



Republic of the Philippines
OFFICE OF THE PRESIDENT
COMMISSION ON HIGHER EDUCATION



CHED MEMORANDUM ORDER

No. 67
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**SUBJECT : REVISED POLICIES, STANDARDS AND GUIDELINES FOR THE
BACHELOR OF SCIENCE IN MARINE TRANSPORTATION
(BSMT) AND BACHELOR OF SCIENCE IN MARINE
ENGINEERING (BSMarE) PROGRAMS**

In accordance with 1) the pertinent provisions of Republic Act (RA) No. 7722, otherwise known as the "Higher Education Act of 1994" that mandates the Commission on Higher Education (CHED) to set the minimum standards for higher education programs without abridgment of the curriculum freedom of universities and colleges except for minimum unit requirements as may be determined by the Commission; and specific professional courses as may be stipulated by various licensing entities; 2) CHED Memorandum Order (CMO) No. 2, Series of 2011 that revised the Guidelines in the formulation of CHED Policies, Standards and Guidelines of Academic Program to hew more closely to the Constitutional provision of academic freedom in all institutions of higher learning and Section 13 of RA 7722; 3) CMO No. 46, Series of 2012 that advocate the shift to learning competency-based policies, standards and guidelines in higher education programs as well as outcomes-based quality assurance, among others; 4) CMO No. 20, Series 2013 that establishes the New General Education Curriculum (NGEC) for the holistic understandings, intellectual and civic competencies; 5) the International Convention of Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978, as amended; and 6) other component of IMO four pillars of Maritime Regulatory Compliance such as Safety of Life at Sea (SOLAS) Convention, Maritime Pollution Convention (MARPOL), and Maritime Labour Convention (MLC) of 2006; and by virtue of the Commission *en banc* (CEB) Resolution No. 0468-2017 dated July 4, 2017, the following policies, standards and guidelines for the Bachelor of Science in Marine Transportation (BSMT) and Bachelor of Science in Marine Engineering (BSMarE) programs are hereby adopted and promulgated by the Commission.

**ARTICLE I
INTRODUCTION**

Section 1. Rationale and Background

These policies, standards and guidelines were developed in pursuit of the educational reforms that include the enhanced basic education curriculum through K to 12, the New General Education Curriculum, and the ongoing quality assurance system for the development, recognition and award of qualification of the BSMT and BSMarE graduates based on the Philippine Qualifications Framework (PQF) Level 6 and International Standards.

Further, these aligned policies serve the purpose of making the BSMT and or BSMarE programs responsive to needs of the industry and ensure the global competitiveness of the BSMT and BSMarE graduates.

In addition, based on the Guidelines for the Implementation of CMO No. 46, s. 2012, this PSG implements the “shift to learning competency-based standards/outcomes-based education.” It specifies the ‘core competencies’ expected of Bachelor of Science in Marine Transportation (BSMT) and Bachelor of Science in Marine Engineering (BSMarE) graduates “regardless of the type of HEI they graduate from.” However, in “recognition of the spirit of outcomes-based education and ... of the typology of HEIs,” this PSG also provides “ample space for HEIs to innovate in the curriculum in line with the assessment of how best to achieve learning outcomes in their particular contexts and their respective missions”

ARTICLE II DEFINITION OF TERMS

Section 2. The following definitions shall be adopted in the application of these guidelines:

Assessment: The process of evaluating evidence of competence through one or more of the methods of demonstrating competence (column 3 of the tables under the STCW code. (ref: IRR RA 10635)

The process of gathering information and evidences on the quality of a product, performance, or demonstration, and measuring their fitness with the pre-determined standard;

Competence: The ability that extends beyond the possession of knowledge and skills. It includes 1) the cognitive competence involving the use of theory and concepts as well as informal tacit experiential knowledge; 2) functional competence (skills or know-how), those things that a person should be able to do when they work in a particular area; 3) personal competence involving knowing how to conduct oneself in a specific situation; and 4) ethical competence involving the possession of certain personal and professional values;

Competencies: Refer to the combination of knowledge, complex skills, behavior and attitude that enables an individual to perform a specific task or role;

For BSMT and or BSMarE programs, specific cognitive and functional competences are provided in the competence Tables of the STCW Code.

Competency Standards: Demonstration of the knowledge, skills and competencies linked to the practice of a job or profession



in accordance with requirements of the job;

Course : It is a discreet component of a degree program. It is identified by a course description and its outline or syllabus. This is also known as subject. It is a collection of learning experiences (e.g. lectures, experiments, academic exercises, and projects) within a particular subject area and organized to accomplish particular outcomes.

Course Specifications: For BSMT and or BSMarE, the course specifications include the course title that may end with a course number to indicate the sequential/ordinal nature of the course, a statement of the competence, knowledge, understanding, and proficiencies (KUPs), performance, and approximate hours required for attaining the standards of STCW as amended. The description of the coverage of the course, characteristics and content of teaching and learning outcomes, the academic demand and/or responsibility of the students, the independence of students in the pursuit of learning, and the depth of learning in the course shall be contained in the course specifications;

Course Syllabus: A collection of elements that shows the plan for the delivery of the course which includes competence; KUP and topics; intended learning outcomes; teaching and learning activities (TLA); equipment, materials, and teaching aids; references; assessment; allocated number of hours.

Curriculum : It is the aggregate of courses indicating the systematic sequence of courses in a degree program. It involves the organization of ways and materials with which students will interact for the purpose of attaining the identified learning outcomes. Essential components of the curriculum are the intended learning outcomes, content/KUPs and topics, learning experiences gained from the deployment of teaching and learning activities, and evaluation.

Curriculum Mapping: It is the process of indexing or diagramming a curriculum to identify and address academic gaps, redundancies, and misalignment for purposes of improving the overall coherence of a course of study and, by extension, its effectiveness;

Diploma : A certificate given by a higher education institution to a student who has fulfilled all the requirements of a Bachelor's degree. In the case of a Bachelor's degree in Marine Transportation and Marine Engineering, granting a diploma presupposes completion of the academic requirements, basic training, and shipboard training in a seagoing ship;



Evaluation : The process of judging the educational quality of a higher education institution or program by using assessment results to determine its fitness with the accepted/declared set of standard;

Learning Outcomes: Clear statements of what the learner expects to know, understand, and do as a result of a learning experience;

MARINA : Refers to the Maritime Industry Authority, which is the "Maritime Administration" or "Single Maritime Administration", in accordance with Sec. 2 (e) of R.A. 10635, or simply the "Administration" under STCW;

Outcomes-Based Assessment: In this approach, the program outcomes are largely measured against the policies, standards and guidelines of the discipline, which, in the case of BSMT and or BSMarE programs, are aligned with the STCW standards as amended as well as those of other international conventions;

Outcomes-Based Education: An educational approach that focuses and organizes the educational system around what is essential for all learners to know, value, and be able to achieve a desired level of competence. Once the desired results or "exit outcomes" have been determined, the strategies, processes, techniques and means are put in place to achieve predetermined goals. In essence, it is working backward with students as the center of the learning-teaching milieu (CMO No. 46, S. 2012 – Typology);

Philippine Qualifications Framework: A national policy which describes the levels of educational qualifications and sets the standards for qualification outcomes;

Program Educational Objectives (PEOs): Broad statements that describe the career and professional accomplishments that the program is preparing graduates to achieve (ABET, 2016);

Program Outcomes (POs): These are sets of competencies (related knowledge, skills, and attitudes) that all learners are expected to demonstrate;

Program of Study: An academic plan towards the attainment of a BSMT or BSMarE degree. An articulation of courses from 1st year to 4th year level;

Seagoing Ship: A ship other than those which navigate exclusively in inland waters or in waters within, or closely adjacent to, sheltered waters or areas where port regulations apply;

STCW Code: The Code adopted in the 1995 Conference of Parties to the International Convention on Standards of Training,



Certification and Watchkeeping for Seafarers, which was convened by the International Maritime Organization in its headquarters from 26 June to 7 July 1995. The Code contains two (2) parts, in **Part A**, mandatory provisions to which specific reference is made to the Annex of the STCW Convention and which give in detail, the minimum standards required to be maintained by Parties in order to give full and complete effect to the provisions of the STCW Convention. **Part B** contains recommended guidance to assist Parties to the STCW Convention and those involved in implementing, applying or enforcing its measures to give the STCW Convention full and complete effect in a uniform manner;

STCW Convention: The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 which entered into force in April 1984, and which has since been amended in 1991, 1994, 1995, 1997, 1998, 2004, 2006 and 2010;

Unit : One credit unit is equivalent to one (1) hour lecture or two (2) or three (3) hours laboratory.

