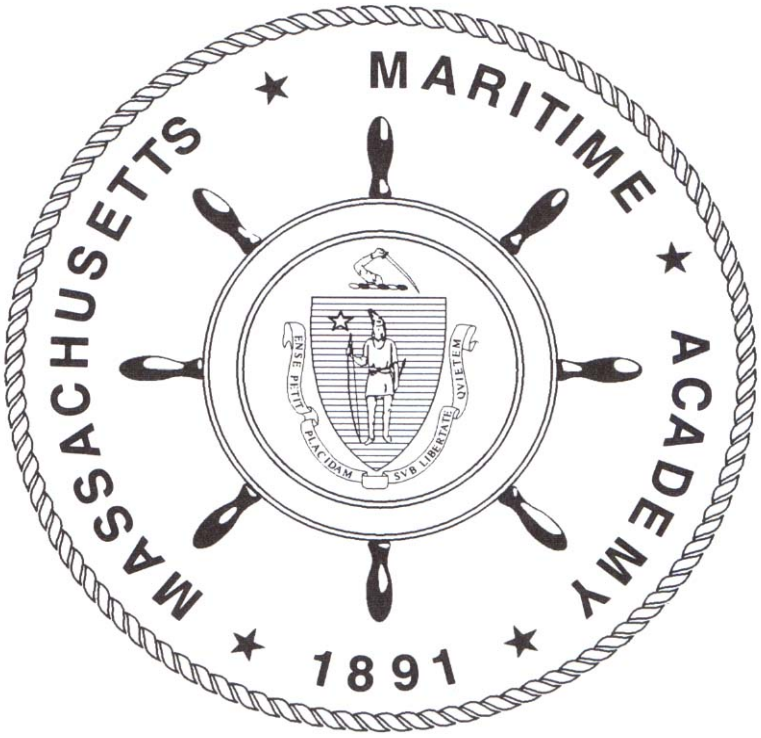

SECTION 3
WATCH EVALUATION PROCEDURES

Department of Marine Transportation
Third Class Sea Term Watch Evaluation

Explanation of the Watch Evaluation Procedures

"Bridge watchkeeping is the single most important activity conducted at sea. Upon the watchkeeper's diligence rest the security of the ship and all who sail on board. It is a demanding activity, frequently undervalued, which needs support, encouragement, motivation, self discipline and high standards of professionalism".

The Nautical Institute on Bridge Watchkeeping, 1993

It remains the responsibility of every cadet who assumes a watch station on the bridge to be keenly aware of the contents of the Master's Standing Orders and the *KENNEDY* Bridge Procedures Manual.

In order to provide an objective analysis of individual Cadet performance while on watch, the Officer of the Watch will evaluate the performance of individual cadets assigned to designated watch stations using a standardized Watch Station Performance Evaluation. On completion of this evaluation, a numerical grade will be assigned for the watch. Cadets are encouraged to review their individual Watch Station Performance Evaluation with the watch officer at a convenient time upon completion of the watch. Every First and Third Class watch station has a multi question Watch Station Performance Evaluation sheet. These watch station performance evaluations will be posted in the Nav. Lab and are provided on the following pages. Cadets are encouraged to become familiar with the Watch Station Performance Evaluation criteria before standing their initial watch. A copy of the evaluation for your class follows.

The following pages will provide some explanation and references for each watch station's questions. Cadets can expect higher grades per watch if they attempt to comply with these explanations: However, this does not compromise the Officer of the Watch's individual demands or requirements that he/she may desire of the watch stander.

DEPARTMENT OF MARINE TRANSPORTATION
CADET WATCH EVALUATION SHEET

OFFICER OF THE WATCH INSTRUCTION

The following paragraph is the instruction to the Bridge Watch Officer for completing the Cadet Watch Evaluation Sheet at the end of each deck watch.

INSTRUCTIONS: The Bridge Watch Officer shall complete and sign the following evaluation sheet at the completion of each watch and retain and compile final watch grades for the 3/C Cadets. Indicate date, division, watch, sea/coastal condition and cadet name adjacent to the watch station he/she is being evaluated upon. Check off box corresponding to grade granted for each watch interrogative. If the Watch Training Officer considers performance above or below grade, place + or – in box following grade, but this addition to grade is not required.

We are grading each First and Third class watch position using five specific questions for that watch station. Watch station questions are included in the Watch Evaluation Loose-leaf on the Bridge. A copy of the evaluation questions will be provided prior to start of watches. At the end of each watch, you are to evaluate the Cadet Officer of the Watch (COOW). Then, after reviewing this evaluation with the COOW, you and the COOW are to complete the evaluations on the remaining positions.

Watch grades are transferred from the evaluation sheet to a computer spreadsheet for cruise grade computation. Because the computer requires numerical inputs, PLEASE INPUT A NUMERICAL GRADE FOR EACH CADET, ***NOT*** A LETTER GRADE. Please use the system below for assigning numerical grades. Thanks.

Because of this the Watch Training Officer is given the opportunity to plus or minus a grade. For example, if a cadet is felt deserving of an A, with no plus or minus, the numerical input is 95; but if a plus is graded, the input is 100, and a minus, 90. This system works the same through the B, C, D grades, but changes in the F grade. An F is granted a 50, an F plus is 55, but an F minus equates to 30. Because of the low numerical award for F-, Watch Training Officers should be absolutely certain the cadet deserves such a damaging grade. The Watch Training Officer should average the five grades for each cadet in the space provided below the watch station.

If you have any additional questions, please contact me.

_____
Capt. Tim Brady, Deck Training Coordinator

3/C - CADET WATCH EVALUATION SHEET

NAME:	DATES:	DIV:	WATCH:

Cadet Assistant Navigator:	□ √ +	Grade
1. Asst. Navigator – at what level did this cadet demonstrate the ability to fix the vessel's position by all means available in a timely manner. (visual bearings, GPS, Loran, celestial)		_____ Number
2. Asst. Navigator demonstrated the ability to determine CMG and SMG.		
3. Asst. Navigator demonstrated the ability to determine an accurate ETA.		
4. Asst. Navigator communicated information to Cadet Navigator, COOW, and Watch Officer on a timely basis.		_____ Initials
5. Asst. Navigator determined compass error from a provided observation.		

3/C Cadet Quartermaster:	□ √ +	Grade
1. Quartermaster recorded the events of the watch so as to contribute to the efficient running of the watch.		
2. Quartermaster demonstrated competency in understanding and complying with the watch routine (at sea, in-port, anchored) including comms throughout the watch.		_____ Number
3. Quartermaster complied with the requirements of the OOW and the COOW.		
4. Quartermaster demonstrated the proper use of the PA system, sound-powered phone and other communication equipment.		_____ Initials
5. Quartermaster demonstrated the proper use of the EOT and made proper entries into the Bell Book.		

3/C Cadet Helmsman:	□ √ +	Grade
1. Helmsman ensured that the vessel was at all times being steered in a safe manner.		
2. Helmsman ensured that junior helmsman were trained and evaluated in properly steering the vessel.		_____ Number
3. Helmsman complied with the requirements of the OOW and the COOW with regards to steering the vessel and demonstrated proper communication between watchstanders.		
4. Helmsman ensured that helm reliefs were executed properly.		_____ Initials
5. Helmsman demonstrated knowledge of switch over and settings of the automatic steering system.		

3/C Cadet Weather Observer:	□ √ +	Grade
1. Observer fully understands how to determine true wind direction/speed, cloud types and sea state conditions for safe navigation of the vessel.		_____ Number
2. Observer recorded, encoded, and transmitted the meteorological elements in a timely manner as designated by the National Oceanic and Atmospheric Administration's and the vessel's GMDSS operation guidelines.		
3. Observer operated the marine weather facsimile receiver to		

ensure receipt of critical weather data.	
4. Observer utilizes acquired skills to train underclass cadets when appropriate.	
5. Observer kept the Cadet Officer of the Watch apprises of all meteorological conditions to maintain the safe navigation of the vessel.	

MAKE SURE THAT YOU TRACK ALL YOUR CRUISE WATCH GRADES AS THEY ARE A MAJOR COMPONENT (30%) OF YOUR 3/C SEA TERM GRADE! IF YOU ARE UNSURE OF A GRADE AFTER STANDING A WATCH SEEK OUT THE WATCH OFFICER OR THE COOW FOR THE WATCH. YOU MAY, OF COURSE, ALWAYS CONSULT WITH ME IN THE DECK TRAINING OFFICE IF THERE REMAINS ANY CONFUSION/CONCERN OVER A GRADE.

Capt. Tim Brady Deck Training Coordinator

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SECTION 4

Cruise Lecture Profiles

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Ships Construction			57

LECTURE TITLE: COMMUNICATION 1

TRAINING SUBJECT: CODE FLAGS

SPECIAL REQUIREMENTS:

- International Signal Flags
- Phonetic Tables
- HO 102

TRAINING LECTURE OBJECTIVE:

A. Identify the components of the International Code of Flags and Pennants
B. Explain the basic meaning of the flags, pennants and substitutes
C. Explain procedures for sending and receiving flag hoists
D. Explain proper care of flags

DISCUSS:

A. Identification of flags
B. Illustrate the difference between a flag ,a burgee, and a pennant
C. The use of code pennant and substitutes
D. How to use HO 102 to create a coded message
E. Single, double, and triple letter signals
F. Tackline

SHOW/DEMONSTRATE:

A. Use of HO 102 to decode a flag hoist

READING ASSIGNMENT: *American Merchant Seaman's Manual* P. 13:2-13:18

MISCELLANEOUS: *Patriot State Bridge Procedures Manual* P. 69 Flag Protocol

TEST QUESTIONS:

- What is the meaning of the single letter signal G flag?
- What is the meaning of the single letter signal Y flag?
- What is the meaning of the flag signal MCY?

WATCHSTATION/GENERAL TRAINING REF.:

- Quartermaster of the Watch
- Professional Achievement Exam
- Navigation at the support level; Table A-II/4 (c.)
- Navigation at the operational level; Table A-II/1 (a.)
- Navigation at the operational level; Table A-II/1 (g.)

LECTURE TITLE: COMMUNICATIONS 2

TRAINING SUBJECT: FLASHING LIGHT COMMUNICATION PROCEDURES AND DRILLS

SPECIAL REQUIREMENTS:

- Access and power to bridge signal light
- H.O. 102 (Available in ship's library)
- Flashing light computer software and PC

TRAINING LECTURE OBJECTIVE:

A. To familiarize cadets with flashing light procedures
B. Increase skill with flashing light to four words per minute

DISCUSS:

A. Message format

SHOW/DEMONSTRATE:

A. General call
B. Answering signals
C. Erase signals
D. Special two letter signals

READING ASSIGNMENT:

American Merchant Seaman's Manual 13-10 through 13-11

MISCELLANEOUS:

Student to demonstrate flashing light competency to four words per minute
Students will require a scheduled flashing light skill development program to achieve this.

TEST QUESTIONS:

- What does EEEE mean?

