

safe and comfortable environment conducive to learning.

(b) Have visual aids for realism, including simulators where appropriate, which are modern and well maintained and sufficient for the number of students to be accommodated.

(c) Give appropriate written or practical examinations in the course material to each student of such a degree of difficulty that a student who successfully completes them could reasonably assume that he or she would pass, on the first attempt, an examination prepared by the Coast Guard based upon knowledge requirements of the position or endorsement for which the student is being trained.

(d) Keep for at least one year after the end of each student's enrollment:

(1) Each written examination, or in the case of a practical test, a report of such test; and

(2) A record of each student's classroom attendance.

(e) Not change its approved curriculum unless approved, in writing, after the request for change has been submitted in writing to the Commanding Officer, National Maritime Center (NMC-42).

(f) At any time the Officer in Charge, Marine Inspection directs, allow the Coast Guard to:

(1) Inspect its facilities, equipment, and records, including scholastic records;

(2) Conduct interviews and surveys of students to aid in course evaluation and improvement;

(3) Assign personnel to observe or participate in the course of instruction; and

(4) Supervise or administer the required examinations or practical demonstrations.

[CGD 81-059, 52 FR 38623, Oct. 16, 1987, as amended at 54 FR 132, Jan. 4, 1989; CGD 95-072, 60 FR 50460, Sept. 29, 1995; USCG-1998-4442, 63 FR 52189, Sept. 30, 1998; USCG-1998-3824, 64 FR 4984, Feb. 2, 1999; USCG-2004-18884, 69 FR 58342, Sept. 30, 2004; USCG-2008-0906, 73 FR 56508, Sept. 29, 2008]

§ 11.304 Substitution of training for required service, use of training-record books, and use of towing-officer assessment records.

(a) Satisfactory completion of certain training courses approved by the

Commandant may be substituted for a portion of the required service for many deck and engineer officer endorsements and for qualified rating endorsements. The list of all currently approved courses of instruction, including the equivalent service and applicable endorsements, is maintained by the National Maritime Center. Satisfactory completion of an approved training course may be substituted for not more than two-thirds of the required service on deck or in the engine department for deck or engineer officer endorsements, respectively, and qualified rating endorsements.

(b) Service time gained at an approved training course does not satisfy recent service requirements nor does training on a simulator; however, any underway service at an approved course may be used for this purpose. An applicant who had met the recent service requirement before entering school will not be penalized by attending the approved training course.

(c) Training obtained before receiving an officer endorsement may not be used for subsequent raises of grade.

(d) Simulator training in combination with a Coast Guard-approved training course may be submitted to the Commanding Officer, National Maritime Center, for evaluation and determination of equivalency to required sea service. Simulator training cannot be substituted for recency requirements, but may substitute for a maximum of 25 percent of the required service for any officer endorsement transaction.

(e) Except as provided in § 11.202 of this part, when a candidate both applies for an STCW endorsement as OICNW, on the basis of training or sea service, and uses completion of approved training to substitute for required service, then not less than one year of the remaining service must be part of approved training that meets the appropriate requirements of Chapter II of STCW (incorporated by reference, see § 11.102) and the requirements of subpart C of this part. The training of a candidate must be documented in a Coast Guard-accepted training-record book.

(f) Except as provided in § 11.202 of this part, each candidate who applies

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for an STCW endorsement as an OICEW on the basis of training or sea service for service on seagoing vessels, shall complete onboard training as part of approved training that meets the appropriate requirements of Chapter III of STCW (incorporated by reference, see §11.102) and the requirements of subpart C of this part. The training must be documented in a Coast Guard-accepted training-record book.

(g) The training-record book referred to in paragraphs (e) and (f) of this section must contain at least the following:

- (1) The identity of the candidate.
- (2) The tasks to be performed or the skills to be demonstrated, with reference to the standards of competence set forth in the tables of the appropriate sections in part A of the STCW Code (incorporated by reference, see §11.102).
- (3) The criteria to be used in determining that the tasks or skills have been performed properly, again with reference to the standards of competence set forth in the tables of the appropriate sections in part A of the STCW Code (incorporated by reference, see §11.102).
- (4) A place for a qualified instructor to indicate by his or her initials that the candidate has received training in the proper performance of the task or skill.
- (5) A place for a designated examiner to indicate by his or her initials that the candidate has successfully completed a practical demonstration and has proved competent in the task or skill under the criteria, when assessment of competence is to be documented in the record books.
- (6) The identity of each qualified instructor, including any MMC endorsements, license, or document held, and the instructor's signature.
- (7) The identity of each designated examiner, when any assessment of competence is recorded, including any MMC endorsement, license, or document held, and the examiner's signature confirming that his or her initials certify that he or she has witnessed the practical demonstration of a particular task or skill by the candidate.
- (h) Each applicant for an endorsement as master or mate (pilot) of tow-

ing vessels, and each master or mate of self-propelled vessels of greater than 200 GRT seeking an endorsement for towing vessels, shall complete a towing officers' assessment record that contains at least the following:

- (1) Identification of the candidate, including full name, home address, photograph or photo-image, and personal signature.
- (2) Objectives of the training and assessment.
- (3) Tasks to perform or skills to demonstrate.
- (4) Criteria to use in determining that the tasks or skills have been performed properly.
- (5) A place for a qualified instructor or credentialed officer (with authority to operate a towing vessel) to indicate by his or her initials that the candidate has received training in the proper performance of the tasks or skills.
- (6) A place for a designated examiner to indicate by his or her initials that the candidate has successfully completed a practical demonstration and has proved proficient in the task or skill under the criteria.
- (7) Identification of each qualified instructor or credentialed officer (with authority to operate a towing vessel) by full name, home address, employer, job title, ship name or business address, MMC, license, or document held, and personal signature.
- (8) Identification of each designated examiner by full name, home address, employer, job title, ship name or business address, serial number of the TWIC, MMC, license, or document held, and personal signature confirming that his or her initials certify that he or she has witnessed the practical demonstration of a particular task or skill by the candidate.
 - (i) The training-record book referred to in paragraphs (e) and (f) of this section may be maintained electronically, if the electronic record meets Coast Guard-accepted standards for accuracy, integrity, and availability.
 - (j) Substitution of a training program in lieu of required service for an endorsement as mate (pilot) of towing vessels is governed by §11.465(a) and Table 11.465–1 of this part.

[CGD 81–059, 52 FR 38623, Oct. 16, 1987]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 11.304, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at *www.fdsys.gov*.

§ 11.305 Radar-Observer certificates and qualifying courses.

(a) A student who takes an approved course of training, which includes passing both a radar-theory examination and a practical demonstration on a simulator, and who meets the requirements of this section is entitled to an appropriate Radar-Observer certificate—

(1) In a form prescribed by the school and acceptable to the Coast Guard; and

(2) Signed by the head of the school.

(b) The following Radar-Observer certificates are issued under this section:

(1) Radar Observer (Unlimited).

(2) Radar Observer (Inland Waters and Gulf-Intracoastal Waterway [GIWW]).

(3) Radar Observer (Rivers).

(4) Radar Observer (Unlimited: Renewal).

(5) Radar Observer (Inland Waters and GIWW: Renewal).

(6) Radar Observer (Rivers: Renewal).

(c) A school with an approved Radar-Observer course may issue a certificate listed in paragraph (b) of this section after the student has successfully completed the appropriate curriculum as follows:

(1) Radar Observer (Unlimited). Classroom instruction—including demonstration and practical exercises using simulators—and examination, in the following subjects:

(i) Fundamentals of radar:

(A) How radar works.

(B) Factors affecting the performance and accuracy of marine radar.

(C) Purposes and functions of the main components that constitute a typical marine-radar system.

(ii) Operation and use of radar:

(A) Purpose and adjustment of controls.

(B) Detection of malfunctions, false and indirect echoes, and other radar phenomena.

(C) Effects of sea return, weather, and other environmental conditions.

(D) Limitations of radar resulting from design factors.

(E) Safety precautions associated with use and maintenance of marine radar.

(F) Measurement of ranges and bearings.

(G) Effect of size, shape, composition, and distance of vessels and terrestrial targets on echo.

(iii) Interpretation and analysis of radar information:

(A) Radar navigation (including visual techniques)—determining positions, and detecting changes in the relative motion, of other vessels.

(B) Collision-avoidance, including visual techniques, appropriate to the circumstances and the equipment in use.

(C) Determining the course and speed of another vessel.

(D) Determining the time and distance of closest point of approach of a crossing, meeting, overtaking, or overtaken vessel.

(E) Detecting changes of course or speed of another vessel after its initial course and speed have been established.

(F) Applying the Navigational Rules, Chapters 30 and 34 of Title 33 U.S. Code [Commandant Instruction M16672.2C, as amended, or equivalent], and other factors to consider when determining changes of course or speed of a vessel to prevent collisions on the basis of radar observation.

(G) Use of radar in maintaining situational awareness.

(iv) Plotting (by any graphically-correct method):

(A) Principles and methods of plotting relative and true motion.

(B) Practical-plotting problems.

(2) Radar Observer (Inland Waters and GIWW). Classroom instruction—with emphasis on situations and problems encountered on inland waters and the GIWW, including demonstration and practical exercises using simulators—and examination, in the following subjects:

(i) Fundamentals of radar:

(A) How radar works.

(B) Factors affecting the performance and accuracy of marine radar.

(C) Purpose and functions of the main components that constitute a typical marine-radar system.

(ii) Operation and use of radar: