

Syllabus for Full Mission ship-bridge simulator and TV Ranger Program MT 3231

Applied Shiphandling Captain J.J. Quinn, USN (ret.)

Course Objectives

The objectives of the Applied Shiphandling program are to introduce to the student basic shiphandling concepts, and to increase student practical navigation and watchstanding skills to the extent that students are prepared to undertake advanced watchkeeping scenarios in Bridge Resource Management.

Learning Outcomes

Upon successful completion of Applied Shiphandling and Bridge Resource Management, all deck license students will individually undertake IMO/USCG mandated assessment of required STCW minimum skill level in the areas of Bridge Resource Management, Ratings forming part of a Navigation Watch, and Proficiency of Officer in Charge of a Navigational Watch. The IMO/USCG assessment program (Watchkeeping MT-4253) is a non-teaching skills assessment program conducted by the Academy's STCW Officer reflecting IMO/USCG watchstanding competency requirements to the level of the 2nd Mate. The experience gained in Applied Shiphandling and Bridge Resource Management, will greatly enhance your meeting these STCW minimum skill requirements.

Specific Outcomes of Applied Ship

- **Cadets will function as a bridge watch team and maneuver various type ships in open ocean and restricted waters scenarios.**
- **Cadets will rotate through the positions of conning officer, Navigator, Radar Officer and Helmsman**
- **Cadets will develop and understanding of ship maneuvering characteristics such as Turning circle, advance, transfer, tactical diameter, final diameter, head reach and lateral deviation for both slow and high speed vessels.**
- **Cadets will gain theoretical and simulator experience in inter action of forces between ships in shallow water and confined channels in addition alongside underway approach to another ship such as in underway replenishment**
- **Cadets will develop and understanding of the effects of wind and current on ship maneuvering both in deep and shallow water.**
- **Cadets will learn the effects of squat and how to calculate estimated squat in both deep and shallow water.**

- **Previous knowledge of rules of the road, terrestrial navigation, Navigation system accuracy, tides & currents will be applied to various ship handling scenarios.**
- **Successful outcomes will be determined by a combination of written tests, homework and class projects**

Texts

The required textbooks for Applied Shiphandling are: Watchstanding Guide for the Merchant Mariner by Muern & Shiphandling for the Mariner by MacElrevey, COMDTINST M16672.2, Navigation Rules International and Inland, Knight's Modern Seamanship, Bowditch, the Ranger Manual - P.J. Modic, Seamanship Notes- P.J. Modic, TV KENNEDY Vessel Particulars, Standing Orders, and Bridge Procedures Manual-T Bushy, will serve as course resource material. These publications are available in the library. Most are also in the ship simulator. **They may not, however, be removed from the simulator without my permission. Technical manuals for all bridge equipment are available for student use on request.**

Minimum Course entry requirements

Entry requirements for this course must be achieved prior to entering this program. Students who register for the course without meeting the published minimum entry course requirements will be dropped. If you are in doubt of your eligibility status, please see me privately during the first week of the program in order to clarify your status. Entry requirements are Basic Seamanship, either Deck 3 training ship or commercial cruise, Radar Observer Certification, and you must be enrolled in ARPA. Only the MT Department chairman may waive the prerequisites.

It is not the purpose of this program to reintroduce the student to basic navigation elements such as buoyage systems, tides and currents, use of the DR, concepts of the Rules of the Road or radar operation although these subject areas may be briefly reviewed in class sessions. ***Students are expected to be competent in the above professional areas as a condition for entry in the program and will be tested weekly in these subject matter areas to insure that these skills, if not already attained, are achieved in order to support the demands of the more complex navigation simulation exercises of the second semester program.*** Students are encouraged to meet with the instructor at any mutually convenient time for assistance in any area of the course curriculum. **Do not let your self fall behind. Seek help early and often!**

Students successfully completing Applied Shiphandling and Bridge Resource Management will receive STCW certification in Bridge Resource Management and Officer in Charge of a Navigation Watch, and will receive a sea-time equivalency of 30 days.

Reading assignments

All reading assignments simulator scenarios & testing will be published separately and posted on blackboard.

Testing

Emphasis will be placed upon achieving a complete understanding of the duties and responsibilities of the bridge Watchkeeper; International and Inland Rules of the Road, Aids to Navigation and their use, IMO Resolution A- 893(21) (Voyage Planning) and all areas relevant to the preparation and carrying out of a voyage plan, and basic and intermediate shiphandling procedures. Normally there will weekly quizzes/Tests on Both the Simulator/classroom and Ranger Material covered in the previous session. No programmable calculators will be allowed in this course such as TI83. Cadets may use a non programmable scientific calculator; however it is each individual responsibility to provide such a calculator. Borrowing of any equipment will not be allowed. Each cadet must bring plotting equipment to every simulator session. Each cadet is responsible for tides and currents for 0800 at the Cape Cod Canal railroad bridge for each simulator session along with a weather report in the format specified for each simulator session. These will be graded and count in your simulator preps.

Overall semester grades will be computed as follows:

Tests and quizzes (Simulator)	40%
Tests and quizzes (Ranger)	30%
Ranger and Simulator preps And projects	10%
Final	20%

You must achieve a grade of 60% (D-) to pass this course. Bridge Resource Management MT- 4133, has embedded STCW knowledge and practical assessments, and therefore requires a minimum 70%, C- to pass.

Cheating will not be tolerated. In any circumstance in which cheating is discerned, the student will be assigned a grade of 0 for the test, a grade of F for the semester and placed on report.

Attendance Policy

No absences will be allowed; all absences must be discussed with the instructor prior to the occurrence, and made up within the same cycle rotation period after obtaining the instructor's permission to do so. Unauthorized absences will result in the cadet being placed on report. Two unexcused absences will result in a grade of F.

Uniform

Cadets will be in the prescribed uniform of the day for all simulator classes. Proper military bearing and courtesy will be adhered to at all times.

Disabilities

Mass Maritime Academy is committed to providing reasonable accommodations to students with documented disabilities. Students who believe that they may need accommodations in this class are required to contact Director of Disability Compliance Dr Fran Tishkevich ext 2208. Academic accommodations must be received by me in writing before implementation.

If you have questions concerning any matter, please see me. My office is in Room Breshan 305. My Telephone is extension 2110. E-mail address is jquinn@maritime.edu my office hours are posted, however I can meet with you at any mutually convenient time in addition to those posted. Please send me an e-mail with suggested times that are best for you and I will try to match my schedule with yours

I look forward to an enjoyable semester. Let's work to make this happen!

J. J. Quinn
Captain, USN (ret.)