WATCH/STATION GENERAL TRAINING REF.:

- Quartermaster
- Navigation at the operational level; Table A-II/1 (g.)

LECTURE TITLE: COMMUNICATION 3

TRAINING SUBJECT: VHF RADIO TELEPHONE

SPECIAL REQUIREMENTS:
- Power and access to VHF radio
- VHF Radio Telephone Log
- *IMO Standard Marine Communication Phrases*

TRAINING LECTURE OBJECTIVE:
A. Familiarize cadets with the proper VHF radio operation procedures
B. Familiarize students with VHF licensing and log requirements

DISCUSS:
A. VHF radio station and operator license requirements in accordance with FCC regulations
B. Monitor/Guard responsibilities
C. Frequency spectrum
D. Equipment nomenclature
E. Traffic priority: Mayday, Pan-Pan, Securite'
F. Digital Selective Calling capabilities and responsibilities

SHOW/DEMONSTRATE:
A. Proper tuning procedures
B. Proper communications techniques

READING ASSIGNMENT:
T.S. Kennedy Bridge Procedures Manual P.64 -VHF Radio Equipment
Manufacturer's operating manual for designated equipment

MISCELLANEOUS:
- Introduce the concept of the Global Maritime Distress and Safety System
- Introduce the concept of the *IMO Standard Marine Communication Phrases*

TEST QUESTIONS:
- Channel 16 corresponds to what frequency?
- What channels are "receive only"?
- What is the range of the VHF radio telephone?

WATCHSTATION/GENERAL TRAINING REF.:

Navigation at the support level; Table A-II/4 (c)
Operate life saving appliances; Table A-II/1 (m)
Respond to a distress signal at sea; Table A-II/1 (e)

LECTURE TITLE: COMMUNICATION 5

TRAINING SUBJECT: INTRODUCTION TO THE GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM

SPECIAL REQUIREMENTS:

- GMDSS Master Hand Book- IMO
- Licensed GMDSS Radio Station Operator
- Power to GMDSS Work Station

TRAINING LECTURE OBJECTIVE:

A. Introduce the student to the concept of Global Maritime Distress and Safety System.
B. Enable the student to identify the various communications and locating equipment carriage requirements placed upon cargo and passenger vessels operating within SEA Areas: A1, A2, A3, & A4.

DISCUSS:

A. RF and satellite systems' capabilities
B. Sea Areas
C. FCC and USCG Regulations for GMDSS Radio Station Operators
D. Communication fundamentals
E. NAVTEX and SAFETY NET
F. Satellite and RF Communications
G. Locating Devices

SHOW/DEMONSTRATE:

- EPIRB
- SART
- NAVTEX
- NBDP

READING ASSIGNMENT:

*Navigation Pub. No. 9 (*1995) Articles 2800-2808

MISCELLANEOUS:

TEST QUESTIONS:

- What is the primary cause of false distress under the GMDSS System?
- What type of satellite communications system is Patriot State fitted with?
- Who are the primary and secondary GMDSS radio operators aboard the Patriot State?
- The term MMSI normally refers to ?
- What is the correct procedure to respond to a distress received by HF?

WATCHSTATION/GENERAL TRAINING REF.:

Navigation at the support level; Table A-II/4 (d)
Operate life saving appliances; Table A-II/1 (m)
Respond to a distress signal at sea; Table A-II/1 (e)

LECTURE TITLE: ELECTRONIC NAVIGATION 1

TRAINING SUBJECT: LORAN C SYSTEMS

SPECIAL REQUIREMENTS:

- Power and access to LORAN C receivers. Pub. 221, Lattice Tables
- Manufacturers' instruction manuals for each LORAN C receiver

TRAINING LECTURE OBJECTIVE:

A. Expose cadets to the operational similarities, differences and limitations of installed Trimble, Raynav 750 and other Loran C receivers.

DISCUSS:

A. Initialization of receivers
B. Operation features including: SNR, ASF, Blinking and Cycle matching
C. Receiver capability and limitations
D. Purpose of Lattice Tables
E. Antenna and self-test functions

SHOW/DEMONSTRATE:

A. Receiver start-up
B. Special features
C. System similarities and differences
D. Use of Lattice Tables

READING ASSIGNMENT:

Navigation Pub. No. 9 (1995), Articles 1019, 1200-1210
Operation Manuals for respective equipment

MISCELLANEOUS:

TEST QUESTIONS:

- How do you set the notch filters in the Meico C-Master; Raynav 750?
- What SNR range constitutes "usable" signal strength on the Raynav 750?
- What is minimum acceptable oscillator deviation?
- When is an ASF correction warranted?

WATCHSTATION/GENERAL TRAINING REF.:

LECTURE TITLE: ELECTRONIC NAVIGATION 2

TRAINING SUBJECT: GLOBAL POSITIONING SATELLITE NAVIGATION SYSTEMS

SPECIAL REQUIREMENTS:

- Power and access to satellite navigation units

TRAINING LECTURE OBJECTIVE:

A. Familiarize students with the operation and navigational use of installed satellite navigation receivers.

DISCUSS:

A. Capabilities and limitations of GPS and DGPS satellite navigation system
B. Operational features of the Trimble System.
C. Operational features of the Raytheon System.
D. Random errors involved with satellite navigation.
E. System Initialization and fault monitoring.
F. Antenna and other maintenance practices.

SHOW/DEMONSTRATE:

A. Entering information into designated navigation system.
B. Voyage planning with waypoints.
C. Keyboard lock mode.

READING ASSIGNMENT:

Navigation Pub. No. 9 (1995), Articles 1100-1115

MISCELLANEOUS:

TEST QUESTIONS:

- How many satellites are required to obtain a three dimensional fix?
- What is meant by Selective Availability (SA)?
- What is GDOP?
- What are the differences in accuracy and theory between GPS and DGPS satellite navigation systems?
- How can you evaluate the accuracy of a fix obtained on a designated receiver?

WATCHSTATION/GENERAL TRAINING REF.:

LECTURE TITLE: FIREFIGHTING 2

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 3

TRAINING SUBJECT: FIXED FIREFIGHTING SYSTEMS

SPECIAL REQUIREMENTS:

- Portable Eductor
- 4 Pieces of 2 1/2" fire hose
- Access to CO_2 and Halon 1301 fixed firefighting systems
- Copy of *46 CFR 95.15*

TRAINING LECTURE OBJECTIVE:

A. Familiarize students with, and provide hands - on practical experience with various vessel damage control appliances.

DISCUSS:

A. Eductors
B. Halon 1301 fixed firefighting systems
C. CO_2 Fixed Firefighting system
D. Ruptured fire main repairs or work around

SHOW/DEMONSTRATE:

A. Rigging portable eductor to de-water an interior space
B. Repair simulated ruptured fire main
C. Secure fire main block valve
D. Operation of the Halon 1301 system

READING ASSIGNMENT:

46 CFR 95.15
Marine Firefighting Manual, BRADY, P. 140-141 and CH. 9

MISCELLANEOUS:

TEST QUESTIONS:

- What is a soft patch?
- What is a hard patch?
- Sketch a properly rigged eductor.

WATCHSTATION/GENERAL TRAINING REF.:

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

LECTURE TITLE: FIREFIGHTING 4

TRAINING SUBJECT: PORTABLE EQUIPMENT

SPECIAL REQUIREMENTS:
- All portable equipment at hand
- Miscellaneous firefighting tools available
- Access to Emergency Gear Locker
- Copy of 46 CFR

TRAINING LECTURE OBJECTIVE:
A. Demonstrate the proper use of portable firefighting equipment at the scene of a fire.
B. Familiarize students with proper attack procedures using various types of portable firefighting equipment available in vessel's Damage Control lockers.

DISCUSS:
A. Types of semi-portable firefighting equipment.
B. Proper use of apparatus application of agent.
C. Maintenance, inspection and recharging requirements.
D. Selection criteria for firefighting agents for use in engine room or on deck application.

SHOW/DEMONSTRATE:
A. Use of individual pieces of portable firefighting equipment
B. Inspection procedures
C. Procedures for securing power
D. Procedures for ventilating space

READING ASSIGNMENT:
Marine Firefighting Manual, Brady, Part II, Chapter 8

MISCELLANEOUS:
- Common sense approach to firefighting.
- Example: Throw burning Class A material overboard and you don't have a fire.

TEST QUESTIONS:
- Generated From Lectures/Demonstrations
- Maintenance under 46 CFR.

WATCHSTATION/GENERAL TRAINING REF.:
Prevent, control and fight fires on board; Table A-II/1 (l)

LECTURE TITLE: FIREFIGHTING 5

FIRE PARTY COMPETENCY DEMONSTRATION

TRAINING SUBJECT: FIREFIGHTING - ON SCENE

SPECIAL REQUIREMENTS:
- Simulate fire in one or more interior compartments.
- Fire pump on line
- Hoses, nozzles and SCBA
- Fireman's suit

TRAINING LECTURE OBJECTIVE:
A. Provide hands on training in firefighting response to members of an emergency squad.
B. To emphasize safety of ship, personnel and cargo.

DISCUSS:
A. Use of liquids, gas, solids, as extinguishing agents.
B. Fire ignition source.
C. Fire fuel source.
D. Fire air and oxygen supply.
E. Most effective way of containing and extinguishing a specific fire.

SHOW/DEMONSTRATE:
A. Use of ship's fire plan and cargo plan and manifests in combating a fire.
B. Establishing fire boundaries.
C. Securing power and ventilation systems.
D. Monitoring bulkheads for hot spots.

READING ASSIGNMENT:
Marine Firefighting Manual, Brady, Part II, Chapter 10

MISCELLANEOUS:
- Advise the Chief Mate and Officer of the Watch of the intended drill and location.
- Conduct evolution in realistic manner.
- Give students opportunity to use the equipment and ask questions.
- Shut down of all ventilation systems and electric supply as appropriate.
- Emphasize that improper firefighting may cause additional damage to the vessel beyond the fire alone.
- Notify Chief Mate and officer of the watch when drill has been completed.
- If conducted as competency demonstration, STCW Table A-II/1 (l) applies.

TEST QUESTIONS:

WATCHSTATION/GENERAL TRAINING REF.:
Prevent, control and fight fires on board; Table A-II/1 (l)

LECTURE TITLE: FIREFIGHTING 6

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: GYRO COMPASS

TRAINING SUBJECT: INTRODUCTION TO THE OPERATION OF THE GYRO COMPASS

SPECIAL REQUIREMENTS:
- Operational Gyro Compass with attendant repeaters

TRAINING OBJECTIVE:
A. Familiarize the cadet with the basic operation and use of the gyro and repeaters

DISCUSS/ SHOW/DEMONSTRATE:
A. Gyro Manual
B. Start UP / Shut DOWN Procedures
C. Slew
D. Limitations of Gyro
E. Adjustments - Speed and Latitutde
F. Caging
G. Lubber's Line
H. Repeater Switches
I. Synchronizing Repeaters

READING ASSIGNMENT:

MISCELLANEOUS:

TEST QUESTIONS:

WATCH STANDING/GENERAL TRAINING REF.:

LECTURE TITLE: LIFESAVING 5

TRAINING SUBJECT: MISCELLANEOUS LIFESAVING APPLIANCES

SPECIAL REQUIREMENTS:

- Immersion Suit
- Life Ring
- Lifejacket
- Smoke Float, Parachute Flares, Hand-held Flares
- Thermal Protective Aids

TRAINING LECTURE OBJECTIVE:

A. To Instruct Student in the proper use and care of personal lifesaving appliances.
B. To instruct students in the proper use of survival craft lifesaving appliances.