ARTICLE III AUTHORITY TO OPERATE

Section 3. Government Recognition

All private higher education institutions (PHEIs) intending to offer BSMT and or BSMarE programs must first secure proper approval to operate from the Commission in accordance with this PSG. All PHEIs with an existing BSMT and BSMarE program/s are required to shift to an outcomes-based approach based on this PSG and must secure approval for such a shift. State universities and colleges (SUCs) and local colleges and universities (LCUs) should likewise strictly adhere to the provisions in these policies and standards. Autonomous and deregulated HEIs should comply with CHED Minimum Requirements as embodied in CMO 46 s. 2012, "Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through an Outcomes-Based and Typology-Based QA".

The Bachelor of Science in Marine Transportation (BSMT) and Bachelor of Science in Marine Engineering (BSMarE) programs shall only be operated by a Higher Education Institution (HEI), whether public or private, after compliance with the pertinent CHED and STCW requirements as stipulated under this PSG and after the proper authority, pursuant to Sections 54, 56 and 57 of the Manual of Regulations for Private Higher Education of 2008 (MORPHE) has been granted by CHED.



ARTICLE IV GENERAL PROVISIONS

Section 4. The Articles that follow give minimum standards, and other requirements and prescriptions. The minimum standards are expressed as a minimum set of desired Program Outcomes which are given in **Article V Section 7**. The Technical Committees have designed a curriculum to attain such outcomes. This curriculum is shown in **Article VII Section 13.1 for BSMT and 13.2 for BSMarE** as a sample curriculum. The number of units of this curriculum is here prescribed as the "minimum unit requirement" under Section 13 of RA 7722. In designing the curriculum, the Technical Committee employed a curriculum map which is shown in Annex A as a sample curriculum map.

Using a learner-centered/outcomes-based approach, the Technical Committees also determined the appropriate curriculum delivery methods shown in **Article VIII Section 20**.

Based on the curriculum and the means of its delivery, the Technical Committee determined the physical resource requirements for the library, laboratories and other facilities; and the human resource requirements in terms of administration and faculty.

Section 5. The HEIs are allowed to design a curricula suited to their own contexts and missions, provided that they can demonstrate that the same leads to the attainment of the required minimum set of program outcomes and course outcomes, albeit by a different route. In the same vein, they have latitude in terms of curriculum delivery and in terms of specification and deployment of human and physical resources; as long as they can show that the attainment of the Program Outcomes and satisfaction of Program Educational Objectives can be assured by the alternative means they propose.

The HEIs can use the CHED Implementation Handbook for Outcomes-Based Education (OBE) and the Institutional Sustainability Assessment (ISA).

ARTICLE V PROGRAM SPECIFICATIONS

Section 6. Program Description

The Bachelor of Science in Marine Transportation is a higher education degree program that covers competences defined under PQF level 6 and Table A-II/1 and some elements of Table A-II/2 of the STCW code indicated in Section 11, 11.1 and other national and international requirements.

The Bachelor of Science in Marine Engineering is a higher education degree program that covers competences defined under PQF level 6 and Table A-III/1 and some elements of Table A-III/2 of the STCW code indicated in Section 11, 11.2 and other national and international requirements.



6.1 Degree Name

The program title of the approved education and training for Marine Deck Officers at the operational level shall be **Bachelor of Science in Marine Transportation (BSMT)**. Consequently, a student who completed such approved education and training and who has complied with all the requirements for graduation thereof shall be conferred with the degree of **Bachelor of Science in Marine Transportation (BSMT)**.

The program title of the approved education and training for Marine Engineer Officers shall be **Bachelor of Science in Marine Engineering (BSMarE)**. Consequently, a student who completed such approved education and training and who has complied with all the requirements for graduation thereof shall be conferred with the degree of **Bachelor of Science in Marine Engineering (BSMarE)**.

6.2 Nature of the Field of Study

The **Bachelor of Science in Marine Transportation** deals with the study of navigation, cargo handling and stowage, controlling the safe operation and care for persons on board the ship at the operational level.

The **Bachelor of Science in Marine Engineering** deals with the study of marine propulsion system and its auxiliaries, its operation and maintenance as well as controlling the operation of the ship and care for persons on board at the operational level of marine engineering. This program also deals with electrical, electronics and control engineering.

6.3 Program Educational Objectives

The general program educational objective is to produce competent merchant marine officers and qualified to pursue a professional career or advanced studies in related maritime field of specialization.

Further, institution/s may expound the PEOs and POs with reference to their Vision, Mission, Goals and Objectives.

6.3.1 The BSMT program aims to produce competent merchant marine deck officers on seagoing ships of 500 gross tonnage or more and qualified to pursue a professional career or advanced studies in related maritime field of specialization.

6.3.2 The BSMarE program aims to produce competent merchant marine engineering officers on seagoing ships of 750kW propulsion power or more and qualified to pursue a professional career or advanced studies in related maritime field of specialization.



6.4 Specific Professions / Careers / Occupations for Graduates

6.4.1 A Graduate of BSMT program may find careers in, among others:

- a) Merchant Marine profession
- b) Maritime Industry
 - 1) Ship building and repair
 - 2) Ship operations and management
 - 3) Port operations and management
 - 4) Ship surveying and inspection
 - 5) Offshore industry
- c) Maritime Education and Training
- d) Government i.e.
 - 1) Philippine Navy
 - 2) Philippine Coast Guard
 - 3) Maritime Industry Authority

6.4.2 A Graduate of BSMarE program may find careers in, among others:

- a) Merchant Marine profession
- b) Maritime Industry
 - 1) Ship building and repair
 - 2) Ship operations and management
 - 3) Port operations and management
 - 4) Ship surveying and inspection
 - 5) Offshore industry
- c) Maritime Education and Training
- d) Industrial and Commercial Establishment
- e) Government i.e.
 - 1) Philippine Navy
 - 2) Philippine Coast Guard
 - 3) Maritime Industry Authority

6.5 Allied Fields

6.5.1 The following shall be considered as allied to the BSMT program for purposes of determining the qualifications of faculty:

- a) Marine Engineering
- b) Mechanical Engineering
- c) Electrical Engineering
- d) Chemical Engineering
- e) Naval Architecture and Marine Engineering
- f) Law
- g) Meteorology
- h) Medicine and Nursing (Emergency First Aid and Medical First Aid)

6.5.2 The following shall be considered as allied to the BSMarE program for purposes of determining the qualifications of faculty:

- a) Marine Transportation
- b) Mechanical Engineering
- c) Electrical Engineering



- d) Chemical Engineering
- e) Electronics Engineering
- f) Industrial Engineering
- g) Instrumentation and Control Engineering
- h) Naval Architecture and Marine Engineering
- i) Law
- j) Medicine and Nursing (Emergency First Aid and Medical First Aid)

Section 7. Program Outcomes

The minimum standards for the BSMT and BSMarE programs are expressed in the following minimum set of learning outcomes:

7.1 Common to all programs in all types of schools

Graduates of BSMT and BSMarE should be able to:

- a) engage in lifelong learning and understanding of the need to keep abreast of the developments in Maritime practice. (PQF level 6 descriptor);
- b) communicate orally and in writing using both English and Filipino;
- c) work independently and in multi-disciplinary and multi-cultural teams. (PQF level 6 descriptor);
- d) act in recognition and practice of professional, social, and ethical accountability and responsibility; and
- e) preserve and promote "Filipino historical and cultural heritage" (RA 7722)

7.2 Common to the BSMT and BSMarE Programs

Graduates of BSMT and BSMarE should be able to:

- a) apply knowledge in mathematics, science and technology in solving problems related to the profession and the workplace;
- b) evaluate the impact and implications of various contemporary issues in the global and social context of the profession;
- c) engage in lifelong learning and keep abreast with developments in the field of specialization and/or profession;
- d) use appropriate techniques, skills and modern tools in the practice of the profession in order to remain globally competitive; and
- e) conduct research using appropriate research methodologies.

7.3 Specific to the Discipline

7.3.1 BSMT

A graduate of BSMT shall be able to demonstrate the ability to perform the competence, at the operational level under Table A-II/1 and some elements of Table A-II/2 of the STCW Code.

7.3.2 BSMarE

A graduate of BSMarE shall be able to demonstrate the ability to perform the competence, at the operational level under Table A-III/1 and some elements of Table A-III/2 of the STCW Code.



7.4 Common to a horizontal type as defined in CMO No. 46, S. 2012

Graduates of BSMT and BSMarE are expected to be able to demonstrate:

- a) for Professional Institutions: a service orientation in one's profession.
- b) for Colleges: an ability to participate in various types of employment, development activities, and public discourses particularly in response to the needs of the community one serves.
- c) for Universities: an ability to participate in the generation of new knowledge or in research and development projects.

Graduates of State Universities and Colleges must, in addition, have the competencies to support "national, regional and local development plans." (RA 7722).

A private HEI, at its option, may adopt mission-related program outcomes that are not included in the minimum set.

Section 8. Sample Performance Indicators

Performance Indicators are specific, measurable statements identifying the performance(s) required to meet the outcome; confirmable through evidence.