DISCUSS:

A. Use and care of life jackets (PFD).
B. Use and care of life rings and attached waterlights.
C. Thermal protective aids.
D. Use of flares and replacement requirements.
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:

American Merchant Seaman's Manual, Chapter 10-29
Department of Marine Transportation *SEA LAB Manual*. P. 76-81

MISCELLANEOUS:

- Inform the 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 Thermal Protective Aid located?
- What is the responsibility of the vessel to carry Immersion Suits for crew members of ocean going cargo vessels?
- When carried, where should Immersion Suits be stowed

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: LIFESAVING EQUIPMENT 7

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.
- Have bridge watch log drill.

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 8

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.
E. 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 2

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:

- T.S. *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)

LECTURE TITLE: NAVIGATION GENERAL 5

TRAINING SUBJECT: INTRODUCTION TO WEATHER OBSERVATION

SPECIAL REQUIREMENTS:

- Power to Furuno fax machine
- NOAA ship's weather forms
- Basic shipboard meteorology equipment-psychomotor, 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, psychomotor, 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 Seaman's Manual, P. 16-28, 16-30, P. 17-9, 17-17

MISCELLANEOUS:

- *Furuno Fax Machine Operation Manual*
- *Patriot State Bridge Procedures Manual*, P. 104, 244 -245 Navigating in Tropical Storm Area

TEST QUESTIONS:

- What is the reason for taking routine weather 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?

WATCH/STATION GENERAL TRAINING REF.:

Navigation at the operational level; Table A-II/1 (a)

LECTURE TITLE: NAVIGATION GENERAL 7

TRAINING SUBJECT: LOG BOOK REVIEW

SPECIAL REQUIREMENTS:

- Azimuth Record Book
- Bell Book
- Deck Log
- Noon Position Reports
- Quartermaster's Notebook

TRAINING LECTURE OBJECTIVE:

A. Prepare cadets to make proper entries in the various bridge logbooks.
B. Prepare cadet to properly complete and distribute ship's noon position report.

DISCUSS:

A. Importance of timely and accurate logbook entries.
B. Proper logging procedures.

SHOW/DEMONSTRATE:

A. Quartermaster's Notebook entries.
B. Bell Book entries.
C. Compass Observation Book entries.
D. Bearing Record Book entries.
E. Deck Log entries.

READING ASSIGNMENT:

MISCELLANEOUS:

- Ship's recent noon position report

TEST QUESTIONS:

- What is the Bell Book symbol for slow astern?
- How and why do vessels log fire and boat drills?
- What reference terminates the sea passage?

WATCH/STATION GENERAL TRAINING REF.:

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

LECTURE TITLE: PILOTING 2

TRAINING SUBJECT: PILOTING EVOLUTION ACTUAL OR SIMULATED

SPECIAL REQUIREMENTS:

- Radar Simulator or live radar when available
- Three VHF radios for communication between stations
- One radar designated for Training Division
- Alidade, charts, navigation plotting instruments, sextant, three arm protractor

TRAINING LECTURE OBJECTIVE:

A. Increase piloting and navigational skills of cadets while operating in restricted waters from sea to a selected anchorage or along a coastwise track under visual or simulated radar conditions.

DISCUSS:

A. Necessary pre-voyage planning procedures.
B. Environmental conditions and navigational hazards.
C. Special requirements and communication procedures.

SHOW/DEMONSTRATE:

A. Navigation of vessel in restricted waters
B. Special case running fixes
C. Use of horizontal and vertical sextant angles
D. Danger bearings
E. Chain of soundings

READING ASSIGNMENT:

Navigation Pub. No. 9 (1995) Articles 801-820

MISCELLANEOUS:

- May be conducted in conjunction with Radar Navigation evolution

TEST QUESTIONS:

- What was the set and drift encountered during the approach?
- Demonstrate obtaining a fix using horizontal sextant angles

WATCHSTATION/GENERAL TRAINING REF.:

Navigation at the operational level; Table A-II/1 (a)

LECTURE TITLE: RADAR

TRAINING SUBJECT: INTRODUCTION TO USE OF RADAR

SPECIAL REQUIREMENTS:
- Live radar with traffic or land

TRAINING OBJECTIVE:
A. Familiarize the cadet with the basic operation and use of Radar

DISCUSS/ SHOW/DEMONSTRATE:
A. Radar Manual
B. Start UP / Shut DOWN
C. Brilliance/Gain
D. Range Rings inc. VRM
E. Cursor / EBL
F. Sea Clutter/Rain Control
G. Display - Head UP, North Up, Course UP
H. Stabilized Vs. Un-stabilized
I. Basic Principles of System

READING ASSIGNMENT:

MISCELLANEOUS:
- Prepare student to meet Assistant Radar Observer Qualifications

TEST QUESTIONS:
- What is the STC control used for?
- What is the FTC control used for?
- What is the sweep or trace?
- What is the performance monitor?
- Which is the preferred marine radar system for collision avoidance purposes? Why?

WATCH STANDING/GENERAL TRAINING REF.:
Radar Observer 1.5, 1.6, 1.7, 1.8 & 1.9
Assistant Radar Observer
Navigator 1.14, 1.16
Navigation at the support level; Table A-II/4 (c)
Navigation at the operational level; Table A-II/1 (a)

WATCHSTATION/GENERAL TRAINING REF.:

LECTURE TITLE: INTRO TO VESSEL SAFETY

TRAINING SUBJECT: SHIPBOARD SAFETY IN OPERATIONS

SPECIAL REQUIREMENTS:

- *KENNEDY Safety Procedures Manual*
- *KENNEDY MSDS Manual*

TRAINING OBJECTIVE:

A. Familiarize the cadet with the Safety Policies and Procedures aboard the KENNEDY

DISCUSS:

A. T. S. ENERPRISE Safety Manual - Setup and how used.
B. T. S. KENNEDY MSDS Binders - How set up and used
C. T.S. KENNEDY Permitting Procedures - Which are required.
   Use samples to fill out - Do demo work problem
   Working Aloft, Working over the side, Lock out/ Tag out, (Use Chief Eng. Kit) Asbestos, Enclosed Space Entry. Any other permit operation
D. Review General Safety Rules - Long Sleeves, Hard Hats, Gloves, Safety Shoes, Respirators, Eye Protection, Hearing Protection

SHOW/DEMONSTRATE:

A. Use of T.S KENNEDY Safety Manual
B. Use of T.S. KENNEDY MSDS Binders
C. Various permits used aboard T.S. KENNEDY

READING ASSIGNMENT:

MISCELLANEOUS:

WATCHSTATION/GENERAL TRAINING REF.:

LECTURE TITLE: SEAMANSHIP 2

TRAINING SUBJECT: SPLICING FIBER ROPE

SPECIAL REQUIREMENTS:

- Six feet of three inch manila line per student.
- Fid, sail twine, sail needle, masking tape, thimble and knife.

TRAINING LECTURE OBJECTIVE:

A. Instruct the student in the procedures for making an eye splice and a short splice in fiber rope.

DISCUSS:

A. Tools required
B. Whippings
C. Tucks
D. Safety factors of finished splices
E. Safety precautions
F. Thimbles
G. Tapers

SHOW/DEMONSTRATE:

A. Eye splice
B. Short splice
C. Back splice

READING ASSIGNMENT:

American Merchant Seaman's Manual, P. 1-28 to 1-31
Modern Seamanship, Knight, P. 617- 619

MISCELLANEOUS:

TEST QUESTIONS:

- What percentage of the strength of a line is lost in the splice?
- Which of the following is stronger, the short splice or the long splice?
- What is a cant line?
- Which of the lines shown is a right lay rope?
- What is a cable laid rope?
- What is a plaited rope?

WATCHSTATION/GENERAL TRAINING REF.:

LECTURE TITLE: SEAMANSHIP 3

TRAINING SUBJECT: DOCKING AND MOORING WITH FIBER LINES & WIRE ROPE

SPECIAL REQUIREMENTS:

- Heaving lines
- Mooring lines and rope stoppers
- Block and tackles

TRAINING LECTURE OBJECTIVE:

A. Teach students proper line handling and mooring procedures.
B. Instill in students a need for constant safety awareness when working with mooring lines.

DISCUSS:

A. Mooring line commands
B. Names and positions of mooring lines
C. How lines are faked, coiled and fleshed
D. Safety procedures- Hospital side and safe side of a synthetic mooring line under tension
E. Winches and capstans
F. Mooring lines singled up, bights singled up, doubled up
G. Dipping the eye
H. Elongation and slipping

SHOW/DEMONSTRATE:

A. Passing types of rope stoppers
B. Taking up mooring lines with winches
C. Making lines fast to bitts
D. Proper way to throw heaving lines
E. Taking up a mooring line with a tackle
F. Methods of letting go safely

READING ASSIGNMENT:

American Merchant Sea Manual, Chapter 4, P. 9-17

MISCELLANEOUS:

TEST QUESTIONS:

- Where is the hospital side of a nylon line?
- What is a backhand rope?
- What is meant by the lay of a rope?
- What is a cantline? A cable laid rope? A plaited rope?
- What is hard laid rope?

WATCH/STATION GENERAL TRAINING REF.:

LECTURE TITLE: SEAMANSHIP 4

TRAINING SUBJECT: BLOCKS AND TACKLES

SPECIAL REQUIREMENTS:

- Rope block
- Wire rope block
- Snatch block.
- Purchases: gun, luff, 2-fold, double luff, 3-fold
- Bosun Chair and Staging

TRAINING LECTURE OBJECTIVE:

A. To review with students the use of blocks and tackles
B. Instruct in how to rig a bosun chair
C. Instruct in how to rig staging

DISCUSS:

A. Review Blocks and tackle
B. Proper method of rigging a bosun chair
C. Where bosun chair can be used
D. Safety of using bosun chair
E. Proper method to rig staging
F. Where staging can be used
G. Safety precautions with staging

SHOW/DEMONSTRATE:

A. Rigging of bosun chair
B. Rigging of Staging

READING ASSIGNMENT:

American Merchant Seaman's Manual -Chapter 3
Instructor handout

MISCELLANEOUS:

TEST QUESTIONS:

WATCH/STATION GENERAL TRAINING REF.:

Boatswain Mate of the Watch
Seaman 1.6

LECTURE TITLE: SEXTANT 3-1

TRAINING SUBJECT: Marine Sextant

SPECIAL REQUIREMENTS:
- Functioning sextants for class
- Sextant Adjustment Handouts
- Adjustment tools

TRAINING OBJECTIVE:
A. Familiarize the cadet with the proper care and use of the Marine Sextant
B. Introduce cadet on proper methods of correcting and use of sextant

DISCUSS:
A. Sextant errors, adjustable and non-adjustable
B. Care and safe use of Sextant
C. Use of sextant for vertical and horizontal measurements
D. Proper reading of Micrometer drum

SHOW/DEMONSTRATE:
A. Measurement of Sun's altitude
B. Adjustment of sextant
C. Taking Horizontal angles

READING ASSIGNMENT:
Navigation Pub No. 9 (1995) Articles 1600-1615

MISCELLANEOUS:
Assign Student Sextants for the watch

WATCHSTATION/GENERAL TRAINING REF.:
Navigation at the operational level; Table A-II/1 (a)

LECTURE TITLE: VOYAGE PLANNING

TRAINING SUBJECT: Requirements for Voyage Planning

SPECIAL REQUIREMENTS:
- KENNEDY Vessel Bridge Procedures Manual
- Chart Catalogs

TRAINING OBJECTIVE:
A. Familiarize the cadet with the proper process of Voyage Planning, using the ports and routes of the Sea Term.

DISCUSS:
A. IMO Requirements for Voyage Planning
B. Four parts of Voyage Planning

SHOW/DEMONSTRATE:
A. Access to documents needed for Voyage Planning

READING ASSIGNMENT:

MISCELLANEOUS:
Assign Student Projects

WATCHSTATION/GENERAL TRAINING REF.:

LECTURE TITLE: CELESTIAL NAVIGATION

TRAINING SUBJECT: SUNLINE/AZIMUTH

SPECIAL REQUIREMENTS:

- Nautical almanac, sextant, chronometer, Navigation Pub. No. 229 and plotting sheet for appropriate latitude.
- Navigation plotting equipment, azimuth circle

TRAINING LECTURE OBJECTIVE:

A. To introduce 3/C Cadets in obtaining a celestial observation of the sun.
B. To introduce students to working out a sunline and azimuth and making appropriate entries in Cadet Navigation Journal and compass record book.

DISCUSS:

A. Use of Nautical Almanac
B. Use of sextant
C. Use of plotting equipment
D. Use and care of azimuth circle
E. Sight reduction introduction

SHOW/DEMONSTRATE:

A. Instructor to introduce aspects of sunline observation and reduction including azimuth.

READING ASSIGNMENT:

A.

MISCELLANEOUS:

Lecture profiles:

- Use of sextant
- Use of Navigation Pub. No. 229
- Use of Nautical almanac

TEST QUESTIONS:

Observe the sun and answer the following questions:

- What was the Hc?
- What was the true azimuth?
- What was the intercept?
- What was the true bearing of the sun at that time?

WATCH/STATION GENERAL REF:

-

LECTURE TITLE: ECDIS

TRAINING SUBJECT: ELECTRONIC CHART DISPLAY AND INFORMATION SYSTEMS

SPECIAL REQUIREMENTS:

- Live or simulated Electronic Chart Display and Information System (ECDIS)

TRAINING LECTURE OBJECTIVE:

A. Familiarize students with the operating procedures and capabilities of the ECDIS system installed aboard the USTS KENNEDY.

DISCUSS:

A. System Configuration
B. System Capabilities
C. System sensor inputs
D. System Errors and Limitations

SHOW/DEMONSTRATE:

A. Start up procedures
B. Chart selection and scale
C. Warnings
D. Environmental selections

READING ASSIGNMENT:

Navigation Pub. No. 9 (1995), Articles 1400-1408

MISCELLANEOUS:

TEST QUESTIONS:

•

WATCHSTATION/GENERAL TRAINING REF.:

LECTURE TITLE: RIGGING 1

TRAINING SUBJECT: PRACTICAL SEAMANSHIP TRAINING
Pilot ladder, Boatswain's Chair, Staging, Gin Pole & Shear legs

SPECIAL REQUIREMENTS:
- Pilot ladder and grab-lines and illumination requirements
- Boatswain's chair and gantline
- Staging
- 2 x 50' Gantlines
- 1 x 15' piece 2" diameter steel pipe
- 3 x 10' pieces 4x4 wood
- Students to wear hard hats and safety shoes

TRAINING LECTURE OBJECTIVE:
A. To train students in the proper and safe rigging of the above units.

DISCUSS:
A. Reasons for rigging this equipment.
B. Safety precautions to be observed.

SHOW/DEMONSTRATE:
Rigging of:
- Pilot Ladder
- Boatswain's Chair
- Staging
- Gin Pole
- Shear legs

READING ASSIGNMENT:
American Merchant Seaman's Manual, Chapter 4

MISCELLANEOUS:

TEST QUESTIONS:

WATCHSTATION/GENERAL TRAINING REF.:
Boatswain Mate of the Watch 1.2
Seaman 1.3, 1.4,
Monitor the loading, stowage etc. of cargo; Table A-II/1 (i)
Respond to emergencies; Table A-II/1 (d)

LECTURE TITLE: CARGO GEAR

TRAINING SUBJECT: PRACTICAL SEAMANSHIP TRAINING
Hydraulic and Conventional Cargo Gear

SPECIAL REQUIREMENTS:
- Access to ships gear
- Load charts for ships gear
- Slings, nets, hooks
- Cargo Hatches
-
-
- Students to wear hard hats and safety shoes

TRAINING LECTURE OBJECTIVE:
A. To train students in the proper and safe operation of the types of cargo gear and associated equipment on the training ship.

DISCUSS:
A. Different types of gear (pros and cons).
B. Safety precautions to be observed.

SHOW/DEMONSTRATE:
Rigging of:
- Barrel
- Pipe
- Bulk
- Married Fall
-

READING ASSIGNMENT:
American Merchant Seaman's Manual, Chapter 5

MISCELLANEOUS:

TEST QUESTIONS:

LECTURE TITLE: CHART CORRECTIONS

TRAINING SUBJECT: PRACTICAL NAVIGATION TRAINING
Chart correction, STCW prep

SPECIAL REQUIREMENTS:
- Charts (corrected and uncorrected).
- Notice to mariners
- Local notice to mariners
- Broadcast notice to mariners
- Charts to correct
- Summary of corrections
-

TRAINING LECTURE OBJECTIVE:
A. To instruct students in proper correction of charts and prepare them for the STCW qual.

DISCUSS:
A. Notice to mariners/chart correlation.
B. Chart notations.
C. STCW requirements

SHOW/DEMONSTRATE:
Correction of:
- Buoys
- Depth / Obstruction
- Lights
- Notes
-

READING ASSIGNMENT:
Dutton article 3604, Bowditch articles 346, 418,419

MISCELLANEOUS:

TEST QUESTIONS:

LECTURE TITLE: PUBLICATION CORRECTION

TRAINING SUBJECT: PRACTICAL NAVIGATION TRAINING
Correction of various pubs, STCW preparation

SPECIAL REQUIREMENTS:
- Notice to Mariners
- Summary of Corrections
- Coast Pilot
- Light List
- Sailing Directions
- List of Lights
-

TRAINING LECTURE OBJECTIVE:
A. To train students to properly correct various publications and prepare for the STCW qual.

DISCUSS:
A. Publication / resource to correct.
B. Proper notation / correction.

SHOW/DEMONSTRATE:
Correction of:
- Coast Pilot
- Light List
- List of Lights
- Sailing Directions
-

READING ASSIGNMENT:
Dutton article 3604, Bowditch articles 404,406, 418, 419

MISCELLANEOUS:

TEST QUESTIONS:

LECTURE TITLE: WATCH STANDING IV

TRAINING SUBJECT: MARINE MAMMAL REPORTING

SPECIAL REQUIREMENTS:

- PC and projector
- Collision avoidance with North Atlantic Right Whales power point

TRAINING LECTURE OBJECTIVE:

A. To familiarize cadets with identifying, reporting and the associated hazards with North Atlantic Right Whales

DISCUSS:

A. How to identify
B. How to report a sighting
C. Rules of navigation associated with Right Whales
D. The protection of Right Whales
E. Major populated areas

SHOW/DEMONSTRATE:

A. Photos of Right Whales
B. Areas of population
C. NOAA fisheries placard for MSR reporting

READING ASSIGNMENT:

MISCELLANEOUS:

Voyage Planning Precautions

TEST QUESTIONS:

-
-

WATCHSTATION/GENERAL TRAINING REF:

Preface

Bridge Procedures Manual was written and edited by Captain Joseph S. Murphy, II in consort with contributing members from the Department of Marine Transportation at the Massachusetts Maritime Academy. These procedures are intended for instructional purposes only during the sea term aboard the academy training vessel and as a bridge procedure training guide in the bridge training simulator at the Massachusetts Maritime Academy.

Principle references consulted include publications of the U.S. Coast Guard, United States Department of Transportation, Maritime Administration, International Maritime Organization, International Chamber of Shipping, as well as published and unpublished data, and information from the files of the Massachusetts Maritime Academy.

An Instructional Guide For Training Purposes Only:
It is impossible to prescribe procedures or provide regulations which will cover every situation. The *Bridge Procedures Manual* are issued for the guidance of the students and are not intended in any way to restrict the Master's authority or obligation to conduct himself, in his/her judgment, in the best interest of the training ship or Massachusetts Maritime Academy. This manual has been designed to address points not covered elsewhere and to provide those onboard, responsible for conducting daily routine operations as well as emergency responses, with background information that may not otherwise be available to them. It in no way replaces or supersedes any of the equipment manuals provided onboard but should be used in conjunction with them. Care has been taken in the preparation of this manual to avoid contradictory information. In the event that discrepancies are found between the advice provided herein and elsewhere, the student should be guided by the official manuals, but shall promptly draw such differences to the attention of the Master who will effect such changes as the circumstances of the particular case admit.

If the procedures described in the *Bridge Procedures Manual* are to produce uniformity in daily routines and understandable procedures, they must be followed in detail, unless the circumstances of the particular case make alternate procedures advisable.

Deck Log Book Procedures

1. INTRODUCTION

A. The Deck Logbook is the legal and permanent record of the ship's life and operation. Because of the many ramifications involved, it is absolutely essential that an accurate, complete and proper logbook be kept. The importance of the Deck Logbook cannot be sufficiently emphasized, as in the case of any proceedings, legal or otherwise, it is the only record that will be accepted as evidence.

B. It is required that all Officers responsible for logbook entries (especially newly assigned Officers) review these instructions. The Master is responsible for proper logbook maintenance and should make a concentrated effort to see that these instructions are followed. How well you write the logbook directly reflects on your personal degree of professionalism.

C. The Deck Logbook is an official record of the vessel and a confidential document. The confidentiality of this logbook will NOT be compromised and NO person will be allowed access to the logbook or to any copies of same, while in the custody of the vessel, for any reason, including, but not limited to such purposes as examination, note-taking, photocopying, etc., without the express authorization of the Master.