MHEIs may refer to the STCW 78 as amended Table A-II/1 and Table A-III/1 as a guide in developing the performance indicators to be achieved by the students as per school's program outcomes.

8.1 FOR BSMT

Program Outcomes	Performance Indicator
Perform navigational watch at the operational level	Plan and conduct a passage and determine position Maintain a safe navigational watch
Perform cargo handling and stowage at the operational level	Monitor the loading, stowage, securing and unloading of cargos and their care during the voyage.
Control the operation of the ship and care for persons on board at operational level	Comply with pollution prevention requirements. Maintain seaworthiness of the ship. Prevent, control and fight fires onboard.



8.2 FOR BSMarE

Program Outcomes	Performance Indicator
Perform Marine Engineering at the operational level	<p>Maintain a safe engineering watch</p> <p>Operate main and ancillary machinery and associated control systems</p> <p>Operate fuel, lubrication, balance and other pumping systems and associated control systems</p>
Apply electrical, electronic and control engineering at the operational level	Operate electrical, electronic and control systems.
Perform maintenance and repair at the operational level	<p>Use of appropriate hand tools and machine tools and measuring instruments for fabrication and repair onboard.</p> <p>Maintain and repair of shipboard machinery and equipment.</p>
Control the operation of the ship and care for persons on board at operational level	<p>Comply with pollution prevention requirements.</p> <p>Maintain seaworthiness of the ship.</p> <p>Prevent, control and fight fires onboard.</p>

ARTICLE VI STANDARDS OF COMPETENCE, ASSESSMENT AND CONFERMENT OF THE DEGREE

Section 9. Standards of Competence

- 9.1** Every student who has satisfactorily completed the BSMT Program shall have acquired the standard of competence specified under the following:
- Regulation II/1, paragraph 2 [.2], [.3], [.5], [.6 only BT];
 - Regulation II/1, paragraph 2 [.4] on basic understanding of Radio Communication; and
 - Part of Regulation II/2 Paragraph 2.2 as can be found in the **Curriculum Mapping**.
- 9.2** Every student who has satisfactorily completed the BSMarE Program shall have acquired the standard of competence specified under the following:



- a) Regulation III/1, paragraph 2 [.2] up to [.5 only BT];
- b) Part of Regulation III/2 Paragraph 2.2 as can be found in the **Curriculum Mapping**.

Section 10. Assessment of Competence

- 10.1** Every student who has satisfactorily completed the BSMT shall be assessed under the following standard of competence:
- a) Section A-II/1;
 - b) Part of Section A-II/2; and
 - c) Basic understanding of Radio Communication.
- 10.2** Every student who has satisfactorily completed the BSMarE shall be assessed under the following standard of competence:
- a) Section A-III/1; and
 - b) Part of Section A-III/2.

Section 11. Conferment of Degree

- 11.1 The issuance of a diploma for a BSMT degree requires:**
- a) Completion of academic course requirement and other institutional standards, if any;
 - b) Completion of the required seagoing service per existing CHED Memorandum Order on shipboard training; and
 - c) Completion of the basic training.
- 11.2 The issuance of a diploma for a BSMarE degree requires:**
- a) Completion of academic course requirement and other institutional standards, if any;
 - b) Completion of the required seagoing service per existing CHED Memorandum Order on shipboard training; and
 - c) Completion of the basic training.

ARTICLE VII CURRICULUM

Section 12. Curriculum Description

12.1 Bachelor of Science in Marine Transportation Program

The BSMT program shall consist of a minimum total of 175 credit units. The program consists of the general education component following CMO No. 20, series of 2013 the General Education Curriculum: Holistic Understandings, Intellectual and Civic Competencies, professional courses, shipboard training, Physical Education (PE) and the National Service Training Program (NSTP).

The sequencing of the courses according to pre-requisites and co-requisites shall be observed. The shipboard training is in line with the requirements of the 1978 STCW Convention as amended, in which the students shall be trained in the actual operation of the ship and the performance of their tasks. A total of



40 units shall be credited to students who satisfactorily fulfill the requirements of the shipboard training.

The instructional approach for this program shall be learner-centered and outcomes-based to prepare the students for a career at sea and effectively carry out the tasks, duties and responsibilities of an Officer-In-Charge of a Navigational Watch.

12.2 Bachelor of Science in Marine Engineering Program

The BSMarE program shall consist of a minimum total of 179 credit units. The program consists of the general education component following CMO No. 20, Series of 2013 the General Education Curriculum: Holistic Understandings, Intellectual and Civic Competencies, professional courses, shipboard training, Physical Education (PE) and the National Service Training Program (NSTP).

The sequencing of the courses according to pre-requisites and co-requisites shall be observed. The shipboard training is in line with the requirements of the 1978 STCW Convention as amended, in which the students shall be trained in the actual operation of the ship and the performance of their tasks. A total of 40 units shall be credited to students who satisfactorily fulfill the requirements of the shipboard training.

The instructional approach for this program shall be learner-centered and outcomes-based to prepare the students for a career at sea and effectively carry out the tasks, duties and responsibilities of an Officer-In-Charge of an Engineering Watch.

Section 13. Curriculum Outline and Content

13.1 Bachelor of Science in Marine Transportation Program

The outline and content of the curriculum of maritime higher education institutions (MHEIs) shall be based on the mapping in **ANNEX A** of courses and hours against the prescribed competence, knowledge, understanding and proficiency for the different functions outlined in Table A-II/1. The course mapping includes part of management level course for marine deck officers as stated in Table A-II/2.

The MHEIs may determine the distribution of course hours into lecture and laboratory hours and the corresponding units for laboratory work, keeping in mind the importance of laboratory hours for honing the competencies of officers-in-charge of a navigational watch. **CHED shall approve the revised curriculum of the MHEIs to ensure that it meets the minimum standards of the STCW.**

The Maritime Higher Education Institutions are expected to comply with the pre-requisites and co-requisites of the required courses.



Sample Curriculum for the Bachelor of Science in Marine Transportation Program

Courses	No. of Courses	Equivalent Units per Course	Total Units	Prereq/ Coreq
GENERAL EDUCATION COURSES	18		50	
a) Core Courses	8	3	24	
NGEC 1 - Understanding the Self				
NGEC 2 - Readings in Philippine History				
NGEC 3 - The Contemporary World				
NGEC 4 - Mathematics in the Modern World				
NGEC 5 - Purposive communication				
NGEC 6 - Art Appreciation				
NGEC 7 - Science, Technology, and Society				
NGEC 8 – Ethics				
b) Elective	3	3	9	
*** NGEC 9 - Math, Science, & Technology				
*** NGEC 10 - Social Sciences & Philosophy				
*** NGEC 11 - Arts and Humanities				
c) Mandated Course/s	7		17	
Rizal - The Life and Works of Dr. Jose Rizal	1	3	3	
Physical Education (PE) (1, 2, 3, 4)	4	2	8	
National Service Training Program (NSTP) 1 and 2	2	3	6	
PROFESSIONAL COURSES	24		85	
Nav 1 – Navigational Instruments with Compasses		4 (3-3)		
Nav 2 – Terrestrial and Coastal Navigation 1		5 (5-0)		Nav 1
Nav 3 – Terrestrial and Coastal Navigation 2		5 (3-6)		Nav 2
Nav 4 – Celestial Navigation		3 (2-3)		Nav 3
Nav 5 – Operational use of RADAR/ARPA		3 (2-3)		D-Watch 1
* Nav 6 – Operational use of ECDIS		2 (1-3)		Nav 5
Nav 7 – Voyage Planning		3 (2-3)		Nav 6
Seam 1 – Ship, Ship Routines and Ship Construction		4 (3-3)		
Seam 2 – Trim, Stability and Stress		5 (5-0)		Seam 1
Seam 3 – Cargo Handling and Stowage (Non-Dangerous Goods)		2 (2-2)		Seam 1
Seam 4 – Cargo Handling & Stowage (Dangerous Goods & Inspections)		2 (2-2)		Seam 1
Seam 5 – Ship Handling & Maneuvering		2 (1-3)		D-Watch 1
Seam 6 – Advance Trim, Stability and Stress		6 (6-0)		Seam 2
D-Watch 1 – Collision Regulations		4 (3-3)		



Courses	No. of Courses	Equivalent Units per Course	Total Units	Prereq/ Coreq
* D-Watch 2 – Deck Watchkeeping with Bridge Resource Management		3 (2-3)		D-Watch 1 Nav 6 Mgmt 1
Met-O 1 – Meteorology and Oceanography 1		5 (5-0)		
Met-O 2 – Meteorology and Oceanography 2		4 (4-0)		Met-O 1
** Mar Power – Basic Marine Engineering		4 (4-0)		
Marcom – Maritime Communications (GMDSS for GOC)		5 (3-6)		
* Safety 1-Basic Training (in accordance to Section 14 – Safety Courses)		No credit unit		
** Software Applications and Network System used in Seagoing Ships		2 (1-3)		
Mar Env – Protection of the Marine Environment		3 (3-0)		
** Mar Law – Maritime Law		4 (4-0)		
** Mgmt 1– Leadership and Teamwork		3 (3-0)		
** Mgmt 2 – Integrated Management Systems		2 (2-0)		
SHIPBOARD TRAINING	1		40	Basic Training