2. GENERAL

A. Exceptional care must be used to write the logbook legibly, using proper nautical terms. All entries must be made in non-erasable ink, using a fine or medium point ball pen. All entries will be made in black ink except Arrival, Departure, S. B. E., F.W.E., Drills and Inspections which are to be entered in red ink and underlined. Entries should be neat and as compact as possible, consistent with a complete and comprehensive record of all activities onboard. It is preferred that all entries be printed rather than written in long hand and that the size of all letters not be larger than one line space.

B. Erasures in the Deck Logbook will never be made, nor pages removed from the logbook because of errors. Where an error is made, draw a single line through the error, initial same, and continue with the correct entry. Alterations on the left hand side of the page may be made by drawing a line through the error, initialing same, and inserting the correct data above.

C. Slips of paper will not be attached to the Deck Logbook under any circumstances. Rubber stamps will not be ordered nor used for the Deck Logbook without prior authorization from the Master.

D. Each page of this Deck Logbook is in two (2) copies consisting of a white original copy for retention onboard the vessel and a yellow duplicate copy for submission to the Academy. The white original pages, comprising every other page in this Deck Logbook, are perforated. When all entries for a day are completed, checked, and signed by the Master and Chief Officer, in chronological order, the white perforated original pages will be removed and inserted into a booklet which will be retained onboard the vessel in the vessel's file. The yellow duplicate copy will be retained in the logbook with covers intact and held for delivery to the Academy Administration at the end of the voyage.

E. The Logbook is to be carefully written up by the Officer of the Watch (OOW) every four (4) hours at sea and/or in-port. Officers making single entries shall sign their names and rank after each entry. The officer standing watch must sign his/her name and rank at the end of each watch. Initials are not to be used except when lining out errors as above descried.

F. The Logbook, when completed and its correctness certified by the officer of each watch, and signed by the Chief Officer, shall be placed before the Master for his/her inspection each day at 1200 hours and he/she is to affix his/her signature thereto as proof of his/her having read same and having ascertained that there are no inaccurate or omissions and that he/she agrees with the entries.

G. The Logbook shall be kept continuously day by day from the beginning of the voyage to the end and all times are to be recorded on a 24 hour basis.

H. At sea, the Logbook shall be kept by watches. All appropriate spaces on the left-hand side of the page shall be filled in. On the right-hand side of the page, at sea, watches shall be headed-up as follows: 0000-0400, 0400-0800, 0800-1200, etc. The main intent of the Deck Logbook at sea is to keep a record of the ship's movements and activities so that her passage can be accurately plotted, the weather experienced noted, and all important events recorded. It follows that all navigational data entered must be sufficiently complete and in such form which will facilitate plotting, at any time, the ship's position (dead reckoning) at sea or at anchor or on pilot passage.

3. PARTICULARS *(J. P. GRUNDY PRINTERS, INC., FORM NO. D81)*

TOP OF THE LOG SHEET

A. Heading

(1) **NAME:** Enter *T. S. KENNEDY*
(2) **FROM/TO:** Enter the passage or Port/Pier location
(3) **DATE:** Enter the day, date, and zone description (See: Time Zones Table)
(4) **VOYAGE NO. :** Voyage number-Year (Sample: 001-98).

LEFT-HAND SIDE OF LOG SHEET

B. Columnar Entries

(1) **COURSE:** Courses are entered in degrees - Gyro course, gyro compass error as determined by azimuth, amplitude or range, standard compass course, local variation, heading deviation.
(2) **WIND:** Direction - True wind direction entered in point of the compass; Force - Beaufort force. (See: Beaufort Table)
(3) **BAROMETER:** Enter reading in millibars
(4) **TEMPERATURE:** Air: Enter outside air temperature, dry/wet bulb readings in degrees Fahrenheit. Sea: Enter the sea water injection temperature in degrees Fahrenheit which is obtained from the engine-room at the end of each four (4) watch.
(5) **R. P. M. :** Revolutions per minute of the engines; average R. P. M. is obtained from the engine-room at the end of each four (4) watch.
(6) **LOOK-OUTS, DETEX OR GANGWAY WATCH:** Enter last names of personnel on wheel or serving as look-outs; the names of Detex watchmen and/or gangway watchmen shall also be entered in these spaces as necessary.
(7) **DAILY NOON SUMMARY:** Enter the Noon Position Information daily at sea. Data will be transcribed from the Navigator's and Chief Engineer's Noon Slips.
(8) **SUMMARY PASSAGE:** Enter the passage data which will be transcribed from the Navigator's and Chief Engineer's Passage Reports.
(9) **FUEL/WATER:** Enter the arrival, departure, shifting and/or received fuel oil and water data.
(10) **DRAFTS:** The forward, aft, and mean drafts shall be entered as follows:
    (a) On arrival and departure from any place.
    (b) Daily in-port at 0800, 1600 and 2400 hours.
    (c) Before and after taking bunkers, fresh water, ballast or embarking/disembarking large numbers of personnel. Always note the density of the water in which the vessel is floating, the freshwater allowance correction or list.

3. PARTICULARS

LEFT-HAND SIDE OF LOG SHEET

B. Columnar Entries

(11) **SEA WATCHES:** Enter the time and date that sea watches are broken and/or set for the officer's and crew.

(12) **SAILING/SHIFTING BOARD:** Enter the time and date that the Sailing/Shifting Board is posted and/or changed.

RIGHT-HAND SIDE OF LOG SHEET

A. Remarks at Sea and/or in-port, where applicable.

(1) Each watch shall begin with the time of day, Relieving Officer's name, the chart in use, a brief description of the weather, sea and swell conditions, vessel's riding status, the speed by nozzles and engine revolutions, course being steered and made good and the steering system in use and its operating mode as well as the active radar/ARPA systems.

(2) Any changes in course shall be entered with the time of such changes.

(3) Any changes in speed shall be entered with the time of such changes.

(4) Any changes in vessel status or equipment shall be entered with the time of such changes.

(5) Watch Condition Status which will be set and changed by the Master or watch officer consistent with the Standing Orders as the circumstances of the case admit in order to take proper and effective action to avoid collision. (Red)

(6) Precautions taken during reduced visibility. (Red)

(7) The name, in full, of every pilot assisting the Master as well as the time of boarding or departing, and the time of his/her taking or giving up pilotage duties.

(8) Principal navigational aids used, with true bearings and distance of any land or lights in sight.

(9) Any important bow, beam, and cross bearings taken.

(10) When and what soundings are obtained, including sounding over various depth curves.

(11) Time zone changes, International Date Line and Equator crossings are to be noted. (Red)

(12) Any changes in weather shall be entered with the time of such changes.

(13) Sea - True direction and height (state) of sea conditions

(14) Unusual changes in sea temperature particularly when associated with passage through ocean currents.

(15) When vessel is laboring, pitching, straining, rolling or taking water, the word “spray” is never to be used. The vessel is considered to be either taking seas or not taking seas. Describe all measures taken to ease vessel's motion and secure during heavy weather.

(16) Diversions and detentions - reason, time expended, and miles deviated. (Red)

(17) If radar is not working and repairs are not possible. This entry must be signed by the Master, Chief Officer, and Second Officer. (Red)

(18) Any alleged accidents, casualties, fires, or unusual circumstances or occurrences that may affect the safety of the vessel or cargo, or welfare of the crew and environment. In case of grounding, collision, or other marine disaster, a very careful and complete record of all events leading up to, during and immediately following shall be entered in the Logbook, including the name of the officer of the watch, and the names and stations of the men on the look-out and at the helm. In these cases, entries in the Logbook shall receive early and most careful consideration of the Master and Chief Officer, in consultation with officer writing the Logbook. All entries should be confined to statements of fact and any assistance given to, or received from, an outside party should be recorded in detail. (Red)

(19) Any births or deaths that may occur among the cadets or crew and, in the latter case, the time and place of burial and the disposition of personal effects. (Red)

(20) Details of ballasting and de-ballasting and/or the pumping of bilges or slop tanks noting times, quantity of liquid and tanks involved.

3. PARTICULARS

B. Remarks on Arrivals, Sailing and Shifts.

(1) Time anchors are cleared and ready for immediate use.

(2) Time of S.B.E. or F.W.E. - first bell and time and position of arrival as contained in the Bell Book. Tenth of an hour or six (6) minute time increments will be used to expedite passage report requirements. (Red)

(3) The name, in full, of every pilot assisting the Master as well as the time of boarding or departing, and the time of his/her taking or giving up pilotage duties.

(4) After Pilot is onboard and at the con, make following entry as appropriate: “Various courses and speeds as per Pilot's orders while proceeding to berth/sea as noted in the bell book. “

(5) Names of principal lighthouses, jetties and landmarks, etc. passed.

(6) If vessel anchors, enter time let go, port or starboard anchor, amount of chain, fathoms of water, and true bearings of the anchorage. Enter time began heaving and anchors aweigh. (Red)

(7) Time watertight integrity is changed. The time side ports or hatches are opened/closed.

(8) Names and times tugs are alongside and location alongside the vessel.

(9) Time entering locks, secure in locks, and clear of locks.

(10) The time first line to dock, time alongside, and time secure. (Red)

(11) Time finished with engines and give conditions. (Red)

(12) Times Pilot and tugs away.

(13) Time singled-up, first or last line, and clear of dock or all secure. (Red)

(14) Time and place of departure. (Red)

C. Remarks in-port.

(1) The first remark at the start of each day, should state the status of the vessel and be entered at the top of the lined area of the "Remarks" section, such as: (See Deck Watch Entry in-port). Subsequent watches may indicate "moored as before" supplemented by the following comments.

(2) Summary of weather at sunrise and sunset (supplemented by appropriate entries in the "wind", "barometer", and "thermometer" columns.

(3) Times of use of deck, cargo, gangway and special lights.

(4) All Detex watchmen's names, times of duty, and location.

(5) Exact time barges arrive and leave the vessel, whether loaded or empty. Also, names of tugs towing, location alongside, and work performed i.e. bunkering operations.

(6) Details of bunkering operations including the time and location operations were conducted, type and net barrels of oil received, vendor's name and method of conveyance (barge/pipeline).

(7) Any alleged injuries to personnel other than crew members. These entries should be limited to statement of fact. (Red)

(8) When and for what purpose boats leave the vessel and return, identifying same with the boat number, coxswain or person in charge and the number of persons aboard.

(9) The times and names of any officials, surveyors, or inspectors aboard and purpose and result of the visit, such as:

(a) USCG Inspectors
(b) ABS Surveyors
(c) Board Underwriter Inspectors
(d) Customs, Immigration, Personnel
(e) Quarantine & Other Officials
(f) MARAD Officials
(g) Police
(h) Private Surveyors
(i) Shipyard Repair
(j) Others

(10) Times of opening and closing side ports and hatches, identifying same. (Red)

(11) Times started and finished required USCG inspections and drills.