SUMMARY OF UNITS	Total number of Units
General Education Courses	50
Professional Courses	85
Shipboard Training	40
TOTAL NO. OF UNITS	175

Note:

- * - A separate Certificate of Completion must be issued by the MHEI after completing courses
- ** - Courses that can be taught by allied faculty with maritime background
- *** - NGECE 9 - recommended to include topics in Solid Mensuration, Spherical Trigonometry and Integral Calculus
- *** - NGECE 10 – recommended to include topics in Occupational Health and Safety (include PADAMS, common health problems of seafarers, proper nutrition, lifestyle, and exercise)
- *** - NGECE 11 – recommended to include World Geography and Intercultural Relationship

Recommended elective Professional Courses/Topics

1. Ship Operations and Shipyard Practice
2. Ship Superintendency and Chartering Practice
3. Ship Survey and Vetting Inspection
4. Port Management and Logistics



5. Trends, Issues, and Breakthroughs in the Maritime Industry
6. Emerging Technologies in the Maritime Industry

13.2 Bachelor of Science in Marine Engineering program

The outline and content of the curriculum of maritime higher education institutions (MHEIs) shall be based on the mapping in **Curriculum Mapping** of courses and hours against the prescribed competence, knowledge, understanding and proficiency for the different functions outlined in Table A-III/1. The course mapping includes part of management level course for marine engineering officers as stated in Table A-III/2.

The MHEIs may determine the distribution of course hours into lecture and laboratory hours and the corresponding units for laboratory work, keeping in mind the importance of laboratory hours for honing the competencies of officers-in-charge of a navigational watch. **CHED shall approve the revised curriculum of the MHEIs to ensure that it meets the minimum standards of the STCW.**

The Maritime Higher Education Institutions are expected to comply with the pre-requisites and co-requisites of the other required courses.

Sample Curriculum for the Bachelor of Science in Marine Engineering Program

Courses	No. of Courses	Equivalent Units per Course	Total Units	Prereq / Coreq
GENERAL EDUCATION COURSES	18		50	
a) Core Courses	8	3	24	
NGEC 1 - Understanding the Self				
NGEC 2 - Readings in Philippine History				
NGEC 3 - The Contemporary World				
NGEC 4 - Mathematics in the Modern World				
NGEC 5 - Purposive communication				
NGEC 6 - Art Appreciation				
NGEC 7 - Science, Technology, and Society				
NGEC 8 – Ethics				
b) Elective	3	3	9	
*** NGEC 9 - Math, Science, & Technology				
*** NGEC 10 - Social Sciences & Philosophy				
*** NGEC 11 - Arts and Humanities				
c) Mandated Course/s	7		17	
Rizal - The Life and Works of Dr. Jose Rizal	3	1	3	
Physical Education (PE) (1, 2, 3, 4)	4	2	8	
National Service Training Program (NSTP) 1 and 2	2	3	6	



Courses	No. of Courses	Equivalent Units per Course	Total Units	Prereq / Coreq
PROFESSIONAL COURSES	27		89	
** Mach 1 - Hand and Measuring Tools		2 (1-4)		
** Mach 2 - Machining Tools		2 (1-4)		Co-req- Mach 1
** Mach 3 - Gas & Electric Welding		2 (1-4)		Mach 1 E Mat
** Electro 1 - Basic Electricity		4 (3-3)		
** Electro 2 – Basic Electronics		3 (2-3)		Electro 1
Electro 3 - Marine Electricity & Electrical Maintenance		5 (3-6)		Electro 1
Aux Mach 1 - Auxiliary Machinery 1		6 (5-3)		Thermo Mech
Aux Mach 2 - Auxiliary Machinery 2		5 (4-3)		AuxMach 1
PPD - Power Plant Diesel		5 (4-3)		Thermo AuxMach 1 Mech
PASGT – Propulsion Ancillary Systems & Gas Turbine		3 (2-3)		IChem Auto 1
PPS - Power Plant Steam		6 (5-3)		Electro 2 Mech
** Auto 1 - Basic Control Engineering		4 (3-3)		Auto 1
Auto 2 – Marine Automation		4 (3-3)		Aux Mach 2 PPD PPS PASGT Mach 3
Maint – Maintenance and Repair		3 (2-3)		Prereq AuxMach 2
EWK 1 – Engine Watchkeeping		3 (3-0)		Co-req PPD PPS PASGT
* EWK 2 – Engine Watchkeeping with Resource Management		1 (0-3)		EWK 1 Mgmt 2
** Nav Arch - Naval Architecture for Marine Engineering		2 (2-0)		Co-req Mech
** E Mat - Engineering Materials		4 (4-0)		
** Thermo – Thermodynamics		4 (3-3)		
Draw - Maritime Drawing and Diagrams		1 (0-3)		
IChem - Industrial Chemistry and Tribology		3 (2-3)		
** Mech - Mechanics and Hydromechanics		3 (3-0)		
* Safety – Basic Training (in accordance to Section 14 – Safety Courses)		No Credit Unit		
** ICT – Software Applications and Network System used in Seagoing Ships		2 (1-3)		
Mar Env – Protection of the Marine Environment		3 (3-0)		
** Mar Law - Maritime Law		4 (4-0)		



Courses	No. of Courses	Equivalent Units per Course	Total Units	Prereq / Coreq
** Mgmt 1– Leadership and Teamwork		3 (3-0)		
** Mgmt 2 - Integrated Management Systems		2 (2-0)		
SHIPBOARD TRAINING	1		40	

SUMMARY OF UNITS	Total number of Units
General Education Courses	50
Professional Courses	89
Shipboard Training	40
TOTAL NO. OF UNITS	179

Note:

- * - A separate Certificate of Completion must be issued by the MHEI after completing courses
- ** - Courses that can be taught by allied faculty with maritime background
- *** - NGEN 9 - recommended to include topics in Solid Mensuration, Spherical Trigonometry and Integral Calculus
- *** - NGEN 10 – recommended to include topics in Occupational Health and Safety (include PADAMS, common health problems of seafarers, proper nutrition, lifestyle, and exercise)
- *** - NGEN 11 – recommended to include World Geography and Intercultural Relationship

Recommended Elective Professional Courses/Topics

1. Ship Operations and Shipyard Practice
2. Ship Superintendency and Chartering Practice
3. Ship Survey and Vetting Inspection
4. Port Management and Logistics
5. Trends, Issues, and Breakthroughs in the Maritime Industry
6. Emerging Technologies in the Maritime Industry
7. Bridge Navigational Equipment for Marine Engineers

13.3 Guidance on the implementation of the new General Education Curriculum

All MHEIs shall strictly implement and abide by the guidance provided in the following memorandum issued to all Higher Education Institutions, thus:

- a) CMO No. 20, series of 2013 entitled “General Education Curriculum: Holistic Understandings, Intellectual and Civic Competencies”
- b) Clarification on the status of Physical Education and other Mandated/Legislated Courses in the New General Education Curriculum (G.E.C) attached as **Annex B**
- c) Clarification on the implementation of CHED Memorandum Order (CMO) No. 20, series of 2013 entitled “General Education



Curriculum: Holistic Understandings, Intellectual and Civic Competencies” attached as **Annex B.1 pertaining to Filipino courses**

- d) Clarification on the implementation of CHED Memorandum Order (CMO) on the offering of Filipino and Panitikan courses in all Higher Education Programs as **Annex B.2.**

Section 14. Certificated Courses

14.1 Basic Training

All MHEIs shall ensure compliance of their students to the requirements of Regulation VI/1 Para. 1. on Basic Training from MARINA-Accredited Training Institution. For this purpose, MHEIs may establish their own training facilities for the above training requirement or may adopt a Memorandum of Agreement (MOA) with MARINA accredited training center subject to the following regulations:

14.1.1 Applicant MHEIs shall submit to CHED the Memorandum of Agreement (MOA) with all the following supporting documents for approval:

- 1) Proof of MARINA accreditation;
- 2) Results of assessment of the Maritime Training Center by the MHEI showing the following:
 - a) Capacity to accommodate any number of students at any time;
 - b) Faculty student ratio;
 - c) Equipment student ratio; and
 - d) Theoretical and practicum components of the course shall be conducted in the training center
- 3) Parents' consent and Board resolution in case the MOA is with a training center not located within the region or neighboring regions.

14.1.2 The MOA mentioned in this rule must be valid. This MOA shall be subjected to CHED monitoring and evaluation for a period of two (2) years. In case of any complaints, CHED shall conduct a verification visit of the training center;

14.1.3 In case of transfer of the MOA to another training center or additional training center/s, the same procedure shall apply;

14.1.4 In case the MOA is terminated, CHED must be immediately informed of such termination;

14.1.5 In case the training center is no longer eligible to be a party to the MOA due to termination of accreditation, CHED must be informed immediately;

14.1.6 The MHEI must have a MOA with the training center located within the region or neighboring regions that may



be closer in location to the school. In case the MOA is outside the region or neighboring regions, the MHEI shall justify such MOA;

14.1.7 The MHEI shall submit the following reports:

- a) List of graduates from the school; and
- b) Annual Summary Statistics of Training conducted per schedule from the school.

14.1.8 The MOA shall be suspended or withdrawn based on the following conditions:

- a) Non submission of annual reports;
- b) Violation of the Scope of Accreditation; and
- c) Violation of any provision of these guidelines and the MOA.

14.1.9 The MHEIs shall facilitate the placement of cadets in an Administration-accredited maritime training institution and **monitor the progress of their training.**

14.2 All MHEIs shall ensure compliance with the requirements set by MARINA for ECDIS, GMDSS for GOC, Deck Watchkeeping with Bridge Resource Management and Engine Watchkeeping with Resource Management courses.

Section 15. Standards governing the use of simulators

All Maritime Higher Education Institutions shall comply with the minimum standards and guidelines governing the use of simulators pursuant to Regulation I/12 including Section A-I/12 of the STCW, as amended. The simulators must have the necessary functions that will enable the demonstration of the intended learning outcome.

Section 16. Shipboard Training

The Policies, Standards and Guidelines governing the seagoing service requirement for the Conferment of the Degree in Bachelor of Science in Marine Transportation and Bachelor of Science in Marine Engineering Programs shall follow the existing CHED Memorandum Order relative thereto.

Section 17. Program of Study

MHEIs may adopt the sample below or develop their own program of study provided that all prescribed courses/competences under the STCW table of competence are offered and complied with and the pre-requisites and co-requisites of the courses are followed.



17.1 Sample 2-1-1 Program of Study for BSMT Program

1ST YEAR 1ST SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
NGEC 1	Understanding the Self	3	0	3	
NGEC 5	Purposive Communication	3	0	3	
*** NGEC 9	Math, Science, & Technology	3	0	3	
NGEC 8	Ethics	3	0	3	
Nav 1	Navigational Instruments with Compasses	3	3	4	
Seam 1	Ship, Ship Routines and Ship Construction	3	3	4	
*P.E. 1	Basic Swimming	0	2	2	
*NSTP 1	National Service and Training Program 1	3	0	3	
TOTAL		21	8	25	

1ST YEAR 2ND SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
NGEC 4	Mathematics in the Modern World	3	0	3	
NGEC 7	Science, Technology & Society	3	0	3	
** ICT	Software Applications and Network Systems used in Seagoing Ships	1	3	2	
Nav 2	Terrestrial and Coastal Navigation II	5	0	5	Nav 1
Seam 2	Trim, Stability and Stress	5	0	5	Seam 1
D-Watch 1	Collision Regulation	3	3	4	
*P.E. 2	Advanced Swimming	0	2	2	
*NSTP 2	National Service Training Program II	3	0	3	
TOTAL		23	8	27	

2ND YEAR 1ST SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
NGEC 10	Social Sciences and Philosophy	3	0	3	
Nav 3	Terrestrial and Coastal Navigation 2	3	6	5	Nav 2
Nav 5	Operational Use of RADAR / ARPA	2	3	3	D-Watch 1
Met O 1	Meteorology and Oceanography	5	0	5	
Mar Env	Protection of the Marine Environment	3	0	3	
D-Watch 2	Deck Watchkeeping with Bridge Resource Management	2	3	3	D-Watch 1 Nav 6 Mgmt 1
Seam 3	Cargo Handling and Stowage (Non-DG)	2	2	2	Seam 1
P.E. 3	Dual Sports	0	2	2	
TOTAL		20	16	26	



2ND YEAR 2ND SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
Nav 4	Celestial Navigation	2	3	3	Nav 3
* Nav 6	Operational Use of ECDIS	1	3	2	Nav 5
Seam 4	Cargo Handling & Stowage (DG and Inspections)	2	2	2	Seam 1
MarCom	Maritime Communications (GMDSS for GOC)	3	6	5	
** Mgmt 1	Leadership and Teamwork	3	0	3	
** Mgmt 2	Integrated Management System	2	0	2	
P.E. 4	Team Sports	0	2	2	
TOTAL		13	16	19	

3RD YEAR					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
BT	Basic Training	-	-	-	
	Shipboard Training	0	0	40	
TOTAL		0	0	40	

4TH YEAR 1ST SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
NGEC 11	Arts and Humanities	3	0	3	
Rizal	The Life and Works of Dr. Jose Rizal	3	0	3	
Nav 7	Voyage and Planning	2	3	3	Nav 6
Seam 6	Advanced Trim, Stability & Stress	6	0	6	Seam 2
** Marlaw	Maritime Law	4	0	4	
TOTAL		18	3	19	

4TH YEAR 2ND SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
NGEC 2	Readings in Philippine History	3	0	3	
NGEC 3	The Contemporary World	3	0	3	
NGEC 6	Art Appreciation	3	0	3	
Met O 2	Meteorology and Oceanography 2	4	0	4	Met O 1
Seam 5	Ship Handling and Maneuvering	2	3	3	
Mar Power	Basic Marine Engineering	4	0	4	
TOTAL		19	3	20	



17.2 Sample 3-1 Program of Study for BSMT Program

1ST YEAR 1ST SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
NGEC 1	Understanding the Self	3	0	3	
NGEC 5	Purposive Communication	3	0	3	
NGEC 8	Ethics	3	0	3	
*** NGEC 9	Math, Science & Technology	3	0	3	
Nav 1	Navigational Instruments with Compasses	3	3	4	
Seam 1	Ship, Ship Routines and Ship Construction	3	3	4	Nav 1
PE 1	Basic Swimming	0	2	2	
NSTP 1	National Service Training Program I	3	0	3	
TOTAL		21	8	25	

1ST YEAR 2ND SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
NGEC 4	Mathematics in the Modern World	3	0	3	
NGEC 7	Science, Technology & Society	3	0	3	
** ICT	Software Applications and Network Systems used in Seagoing Ships	1	3	2	
Nav 2	Terrestrial and Coastal Navigation 1	5	0	5	Nav 1
Seam 2	Trim, Stability and Stress	5	0	5	Seam 1
Met O 1	Meteorology and Oceanography 1	5	0	5	
*P.E. 2	Advanced Swimming	0	2	2	
*NSTP 2	National Service Training Program 2	3	0	3	
TOTAL		25	5	28	

2ND YEAR 1ST SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
NGEC 10	Social Sciences and Philosophy	3	0	3	
Nav 3	Terrestrial and Coastal Navigation 2	3	6	5	Nav 2
Nav 5	Operational Use of RADAR/ARPA	2	3	3	D-Watch 1
Seam 3	Cargo Handling and Stowage (Non-DG)	2	2	2	Seam 1
Seam 4	Cargo Handling and Stowage (DG and Inspections)	2	2	2	Seam 1
Met O 2	Meteorology and Oceanography 2	5	0	5	
*P.E. 3	Dual Sports	0	2	2	
TOTAL		17	15	22	



2ND YEAR 2ND SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
NGEC 3	The Contemporary World	3	0	3	
NGEC 11	Arts and Humanities	3	0	3	
Nav 4	Celestial Navigation	2	3	3	Nav 3
* Nav 6	Operational Use of ECDIS	1	3	2	Nav 5
Seam 6	Advanced Trim, Stability and Stress	6	0	6	Seam 2
D-Watch 1	Collision Regulation	3	0	3	
Mgmt 1	Leadership and Teamwork	3	3	4	
*P.E. 4	Team Sports	0	2	2	
TOTAL		21	11	26	

3RD YEAR 1ST SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
Rizal	The Life and Works of Dr. Jose Rizal	3	0	3	
MarCom	Maritime Communications (GMDSS for GOC)	3	6	5	
D-Watch 2	Deck Watchkeeping with Bridge Resource Management	2	3	3	D-Watch 1 Nav 6 Mgmt 1
MarEnv	Protection of the Marine Environment	3	0	3	
** Marlaw	Maritime Law	4	0	4	
TOTAL		15	9	18	

3RD YEAR 2ND SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
NGEC 6	Art Appreciation	3	0	3	
NGEC 2	Readings in Philippine History	3	0	3	
** MarPower	Basic Marine Engineering	4	0	4	
Seam 5	Ship Handling and Maneuvering	2	3	3	D-Watch 1
Nav 7	Voyage Planning	2	3	3	Nav 6
** Mgmt 2	Integrated Management Systems	2	0	2	
TOTAL		16	6	18	