(12) If radar is not working and repairs are not possible. This entry must be signed by the Master, Chief Officer, and Second Officer. (Red)

(13) The exact times when passengers/observers are embarked or landed.

(14) Anything of interest that occurs in or around the vessel shall be entered in the Logbook.

(15) The approximate number of Cadet Corps Sections aboard.

(16) All times involving cargo or stores activities to be entered to the minute.

(17) Times of starting and ending training evolutions as well as the instructor in charge.

(18) Times of starting and ending of repair activities including the actual work undertaken, the repair vendor's name and the approximate number of laborers involved.

(19) In cases of unscheduled stoppage of the any of the above operations, enter times stopped and resumed operations and reason for stoppage such as lost ship's power, rain, equipment failure, etc. (Red)

(20) A statement to the effect that the vessel is properly secured and that the vessel has been carefully inspected and is seaworthy and secure for sea in all respects prior to sailing. This entry will be signed by the Master. (Red)

D. Remarks in-port during Dry-dock Periods.

(1) Time entered dry dock. (forefoot over the sill)
(2) Time the vessel rests on keel blocks.
(3) Time vessel is dry.
(4) General condition, observed damage, cleaning and paint of the bottom.
(5) Time began flooding.
(6) Time the vessel is afloat.
(7) Time clear of the dry-dock. (Forefoot clear of the sill)

E. Inspections, Tests, Searches and Drills. (All entries should be made in red ink.)

(1) Fire, emergency and boat drills.
(2) Launching of lifeboats and exercising the crew under oars.
(3) Inspection of lifeboat equipment.
(4) Change-over of lifeboat fuel.
(5) Inspection and service of liferaft equipment.
(6) Inspection of exposure suits.
(7) Inspection and service of firefighting equipment.
(8) Stripping and overhaul of lifeboats.
(9) Test of lifeboat winch motor controllers, control, master disconnect and limit switches.
(10) Test of line-throwing appliance.
(11) Test of EPIRB.
(12) Test of emergency lighting and power systems including storage batteries.
(13) Pre-Arrival tests and inspections.
(14) Pre-Departure tests and inspections.
(15) Emergency steering drills.
(16) Tests and inspections of bridge equipment daily at 1200 zone time:
    (a) Test the ship's whistle.
    (b) Test the General Alarm Bells.
    (c) Test all means of vessel internal control communications.
    (d) Set and synchronize ship's clocks with the chronometers.
    (e) Test bridge and engine-room telegraphs and revolution indicators.
    (f) Test the steering system in all modes of operation and the change-over procedure.
    (g) Test radio-room auto-alarm.
    (h) Test watertight and flame screen doors.
    (i) Test hazard monitoring equipment including change over procedures.
    (j) Test the operation of the radar/ARPA systems.
    (k) Test the operation of speed/distance recorder.
    (l) Test the navigation and emergency lights.
    (m) Test the echo sounder and depth recorder.
    (n) Ventilation of cargo holds and living spaces.
(17) Master's sanitary inspections conducted.
(18) Inspection of shell plate and wheel after docking and shifts.
(19) Inspections prior to bunkering operation.
(20) Inspection of cargo gear.
(21) Inspection of cargo gear prior to loading, discharge or cadet training.
(22) Inspection of cargo holds prior to loading.
(23) Inspections of deck cargo lashings prior to sailing.

(24) Inspections of dangerous cargo, deck cargo, boat and container lashings made daily by the Chief Officer.
(25) Stowaway search. This entry to be signed by the Master and Department Heads. (Red)
(26) Search for contraband prior to arrival and/or departure. This entry to be signed by the Master and Department Heads. (Red)

4. TERMINOLOGY

A. At Sea

The term *"Routine Inspections"* will include:

(1) That the ventilation of training, storage and living spaces has been attended to.
(2) Training and storage spaces secure.
(3) Ventilators properly trimmed.
(4) Radio antennas inspected by Radio Officer.
(5) Lifeboats, launches and davits, side ports, cargo gear, running rigging, deadlights, and watertight doors are properly secured.
(6) Engineer on watch will be notified when temperature falls to 34° F and again when it is 32° F.
(7) Running lights, internal monitoring and alarm systems are operating in proper working condition.

B. Inport

The term *"Routine Inspections"* will include:

(1) When inflammable cargo is being handled, sufficient lengths of fire hose are available and connected to reach vicinity.
(2) Mooring lines are periodically tended.
(3) Deck and passageways are properly lighted.
(4) Gangways are properly rigged, lighted and manned.
(5) Red warning lights are placed on stern.
(6) Detex watchmen know and are attentive to their duties.
(7) Engineer on watch will be notified when temperature falls to 34° F and again when it is 32° F.

5. ANCILLARY DOCUMENTS

A. Official Logbook - must be kept in strict conformity with rules and regulations of the U.S. Coast Guard. Refer to Actions to be Logged (46 CFR 97.35-5).

B. Chronometer Rate Book, Bell Book, Compass Observation Book, Anchor or Bearing Record Book, Navigation Logbook, Radiotelephone Log and Radar Log - these are to be kept with in accordance with the detailed instruction provided on the inside cover of each individual record book. Every attention and care should be exercised so as to show a fair and faithful record of the performance and efficiency of the equipment or the operation being recorded. They must never be removed from the vessel.

C. Tank and Bilge Soundings Book - the books supplied for the purpose of recording the soundings of wells and ballast tanks must be carefully kept. Enter in the Deck Logbook daily at 0800 hours.

D. Master's Voyage Report - Passage Summary and Port Time Information is to be entered on the master's Voyage Report by the navigator and it is not necessary to make these entries on the daily logbook page.

6. NOTES

A. The vessel is never to be left without an Officer of the Watch (OOW). At sea, the Officer of the Watch (OOW) is to keep his/her watch on the Bridge and, when on duty, is not to allow his/her attention to be diverted from his/her work. In case he/she believes the vessel to be running into danger, it is his/her duty to act at once upon his/her own judgment and take the necessary precautionary measures; he/she will, however, immediately pass the word to call the Master. No Officer, on any occasion is to leave the bridge during the watch nor until properly relieved of duty.

B. When the vessel is securely moored in a port, an officer must be assigned for duty who will satisfy himself that everything is in order, Detex watchmen at their posts and vigilant that all precautions against fire have been taken.

C. When bunkering, all regulations must be observed, i. e., red flag or light displayed, scuppers plugged, bilge soundings taken every half-hour and one hour after finish, pass the word that “The smoking lamp is out throughout the vessel during bunkering operations” and appropriate entries made in the Deck Logbook.

D. Immediate steps will be taken to confine and clean oil spills. The U.S. Coast Guard and/or Local Officials also will be advised in accordance with their instructions (1-800-421-8802). An entry will be made in the Deck Logbook regarding the notification of all parties concerned, giving details pertaining to the confinement and clean-up, including the name of the Contractor employed.

E. Entries must conform to the requirements of the U.S. Coast Guard and to applicable master's circulars and memorandums. Obviously, it is not possible to list here all the incidents which should be logged. Refer to the Sample Logbook Entries for additional guidance.

F. At the end of the voyage, the properly completed Deck Logbook, consisting of the yellow duplicate sheets retained in the logbook with covers intact, which has been signed by the Master and Chief Officer, will be forwarded promptly to the Massachusetts Maritime Academy Administration.

OFFICIAL LOGBOOK: ACTIONS REQUIRED TO BE LOGGED

CFR Reference: 46 CFR 97.35-5

(a) The actions and observations noted in this section shall be entered in the official logbook. This section contains no requirements which are not made in other portions of this sub-chapter, the items being merely grouped together for convenience.

(1) Fire and Boat Drills. Weekly. See 46 CFR 97.15-35

(2) Steering Gear, Whistle, and Means of Communication. Prior to departure. See 46 CFR 97.15-3, 33 CFR 164.25

(3) Drafts and Load Line Markings. Prior to leaving port, ocean, coastwise, and Great Lakes services only. See 46 CFR 97.15-5.

(4) Hatches and other openings. All openings and closings, or leaving port without closing. Except vessels on protected waters. See 46 CFR 97.15-20.

(5) Line Throwing Appliances. Once every 3 months. See 46 CFR 97.15-25.

(6) Emergency Lighting and Power Systems. Weekly and semi-annually. See 46 CFR 97.15-30.

(7) Electric Power Operated Lifeboat Winches. Once every 3 months. See 46 CFR 97.15-40.

(8) Fuel oil data: Upon receipt of fuel oil onboard. See 46 CFR 97.15-55.

(9) Cargo gear inspections: At least once a month. See 46 CFR 91.37-70 of this subchapter.

(a) On vessels where an Official Logbook is required by R.S. 4290 (46 U.S.C. 201), all items relative to the crew and passengers, as well as with respect to any casualties which may occur, shall be entered in the Official Logbook as required by this law.

SAMPLE LOGBOOK ENTRIES FOR SAFETY EQUIPMENT

LIFEBOATS - LIFEBOATS DRILLS
CFR Reference: 46 CFR 97.15-35, 46 CFR 97.15-45, 46 CFR 97.15-50; 46 CFR 97.15-30; Weekly
At 1400 hours, in position *Lat. 40°-56' N, Long. 052°-20' W* conducted emergency drills. Fire signals sounded, engine on stand-by cadets and crew mustered and instructed in their duties. Emergency squad mustered and exercised in their duties. Five (5) hoses led out and good pressure applied. Watertight and firescreen doors, emergency lighting and power systems inspected and operated. 1430 hours, fire drill secured. hours, abandon ship drill. 1431 Signals sounded. Cadets and crew mustered at their stations wearing life jackets and instructed in their duties. Six (6) lifeboats lowered to the embarkation deck. Diesel engines in lifeboats No. 1, 2, & 5 operated for five (5) minutes in the ahead and astern modes. Flemming gear in lifeboat No. 6 exercised. Radio receiver operated with artificial aerial. Winches, switches and drains in good order. 1445 hours boats secure, secured from drill. All equipment in good working order. Length of drill Forty-five (45) minutes.

LIFEBOATS - LIFEBOAT EQUIPMENT INSPECTION
CFR Reference: 46 CFR 97.15-35 (b) (9); Monthly
At *1500* hours, in position *Lat. 40°-21' N, Long. 035°-58' W* examined all port and starboard lifeboat equipment this date. All found to be complete and in good working order and condition.

SAMPLE LOGBOOK ENTRIES FOR SAFETY EQUIPMENT

LIFEBOATS - LAUNCHING & EXERCISE AT OARS
CFR Reference: 46 CFR 97.15-35 (b) (6); Quarterly (Every 3 Months)
At *0900* hours, in position *Lat. 45°-26' N, Long. 065°-23' W* lifeboat/lifeboats lowered to the water and released. Releasing gear, blocks, sheaves, falls and all moving parts inspected and greased. Lifeboat engine/Flemming gear operated ahead and astern. Crew exercised at oars. *0928* Lifeboat/lifeboats secured and crew dismissed. All equipment in good working order.