4TH YEAR					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
BT	Basic Training	-	-	-	
	Shipboard Training	-	-	40	
TOTAL		-	-	40	



17.3 Sample 2-1-1 Program of Study for BSMarE Program

1ST YEAR 1ST SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
Draw	Maritime Drawing and Diagrams	0	3	1	
Electro 1	Basic Electricity	3	3	4	
E Mat	Engineering Materials	4	0	4	
Mech	Mechanics and Hydromechanics	3	0	3	
Ther	Thermodynamics	3	3	4	
Nav Arch	Naval Architecture for Marine Engineering	2	0	2	Co-req: Mech
***NGEC 9	Math, Science & Technology	3	0	3	
NGEC 4	Mathematics in the Modern World	3	0	3	
*P.E. 1	Basic Swimming	0	2	2	
*NSTP 1	National Service and Training Program 1	3	0	3	
TOTAL		24	11	29	

1ST YEAR 2ND SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
*ICT 1	Software Applications and Network System used in Seagoing Ships	1	3	2	
Mach 1	Hand and Measuring Tools	1	4	2	
Mach 2	Machining Tools	1	4	2	Co-req: Mach 1
Electro 2	Basic Electronics	2	3	3	Electro 1
Aux Mach 1	Auxiliary Machinery 1	5	3	6	Thermo, Mech
*P.E. 2	Advanced Swimming	0	2	2	
*NSTP 1	National Service and Training Program 2	3	0	3	
TOTAL		13	19	20	

2ND YEAR 1ST SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
IChem	Industrial Chemistry and Tribology	2	3	3	Mech
Electro 3	Marine Electricity and Electrical Maintenance	3	6	5	Electro 1
Auto 1	Basic Control Engineering	3	3	4	Electro 2, Mech
Aux Mach 2	Auxiliary Machinery 2	4	3	5	Aux Mach 1
Mach 3	Gas & Electric Welding	1	4	2	Mach 1 E Mat
*P.E. 3	Team Sports	0	2	2	
TOTAL		13	21	21	



2ND YEAR 2ND SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
Mgmt 2	Integrated Management System	2	0	2	
PPD	Power Plant Diesel	4	3	5	Thermo, Aux Mach 1, Mech, Auto 1, IChem
PPS	Power Plant Steam	5	3	6	
PASGT	Propulsion Ancillary System and Gas Turbine	2	3	3	
EWK 1	Engine Watchkeeping	3	0	3	Pre-req: Aux Mach 2 Co-req: PPD, PPS, PASGT
*Mar Env	Protection of the Marine Environment	3	0	3	
*P.E. 4	Dual Sports	0	2	2	
TOTAL		19	11	24	

3RD YEAR					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
BT	Basic Training	-	-	-	
	Shipboard Training	0	0	40	
TOTAL		0	0	40	

4TH YEAR 1ST SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
*Mar Law	Maritime Law	4	0	4	Auto 2
Mgmt 1	Leadership and Teamwork	3	0	3	
NGEC 1	Understanding the Self	3	0	3	
NGEC 2	Readings in Philippine History	3	0	3	
NGEC 3	The Contemporary World	3	0	3	
NGEC 5	Purposive Communication	3	0	3	
NGEC 6	Art Appreciation	3	0	3	
TOTAL		22	0	22	



4TH YEAR 2ND SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
Auto 2	Marine Automation	3	3	4	Auto 1
Maint	Maintenance and Repair	2	3	3	Aux Mach 2 PPD, PPS, PASGT Mach 3
EWK 2	Engine Watchkeeping with Resource Management	0	3	1	EWK 1 Mgmt 1
NGEC 7	Science, Technology and Society	3	0	3	
NGEC 8	Ethics	3	0	3	
NGEC 10	Social Sciences and Philosophy	3	0	3	
NGEC 11	Arts and Humanities	3	0	3	
Rizal	The Life and Works of Rizal	3	0	3	
TOTAL		20	09	23	

17.4 Sample 3-1 Program of Study for BSMarE Program

1ST YEAR 1ST SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
Electro 1	Basic Electricity	3	3	4	
Mach 1	Hand and Measuring Tools	1	4	2	
*ICT 1	Software Applications and Network System used in Seagoing Ships	1	3	2	
Draw	Maritime Drawing and Diagrams	0	3	1	
EMat	Engineering Materials	4	0	4	
*** NGEC 9	Math, Science & Technology	3	0	3	
NGEC 4	Mathematics in the Modern World	3	0	3	
*P.E. 1	Basic Swimming	0	2	2	
*NSTP 1	National Service and Training Program 1	3	0	3	
TOTAL		18	15	24	



1ST YEAR 2ND SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
Electro 2	Basic Electronics	2	3	3	Electro 1
Mach 2	Machining Tools	1	4	2	Co-req: Mach 1
Nav Arch	Naval Architecture for Marine Engineering	2	0	2	Co-req: Mech
Thermo	Thermodynamics	3	3	4	
Mech	Mechanics and Hydromechanics	3	0	3	
NGEC 2	Readings in the Philippine History	3	0	3	
NGEC 3	The Contemporary World	3	0	3	
*P.E. 2	Advanced Swimming	0	2	2	
*NSTP 2	National Service and Training Program 2	3	0	3	
TOTAL		20	12	27	

2ND YEAR 1ST SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
IChem	Industrial Chemistry and Tribology	2	3	3	
Electro 3	Marine Electricity and Electrical Maintenance	3	6	5	Electro 1
Mach 3	Gas & Electric Welding	1	4	2	Mach 1 E Mat
Aux Mach 1	Auxiliary Machinery 1	5	3	6	Thermo Mech
NGEC 5	Purposive Communication	3	0	3	
NGEC 6	Art Appreciation	3	0	3	
NGEC 7	Science, Technology and Society	3	0	3	
*P.E. 3	Team Sports	0	2	2	
TOTAL		20	18	26	

2ND YEAR 2ND SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
Aux Mach 2	Auxiliary Machinery 2	4	3	5	Aux Mach 1
Auto 1	Basic Control Engineering	3	3	4	Electro 2 Mech
NGEC 1	Understanding the Self	3	0	3	
NGEC 8	Ethics	3	0	3	
NGEC 10	Social Sciences & Philosophy	3	0	3	
NGEC 11	Arts and Humanities	3	0	3	
P.E. 4	Dual Sports	0	2	2	
TOTAL		19	8	23	



3RD YEAR 1ST SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
PPD	Power Plant Diesel	4	3	5	Thermo, AuxMach1, Mech, Auto 1, IChem
PPS	Power Plant Steam	5	3	6	
PASGT	Propulsion Ancillary System and Gas Turbine	2	3	3	
EWK 1	Engine Watchkeeping	3	0	3	Pre-req: Aux Mach 2 Co-req: PPD PPS PASGT
**Mgmt 1	Leadership and Teamwork	3	0	3	
TOTAL		17	9	20	

3RD YEAR 2ND SEMESTER					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
Auto 2	Marine Automation	3	3	4	Auto 1
Maint	Maintenance and Repair	2	3	3	Aux Mach 2 PPD PPS PASGT Mach 3
*Mar Env	Protection of the Marine Environment	3	0	3	
EWK 2	Engine Watchkeeping and Resource Management	0	3	1	EWK 1 Mgmt 1
**Mgmt 2	Integrated Management System	2	0	2	
**Mar Law	Maritime Law	4	0	4	
Rizal	The Life and Works of Dr. Jose Rizal	3	0	3	
TOTAL		17	9	20	

4TH YEAR					
Course	Descriptive Title	Contact Hours		Units	Prereq Coreq
		Lec	Lab		
BT	Basic Training	-	-	-	
	Shipboard Training	0	0	40	
TOTAL		-	-	40	



Section 18. Review, Revision and Approval of the Curriculum

MHEIs shall review the BSMT and BSMarE courses at least once a year, or as the need arises depending on the changes mandated by the regulatory authorities. Policies and procedures to this effect shall be embodied in the MHEIs quality management system.

Curriculum review is conducted annually for the purpose of monitoring its implementation. Revisions shall take effect at least after a cycle of the curriculum.

18.1 Review and Revision

- 18.1.1 The review and revision of the curriculum and course syllabi shall aim towards continuing improvement of the program;
- 18.1.2 Such review and revision shall consider alignment with STCW as amended and other international conventions as well as new laws, rules and regulations as well as the needs of industry; current trends and practices; and such other factors or considerations as may be applicable;
- 18.1.3 Any revision made on the curriculum and course syllabi must be clearly and properly identified and presented for purposes of evaluation and approval;

18.2 Submission of the proposed revised Curriculum

- 18.2.1 Any proposed revision below the minimum that affects the curriculum shall be submitted in duplicate copies at least one semester before the proposed implementation, to CHED Maritime Education Section (MES), Division of Programs with International Conventions, Office of Programs and Standards Development for approval;
- 18.2.2 However, any proposed revision that does not affect the minimum requirements of the curriculum shall be submitted in duplicate copies at least one semester before the proposed implementation, to CHED-MES for information;
- 18.2.3 The proposed revised curriculum shall be duly supported with documentary evidence that it is aligned with the standards of STCW as amended and other international agreements and is in accordance with the needs of industry, current trends, practices, laws etc.

18.3 Effectivity and Implementation of the approved revised Curriculum

- 18.3.1 A duly approved revised curriculum shall take effect and be implemented in the following academic year;
- 18.3.2 Such revised curriculum shall cover only the incoming freshmen although the MHEI is free to use the approved curriculum for students in the other years.



ARTICLE VIII COURSE SPECIFICATIONS

Section 19. The course specifications for the BSMT and BSMarE programs that meet the STCW standards as amended are contained in **Annex "C"** of this CMO.

Section 20. Sample means of Curriculum Delivery

The curriculum delivery for BSMT and or BSMarE begins with a clear identification of competencies the student must acquire and demonstrate at the end of the program. Appropriate teaching-learning strategies through a constructivist and learner-centered paradigm facilitate the acquisition of these competencies. Under this paradigm, the student is the subject of the learning process enabling the learner to achieve his/her full potentials.

The teaching-learning process is interactive, participatory, collaborative and experiential emphasizing the connection among courses to achieve a seamless integration towards holistic learning.

Curriculum delivery may vary on the classroom level. Hence, it shall show contribution of the courses/topics to the attainment of program and learning outcomes. The following teaching and learning activities may be utilized in the learner-center course delivery, but not limited to:

1. Peer/Team Teaching
2. Micro-teaching
3. Film/Video Viewing
4. Interactive Learning
5. Reporting
6. Brainstorming
7. Class Discussion/Question and Answer Technique
8. Panel Discussion
9. Focused Group Discussion
10. Workshop Activity
11. Buzz Session
12. Concept/Mind Mapping
13. Gallery Walk
14. Research Project
15. Seminar/Symposium
16. Debate
17. Study Tour

ARTICLE IX REQUIRED RESOURCES

Section 21. Organization

A distinct and separate College of Maritime Education shall be established for the operation of maritime programs. There shall be established department for every maritime program under the College of Maritime Education.



The College of Maritime Education shall be managed by a full-time Dean. The Dean may serve as concurrent department chair where appropriate. The Dean must be full-time in order to effectively carry out his/her functions and responsibilities as a dean.

Section 22. Dean

The Dean shall have the following qualifications:

Professional Qualifications				Academic Qualifications	
Level	Seagoing Experience	Experience		Degree	Trainings
		Teaching	Supervisory Capacity		
*Management	24 months as *management level officer	2 years	None	BSMT/BSMarE and any Master's degree to be completed within three years	6.09 & 3.12
*Management	12 months as *management level officer	3 years	1 year	BSMT/BSMarE and any Master's degree	6.09 & 3.12
*Management	**24 months as OIC	5 years	2 years	BSMT/BSMarE and any Master's degree	6.09 & 3.12
**OIC	**36 months as OIC	5 years	3 years	BSMT/BSMarE and any Master's degree	6.09 & 3.12

* Master or Chief Mate / Chief Engineer or Second Engineer

** Third Officer or Second Officer / Fourth Engineer or Third Engineer

Section 23. Department Chair/Head

23.1 BSMT

The Marine Transportation Department under the College of Maritime Education shall be administered by a Department Chair/Head who shall have the following qualifications:

Professional Qualifications				Academic Qualifications	
Level	Seagoing Experience	Experience		Degree	Trainings
		Teaching	Supervisory Capacity		
*Management	12 months as *management level officer	3 years	None	BSMT	6.09 & 3.12
*Management	24 months as **OIC	4 years	1 year	BSMT and any Master's degree	6.09 & 3.12

* Master or Chief Mate

** Third Officer or Second Officer



23.2 BSMarE

The Marine Engineering Department under the College of Maritime Education shall be administered by a Department Chair/Head who shall have the following qualifications:

Professional Qualifications				Academic Qualifications	
Level	Seagoing Experience	Experience		Degree	Trainings
		Teaching	Supervisory Capacity		
*Management	12 months as *management level officer	3 years	None	BSMarE	6.09 & 3.12
*Management	24 months as **OIC	4 years	1 year	BSMarE and any Master's degree	6.09 & 3.12

* Chief Engineer or Second Engineer

** Fourth Engineer or Third Engineer

Section 24. Faculty

24.1 Faculty members teaching **General Education Courses** shall be holders of appropriate master's degree in his/her field of specialization. However, in specific fields where there is dearth of holders of Master's degree, a holder of professional license requiring at least a bachelor's degree may be qualified to teach.

Faculty members teaching physical education courses shall be holders of a bachelor's degree in physical education or Bachelor of Science in Education with major or minor in physical education, or any other bachelor's degree with certificate in physical education.

24.2 Faculty members teaching **Professional Courses** shall be holders of relevant academic degree, experiences and credentials as follows:

Minimum Professional Qualifications				Academic Qualifications	
Level	Seagoing Experience	Experience		Degree	Trainings
		Teaching	Supervisory Capacity		
*OIC-NW	12 months as *OIC-NW on seagoing ship over 500 GT	n/a	n/a	BSMT	6.09
**OIC-EW	12 months as **OIC-EW on seagoing ship powered by main propulsion machinery of 750 kW propulsion power or more	n/a	n/a	BSMarE	6.09

* Third Officer or Second Officer

**Fourth Engineer or Third Engineer

Boatswain / fitter / able seafarer (deck or engine) with at least three years seagoing practice shall be allowed to conduct skills laboratory classes under supervision of a lead instructor.



24.3 Allied faculty members teaching **courses which fall under the category of professional** as enumerated under Section 6.5 of this CMO shall be holders of the following:

- a) Appropriate Bachelor's degree in such allied fields;
- b) Valid certificate of registration and/or PRC license of his/her profession and Certificate of Completion of the "Training Course for Instructors" (IMO Model Course 6.09)

24.4 Faculty members **teaching courses involving the use of simulators**, in addition to the requirements in the preceding paragraph shall:

- a) Be holders of a Certificate of Completion of the "Train the Simulator Trainer and Assessor Course" (IMO Model Course 6.10), or an approved training course for Simulator Instructors and Assessors by the Philippines' STCW Administration;
- b) Have gained practical operational experience on the particular type of simulators being used. This requirement may be satisfied through a planned in-house training of the maritime higher education institution or the transfer of technology training by the simulator supplier.

24.5 Management Level Courses/topics

The management level courses/topics as per curriculum mapping shall be taught by management level officers.

24.6 Teaching Load

The Dean, Department Chair/Head and Shipboard Training Officer may be allowed to handle a maximum teaching load of not more than 18 hours a week provided that their primary duties and responsibilities are not neglected.

A full-time faculty may be allowed a maximum teaching load of 30 contact hours per week. However, a faculty member with a documented very satisfactory teaching performance may be allowed to handle additional six (6) hours per week.

24.7 There shall be faculty manual containing information and policies on:

- a) Hiring, retention, promotion and separation;
- b) Functions and responsibilities;
- c) Ranking system;
- d) Evaluation;
- e) Salary rates;
- f) Faculty benefits; and
- g) Code of conduct/ethics.

24.8 Faculty Development

MHEIs shall develop and implement a system of faculty development for professional advancement of the faculty members.



Section 25. Assessments and Assessors

MHEIs shall institute a system and structure of assessment including appeals and remediation that will ensure the achievement of outcomes to comply with STCW standards that will remove faculty bias in the development of summative assessment (written, oral and demonstration of skills).

In addition, MHEIs shall ensure that students must pass any of the following prior to conferment of the BSMT or BSMarE degree:

- a) Comprehensive Examination
- b) Validation Examination
- c) Exit Examination

The MHEIS shall designate assessor/s with the following qualifications:

- 1 have an appropriate level of knowledge and understanding of the competence to be assessed
- 2 be qualified for the task for which the assessment is being made
- 3 have undergone training in:
 - a) "Training Course for Instructors" (IMO Model Course 6.09)
 - b) "Assessment, Examination and Certification of Seafarers" (IMO Model Course 3.12); and
 - c) "Train the Simulator Trainer and Assessor Course" (IMO Model Course 6.10), or an approved training course for Simulator Instructors and Assessors by the Philippines' STCW Administration for those assessing competence using simulators;
- 4 gained practical experience (e.g. teaching for at least one semester in the related subject or as assistant to an experienced assessor for at least one semester)
- 5 gained practical assessment experience on the particular type of simulator under the supervision and to the satisfaction of an experienced assessor for assessments involving the use of simulators.