ELECTRIC POWER OPERATED LIFEBOAT WINCH INSPECTION
CFR Reference: 46 CFR 97.15-40; Quarterly (Every 3 Months)
At *1600* hours, in position *Lat. 35°-21' N, Long. 055°-58' W* lifeboat winch motor controllers, control switches, master disconnect switches and limit switches were opened and found to be dry and in good working order.

LIFEBOATS - LIFEBOAT EQUIPMENT INSPECTION
CFR Reference: 46 CFR 97.15-40; Annually (Yearly)
At *1500* hours, in position *Lat. 40°-21' N, Long. 035°-58' W* all lifeboat (s), rescue boat (s) were stripped cleaned and thoroughly overhauled. Fuel tanks of all motor-propelled lifeboats were emptied and the fuel changed. Examined all lifeboat equipment this date. All found to be complete and in good working order and condition.

EMERGENCY POSITION INDICATING RADIOBEACON (EPIRB)
CFR Reference: 46 CFR 97.15-65; Monthly
At *1500* hours, in position *Lat. 40°-21' N, Long. 035°-58' W* examined and tested emergency position indicating radio beacon. Equipment was found to be in good working order.

LINE THROWING APPLIANCES
CFR Reference: 46 CFR 97.15-25; Quarterly (Every 3 Months)
At *1500* hours, in position *Lat. 40°-21' N, Long. 035°-58' W* demonstrated and tested impulse-projected rocket type, line throwing appliance. *Test rocket No. RQ/5671* with flexible line of proper size and length, suitably faked or laid out was used. All equipment was found to be in good working order.

EMERGENCY STEERING DRILL
CFR Reference: 33 CFR 164.25; Quarterly (Every 3 Months)
At *1500* hours, in position *Lat. 40°-21' N, Long. 035°-58' W* conducted an emergency steering drill. Operated and inspected main steering within the steering gear compartment, tested means of communication between the Navigation Bridge and steering compartment, operated alternative power supply for the steering gear. (U.S. Waters only)

EMERGENCY LIGHTING AND POWER SYSTEMS
CFR Reference: 46 CFR 97.15-30 (a); Weekly
At *1500* hours, in position *Lat. 40°-21' N, Long. 035°-58' W* tested emergency storage batteries and emergency generator. Emergency diesel generator was operated under full load conditions. Observed steady state temperatures and electrical load characteristics. All equipment found to be in good working order.

EMERGENCY LIGHTING AND POWER SYSTEMS
CFR Reference: 46 CFR 97.15-30 (b); Monthly
At *1500* hours, in position *Lat. 40°-21' N, Long. 035°-58' W* tested emergency storage batteries and emergency generator. Emergency diesel generator was operated under full load conditions for two (2) hours from *1500 to 1700.* Observed steady state temperatures and electrical load characteristics. All equipment found to be in good working order.

SAMPLE LOGBOOK ENTRIES FOR VESSEL OPERATIONS

EMERGENCY LIGHTING AND POWER SYSTEMS
CFR Reference: 46 CFR 97.15-30 (c); Semi-annually (Every 6 months)
At *1500* hours, in position *Lat. 40°-21' N, Long. 035°-58' W* tested storage batteries for emergency lighting and power systems. Demonstrated the ability of storage batteries to supply the emergency loads for the period of time specified in Table 46 CFR 112.05-5 (a). All equipment found to be in good working order.

NAVIGATION EQUIPMENT
CFR Reference: 46 CFR 97.15-3; Daily (At noon)
At *1200* hours, in position *Lat. 40°-21' N, Long. 035°-58' W* tested and examined engine order telegraphs, general alarm bells, navigation lights, and whistle, echo sounder, smoke detection system, watertight doors, ventilation control systems steering gear and changed over to the *(Port or Starboard)* steering control unit. Synchronized bridge and engine-room clocks. All equipment was found in working good order. (Except as noted)

DANGEROUS CARGO
CFR Reference: 49 CFR 176.39; Daily (When carried aboard)
At *1500* hours, in position *Lat. 40°-21' N, Long. 035°-58' W* conducted a visual inspection of all cargo holds and compartments containing hazardous materials. All was found in good order.

SANITARY INSPECTIONS
CFR Reference: 46 CFR 91.35-1, 46 CFR 97.15-10; Daily or when made.
At *1500* hours, in position *Lat. 40°-21' N, Long. 035°-58' W* Master conducted a sanitary inspection of the vessel. All quarters, toilet and washing spaces, serving pantries, galleys, living and recreations spaces found to be in good order.

SEAWORTHINESS INSPECTION PRIOR TO GETTING UNDERWAY
At *0800 hours, in the port of Buzzards Bay, Massachusetts* the Master conducted a visual inspection of the vessel and found the vessel properly secured and seaworthy in all respects for her intended voyage.

STEERING GEAR, WHISTLE, AND MEANS OF COMMUNICATION
CFR Reference: 46 CFR 97.15-3, 33 CFR 164.25; Tests before entering or getting underway.
At *1500* hours, in position *Lat. 40°-21' N, Long. 035°-58' W* or *(In the Port of Buzzards Bay, Massachusetts)* tested and examined both the primary and secondary steering gear, engine order telegraph, general alarm bells, hand and electric whistles, navigation lights, channel 13 and 16 FM VHF radios, radars and automatic radar plotting aids/collision avoidance systems, echo sounder, all electronic position fixing equipment, compared magnetic and gyro compasses and synchronized master gyro and gyro repeaters, synchronized the bridge and engine-room clocks, tested watertight doors, all internal vessel communications, vessel control alarms, stand-by or emergency generator, storage batteries for emergency lighting and power systems in the vessel control and propulsion machinery spaces and the main propulsion machinery in the ahead and astern modes. Conducted an emergency steering drill. All equipment was found to be in working good order. (Except as noted)

EXPOSURE SUITS
CFR Reference: 46 CFR 97.15-37; Monthly (When carried aboard)
At *1500* hours, in position *Lat. 40°-21' N, Long. 035°-58' W* each member of the crew participated in a demonstration on the donning and use of exposure suits. Each passenger was instructed at the beginning of the voyage on the stowage location of exposure suits and was encouraged to read the instructions for donning and use of exposure suits at that time. Each passenger is instructed at each fire and boat drill on the donning and use of exposure suits.

SAMPLE LOGBOOK ENTRIES FOR VESSEL OPERATIONS

CARGO GEAR INSPECTIONS
CFR Reference: 46 CFR 91.37-70; Monthly
At *1500* hours, in position *Lat. 40°-21' N, Long. 035°-58' W* visually inspected and examined all wire rope, chains other than bridle chains attached to booms or masts, and all rings, hooks, links, shackles, swivels and blocks used in loading or unloading. All equipment found in working good order.

BUNKERING OPERATIONS
CFR Reference: 33 CFR 155-156, 33 CFR 155.710 (e) (1); (Prior to receiving fuel oil aboard)
At *0800 hours, in the port of Buzzards Bay, Massachusetts* prior to the commencement of bunkering operations a complete inspection of the vessel was conducted by the person-in-charge (PIC) of bunkering operations. In the opinion of the person-in-charge (PIC) of bunkering operations all precautions have been taken and that vessel is in compliance with all applicable rules and regulations and is ready in all respects to conduct bunkering operations. Signed by Master, Chief Engineer and Chief Officer

FUEL OIL
CFR Reference: 46 CFR 97.15-55; (When fuel oil is received aboard)
At *0800 hours, in the port of Buzzards Bay, Massachusetts* received onboard *4,600 Net Barrels of IFO 240 Fuel Oil,* with a flash point *120°F*, produced by *Shell Oil Co.* The vendor is *Patriot Petroleum Co.* The fuel oil was received aboard this vessel via the *Barge Petrobas No. 16.*A half pint sample of each lot of fuel oil was drawn, sealed and suitably labeled at the time the supply was delivered. These samples will be preserved until the particular supply of oil is exhausted. Signed by Master, Chief Engineer and Chief Officer

STOWAWAY SEARCH
Prior to sailing from foreign ports and prior to entry into the United States
At *1500* hours, in position *Lat. 40°-21' N, Long. 035°-58' W* completed a search of all quarters, storerooms, machinery and other accessible spaces. No stowaways found. Signed by Master, Chief Engineer and Chief Officer, Commandant of Cadets, Chief Steward.

CONTRABAND SEARCH
Prior to entry into the United States
At *1500* hours, in position *Lat. 40°-21' N, Long. 035°-58' W* completed a search of all quarters, storerooms, machinery and other accessible spaces. No dutiable articles, contraband, or narcotics found. Signed by Master, Chief Engineer and Chief Officer, Commandant of Cadets, Chief Steward.

RESTRICTED VISIBILITY
At *1500* hours, in position *Lat. 40°-21' N, Long. 035°-58' W* approaching restricted visibility, established watch condition 2, stand-by-engine, proceeding at safe speed, initiated fog signals, additional look-outs posted and instructed in their duties, both radars in operation with an effective radar watch being maintained by the bridge team. All USCG Rules and Regulations observed.

DECK WATCH RELIEF ENTRY (AT SEA)
1600-2000, the watch was properly relieved by *1/C Will Graduate, COOW*. The Master's Standing and/or Night Orders observed, courses and the vessel's position were verified on Chart No. 13006. Overcast, moderate visibility, vessel rolling and pitching moderately in a rather rough northeasterly sea and high short swell. Engine is at full sea speed at approximately 13 nozzles/85 RPM's. Steering on the starboard steering control unit in the hand steering mode. Both 3cm and 10cm radars are in use.

A chronological list of watch activities follows. The remarks contained in the body of the watch text should reflect the entries which are delineated in The Directions for Keeping the logbook.

The vessel's position at *1950* hours is *Lat. 43°-06.1' N, Long. 069°-08.0' W*. The vessel's position and compasses were checked frequently. The watch was properly relieved at *1950* hours by *1/C Joe Deckie, COOW*. Routine inspections and Detex rounds conducted, all in good order. *1/C Will Graduate, COOW*

SAMPLE LOGBOOK ENTRIES FOR VESSEL OPERATIONS

CHANGE OF COURSE
At 1930 hours, Diamond Shoals Light Tower is abeam to starboard bearing 270° true at a distance of 10.8 miles by radar. Altered course to 197° true, 198° gyro, 214° psc, 1° west gyro error.

CHANGE OF SPEED
At 1930 hours, vessel in a heavy pitching motion shipping white water over the weather decks forward. Removed the look-out from the forecastle and stationed him/her on the lee bridge wing. Reduced speed to 13 nozzles/85 RPM's in order to ease the vessel's motion in very rough quartering seas. Secured the weather decks to all personnel until further notice.

CODE OF FEDERAL REGULATIONS REFERENCE GUIDE

DAILY TESTS & INSPECTIONS

Sanitary inspection (When made)	46 CFR 91.35-1, 46 CFR 97.15-10
Bridge equipment inspection/tests (At noon)	46 CFR 97.15-3

WEEKLY TESTS & INSPECTIONS

Emergency lighting and power systems inspection	46 CFR 97.15-30 (a)
Fire and boat drills	46 CFR 97.15-35
Motor propelled lifeboat engines ahead and astern test	46 CFR 97.15-45 (3) (b)
Radio apparatus for lifeboats test	46 CFR 97.15-50

MONTHLY TESTS & INSPECTIONS

Sanitary inspection (At least monthly)	46 CFR 91.35-1, 46 CFR 97.15-10
Responsibility of ship's officer for inspection of cargo gear	46 CFR 91.37-70
Emergency lighting and power systems (2 hour load test)	46 CFR 97.15-30 (b)
Lifeboat equipment inspection	46 CFR 97.15-35 (b) (9)
Exposure suits inspection and demonstration (When carried)	46 CFR 97.15-37
Emergency position indicating radio beacon (EPIRB) Inspection	46 CFR 97.15-65

QUARTERLY TESTS & INSPECTIONS EVERY (3 MONTHS)

Emergency Steering Drill	33 CFR 164.25 (d)
Line-throwing appliance test	46 CFR 97.15-25
Lifeboat lowered to the water and crew exercised at oars	46 CFR 97.15-35 (b) (6)
Electric power operated lifeboat winch inspection	46 CFR 97.15-40

SEMIANNUAL TESTS & INSPECTIONS EVERY (6 MONTHS)

Emergency lighting & power systems, storage batteries inspection	46 CFR 97.15-30 (c)

ANNUAL TESTS & INSPECTIONS

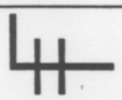
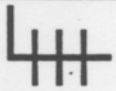
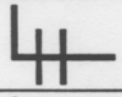
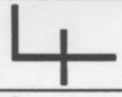
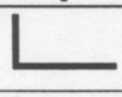
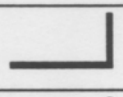
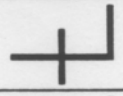
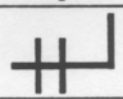
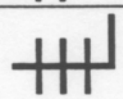
Inspection for certification	46 CFR 91.25
Service liferafts	46 CFR 91.25 (a) (6)
Service hydrostatic releases	46 CFR 91.25 (a) (8)
Inspection of assembled cargo gear	46 CFR 91.37-1 (b)
Test and service hand portable, semi-portable, and fixed fire extinguishing systems	46 CFR 91.60 (b)
Flashlight batteries for lifeboats	46 CFR 94.20-15 (j)
Strip and over-haul lifeboats and rescue craft	46 CFR 97.15-45 (c)
Change fuel in motor operated lifeboats and rescue craft	46 CFR 97.15-45 (d)

VESSEL OPERATIONS

Test before entering or getting underway	33 CFR 164.25, 46 CFR 97.15-3
Draft and load line markings	46 CFR 97.15-5
Examination of boilers and machinery	46 CFR 97.15-15
Hatches and other openings	46 CFR 97.15-25
Requirements for fuel oil	46 CFR 97.15-55
Dangerous cargo inspection (When carried)	49 CFR 176.39

Commonwealth of Massachusetts *Massachusetts Maritime Academy*

Standard Engine Order Telegraph (E.O.T.) signals and symbols will be used by the Bridge and Engine room Watches aboard the *T. S. Empire State* as follows:

ENGINE ORDER TELEGRAPH SIGNALS & SYMBOLS		
ENGINE ORDER SIGNAL	*SYMBOL*	*TELEGRAPH POSITION TACHOMETER INDICATION*
STAND BY ENGINE	**S.B.E.**	*S.B.E. Position* + ± 0 RPM [prior to getting underway
AHEAD MODE +		
FULL THROTTLE +		*Full Ahead Position* Requested by sound-powered-telephone. 80 RPM AHEAD +
EMERGENCY FULL AHEAD +		*Full Ahead Position* Ring Full Ahead two or more times in succession. "Jingle" the telegraph. 60 RPM AHEAD +
FULL AHEAD +		*Full Ahead Position* 60 RPM AHEAD +
HALF AHEAD +		*Half Ahead Position* 40 RPM AHEAD +
SLOW AHEAD +		*Slow Ahead Position* 20 RPM AHEAD +
DEAD SLOW AHEAD +	DS or D	*Dead Slow Ahead Position* 10 RPM AHEAD +
STOP + ± 0 RPM [	O or ✖	*Stop Position* + ± 0 RPM [
ASTERN MODE [		
DEAD SLOW ASTERN [	DS or D	*Dead Slow Astern Position* 10 RPM ASTERN [
SLOW ASTERN [		*Slow Astern Position* 20 RPM ASTERN [
HALF ASTERN [		*Half Astern Position* 30 RPM ASTERN [
FULL ASTERN [		*Full Astern Position* 40 RPM ASTERN [
EMERGENCY FULL ASTERN [		*Full Astern Position* Ring Full Astern two or more times in succession. "Jingle" the telegraph. 60 RPM ASTERN [
FINISHED WITH ENGINES	**F.W.E.**	*F.W.E. Position* + ± 0 RPM [

When a mistake is made in the bell book or logbook, cross out the mistake with one line and initial it,

2013 CRUISE TRAINING PROGRAM

Department of Marine Transportation

THIRD CLASS

SECTION 5

Long Term Training Schedule

SOPHOMORE SEA TERM COURSES WINTER 2012 DIVISION 1

	Period 1	Period 2	Period 3	Period 4
Training Day 9	ELNAV 1 - ECDIS - BLUE SHIP CONSTRUCTION - GOLD AFT NAV LAB		VOYAGE PLAN 1 FWD NAV LAB	WEATHER OBS FNL
Training Day 10	SEAMANSHIP 1 SEATORIUM		FIREFIGHTING 1 SEATORIUM	
	Period 1	**Period 2**	**Period 3**	**Period 4**
Training Day 11	GPS FWD NAV LAB	SEXTANT-1 FWD NAV LAB	ELNAV 1 - ECDIS - GOLD SHIP CONSTRUCTION - BLUE AFT NAV LAB	
Training Day 12	RIGGING SEATORIUM		VOYAGE PLAN 2 FWD NAV LAB	
	Period 1	**Period 2**	**Period 3**	**Period 4**
Training Day 21	GMDSS - BLUE STEERING SYSTEM-GOLD AFT NAV LAB	SEXTANT-2 - BLUE AFT NAV LAV JSA/MSDS - GOLD 3-2	SEXTANT-2 - GOLD AFT NAV LAV JSA/MSDS - BLUE 3-2	GMDSS - GOLD STEERING SYSTEM-BLUE AFT NAV LAB
Training Day 22	VOYAGE PLAN 3 AFT NAV LAB		FIREFIGHTING 2 AFT NAV LAB	SMS ANL
	Period 1	**Period 2**	**Period 3**	**Period 4**
Training Day 23	RIGHT WHALES 3-2	SEXTANT-3 FWD NAV LAB	CHART & PUB CATALOGS AFT NAV LAB	
Training Day 24	VOYAGE PLAN 4 AFT NAV LAB	CONFINED SPACE AFT NAV LAB	COMMUNICATIONS FLYING BRIDGE	

SOPHOMORE SEA TERM COURSES WINTER 2012 DIVISION 2

	Period 1	Period 2	Period 3	Period 4
Training Day 5	ELNAV 1 - ECDIS - BLUE SHIP CONSTRUCTION - GOLD AFT NAV LAB		VOYAGE PLAN 1 FWD NAV LAB	WEATHER OBS FNL
Training Day 6	SEAMANSHIP 1 SEATORIUM		FIREFIGHTING 1 SEATORIUM	

	Period 1	Period 2	Period 3	Period 4
Training Day 7	GPS FWD NAV LAB	SEXTANT-1 FWD NAV LAB	ELNAV 1 - ECDIS - GOLD SHIP CONSTRUCTION - BLUE AFT NAV LAB	
Training Day 8	RIGGING SEATORIUM		VOYAGE PLAN 2 FWD NAV LAB	

	Period 1	Period 2	Period 3	Period 4
Training Day 17	GMDSS - BLUE STEERING SYSTEM-GOLD AFT NAV LAB	SEXTANT-2 - BLUE AFT NAV LAV JSA/MSDS - GOLD 3-2	SEXTANT-2 - GOLD AFT NAV LAV JSA/MSDS - BLUE 3-2	GMDSS - GOLD STEERING SYSTEM-BLUE AFT NAV LAB
Training Day 18	VOYAGE PLAN 3 AFT NAV LAB		FIREFIGHTING 2 AFT NAV LAB	SMS ANL

	Period 1	Period 2	Period 3	Period 4
Training Day 19	RIGHT WHALES 3-2	SEXTANT-3 FWD NAV LAB	CHART & PUB CATALOGS AFT NAV LAB	
Training Day 20	CONFINED SPACE FWD NAV LAB	VOYAGE PLAN 4 FWD NAV LAB	COMMUNICATIONS FLYING BRIDGE	

SOPHOMORE SEA TERM COURSES WINTER 2012 DIVISION 3

	Period 1	Period 2	Period 3	Period 4
Training Day 1	ELNAV 1 - ECDIS - BLUE SHIP CONSTRUCTION - GOLD AFT NAV LAB		VOYAGE PLAN 1 FWD NAV LAB	WEATHER OBS FNL
Training Day 2	SEAMANSHIP 1 SEATORIUM		FIREFIGHTING 1 SEATORIUM	

	Period 1	Period 2	Period 3	Period 4
Training Day 3	GPS FWD NAV LAB	SEXTANT-1 FWD NAV LAB	ELNAV 1 - ECDIS - GOLD SHIP CONSTRUCTION - BLUE AFT NAV LAB	
Training Day 4	RIGGING SEATORIUM		VOYAGE PLAN 2 FWD NAV LAB	

	Period 1	Period 2	Period 3	Period 4
Training Day 13	GMDSS - BLUE STEERING SYSTEM-GOLD AFT NAV LAB	SEXTANT-2 - BLUE AFT NAV LAV JSA/MSDS - GOLD 3-2	SEXTANT-2 - GOLD AFT NAV LAV JSA/MSDS - BLUE 3-2	GMDSS - GOLD STEERING SYSTEM-BLUE AFT NAV LAB
Training Day 14	VOYAGE PLAN 3 AFT NAV LAB		FIREFIGHTING 2 AFT NAV LAB	SMS ANL

	Period 1	Period 2	Period 3	Period 4
Training Day 15	RIGHT WHALES 3-2	SEXTANT-3 FWD NAV LAB	CHART & PUB CATALOGS AFT NAV LAB	
Training Day 16	VOYAGE PLAN 4 AFT NAV LAB	CONFINED SPACE AFT NAV LAB	COMMUNICATIONS FLYING BRIDGE	

WHEN AN EMERGENCY DRILL IS SCHEDULED, EXCEPT WHEN SUCH DRILLS OCCUR AT 1530 OR LATER, TRAINING SESSIONS WILL RESUME/COMMENCE 10 MINUTES AFTER "SECURE FROM ALL DRILLS" IS PIPED.