The following tasks shall be performed by the designated assessor/s:

- 1 spearhead the design, development and enhancement of assessment tools;
- 2 Ensure reliability and validity of assessment tools; and
- 3 Monitor the administration of examination/assessment.

Records of assessment shall be maintained as per quality standards system of the MHEI.

Section 26. Technical Support Personnel

Technical Support Personnel particularly those in the laboratory must have the appropriate training or certification on laboratory supervision and safety. Laboratory safety is the responsibility of the institution. As such, the institution shall be responsible for keeping its laboratories properly used and maintained and free from dangers and hazards which may cause accidents or disease. The following must be observed:



- a) All laboratory activities shall be properly and adequately supervised by a faculty member; students shall not be allowed to work inside the laboratories unsupervised; and
- b) Each department with laboratory/ies shall have full-time laboratory technician/s to assist instructors, supervise students and maintain laboratory facilities;

Section 27. Grading System

27.1 Bases for Grading

The final grade or rating given to a student shall be based solely on scholarly performance in any course. Any adjustment diminution to the final grade for co-curricular activities, attendance or misconduct shall not be allowed. Any final grade given to a student may be reviewed in accordance with institutional academic processes.

Scholarly performance shall be measured by any of the following:

- 1 Lecture Component
 - a) Written Examinations
 - b) Oral Examinations
 - c) Research works
 - d) Outputs such as project, portfolio, and others
- 2 Laboratory Component
 - a) Scientific and Technical Experiments
 - b) Demonstration of competences acquired

27.2 Requirements for promotion

The promotion of a student from any curricular or component course towards graduation shall strictly comply with the conditions or requirements as follows:

- 1 The following shall be complied by the student for granting the necessary credits toward the completion of a course, or graduation from a BSMT or BSMarE program:
 - has enrolled in the program;
 - has satisfactorily complied with the admission requirements;
 - has faithfully and regularly attended classes; and
 - has demonstrated the required outcomes as defined in the standards.
- 2 A student shall be promoted or permitted to enroll in advanced or specialized courses provided the basic and pre-requisite course(s) are complied with, except otherwise provided in this CMO, MORPHE or by the Commission.



- 3 A student shall earn academic credits for promotion towards graduation, provided a final grade of at least fifty percent (50%) or its equivalent in curricular or component course, as determined by proper institution authorities on academics.
- 4 The scholastic records of every student shall be filed with the institution until the close of the next academic term, for reference or examination in case of any grievance or complaint.

27.3 Requirements for Grading

The grading system for a student in curricular or component courses shall strictly comply with the conditions or requirements as follows:

- a) No provisional, conditional or temporary final grade for any curricular or component course shall be given to a student.
- b) In case a student fails to take a final examination or submit an academic requirement for completion of a course and that his/her scholastic performance is not sufficient to merit a final passing grade, an institution may, consistent with its academic policies, give the student a final grade which does not earn any academic credit nor indicates failure such as "NC" for "No Credit" or "NG" for "No Grade". Such a grade is permanent and cannot be subsequently changed. Provided however, that where the failure to take the final examination, or to submit the academic requirements, is due to excusable grounds, such as, sickness, emergency, or accident, the student may be given an incomplete mark or "INC". Provided further, that the institution allows special or completion examinations, or additional time for compliance of the requirements. In no case shall an incomplete or "INC" mark remain for more than one (1) academic year.
- c) The passing standard shall be the grade of 50%. However, the institution may raise the passing standard. To get the percentile grade, the number of correct answers called raw score shall be divided by the total number of test points and multiplied by 100.
- d) The transmutation of grades shall not be allowed.

Percentage (%) is used in determining and expressing a student's raw scores in every examination. The table below shows a **sample** of the range of percentage marks and their corresponding equivalents.



Percentage Grade	Letter Grade	Descriptive Rating	Five Point Grading	Remarks
90 – 100%	A	Excellent	1	Meets minimum competence with exceptional score
80 – 89%	B	Very Good	1.5	Meets minimum competence with over and above average score
70 – 79%	C	Good	2	Meets minimum competence with above average score
60 – 69%	D	Satisfactory	2.5	Meets minimum competence with average score
50 – 59%	E	Pass	3	Meets minimum competence
0 – 49%	F	Fail	5	Does not meet the minimum competence

Section 28. Library

The library personnel, facilities and holdings shall conform to existing CHED requirements for libraries which are embodied in a separate CHED issuance.

Section 29. Carrying Capacity

The intake of students for all levels shall be computed with the following ratios in mind.

29.1 For BSMT program

FACILITIES AND LABORATORY EQUIPMENT RATIO	Ratio
CHART ROOM: CHART TABLES	1:2
NAVIGATIONAL EQUIPMENT: MARINE SEXTANT	1:5
SHIP'S BRIDGE SIMULATOR	1:4
GMDSS/COMMUNICATION SIMULATOR	1:4
SEAMANSHIP ROOM: WORK BENCHES	1:8
SEAMANSHIP ROOM: VISES FOR SPLICING	1:2
SEAMANSHIP ROOM: PAINTING STAGE WITH RIGGING	1:6
SEAMANSHIP ROOM: BOATSWAIN'S CHAIR	1:5
PERSONAL PROTECTIVE EQUIPMENT	1:1
FACULTY RATIO FOR LECTURE	1:40
FACULTY RATIO FOR LABORATORY	1:20
SHIPBOARD TRAINING	60% deployment rate of students with CAR per academic year



29.2 For BSMarE Program

FACILITIES AND EQUIPMENT RATIO	LABORATORY	Ratio
DRAWING TABLE		1:1
LATHE MACHINE		1:5
ELECTRIC ARC WELDING MACHINE		1:4
GAS WELDING		1:4
DIESEL ENGINE		1:8
For Operational diesel engine (2 or 4 stroke whichever is available):		1:2
1) For engine of 5-20kW		1:4
2) For engine of 21-60kW		1:6
3) For engine of 61-100kW		1:8
4) For engine of 101-200kW		
For Non-operational, complete 400kW marine diesel engine		1:8
STEAM PLANT		1:8
REFRIGERATION		1:6
PUMPS/ SEPARATORS	COMPRESSORS/	1:5
TEST INSTRUMENTS		1:1
TRAINING KIT/MODULE		1:4
MAIN SWITCHBOARD		1:5
PROCESS CONTROL SIMULATOR		1:4
ENGINE ROOM SIMULATOR (ERS)		1:4
PERSONAL PROTECTIVE EQUIPMENT		1:1
FACULTY RATIO FOR LECTURE		1:40
FACULTY RATIO FOR LABORATORY		1:20
SHIPBOARD TRAINING		60% deployment rate of students with CAR per academic year

The carrying capacity of BSMT and or BSMarE programs in recognized MHEIs shall be reviewed annually to facilitate changes in the number of enrollees depending on new investments in faculty recruitment and development, equipment, facilities and opportunities for supervised shipboard training.

ARTICLE X FACILITIES AND EQUIPMENT

Section 30. Institutional Sites and Buildings

30.1 An MHEI shall own its institutional sites and buildings to conform with CHED standards, fire and building code and city/provincial ordinances. The institutional sites and buildings shall be equipped with adequate equipment, safety measures and procedures but not limited to the following:

- a) Fire escape
- b) Fire alarm systems
- c) Campus security force



30.2 Site/Building/Room Requirements shall include the following:

- a) Institutional site/lot
- b) Athletic field and/or gymnasium
- c) Administrative Offices (General or Executive Office, Registrar, Accounting, National Service Training Program (NSTP), Guidance/Placement office)
- d) Medical and dental clinic
- e) Toilets
- f) Canteen/cafeteria
- g) Faculty room
- h) Student lounge
- i) Library room
- j) Laboratory room
- k) Tool room
- l) Shipboard Training Office
- m) Research and Extension Office
- n) Adequate facilities for swimming or MOA with service providers

Section 31. Classroom

The standard classroom shall be a minimum of **1.2 square meters** per student. Classrooms must be well-lighted and well-ventilated. They should contain the necessary equipment and furniture such as chairs, instructor's podium, and black/white boards.

Section 32. Laboratory

Laboratory rooms shall allow space appropriate to the size of the equipment and the number of students. It should be well-ventilated and well-lighted, contain the specific laboratory equipment and, where appropriate, adequate water supply is provided. The following laboratory rooms shall be made available:

32.1 For BSMT program

- a) Chart plotting
- b) Bridge simulator covering RADAR-ARPA and ECDIS
- c) Seamanship
- d) GMDSS

32.2 For BSMarE program

- a) Engine Simulator
- b) Machinery Room that can house the marine engine, refrigeration, electrical equipment, etc.
- c) Machine shop

32.3 Laboratory Equipment

As a general policy, all laboratory equipment **except those stipulated in Section 14.1** shall be owned by the institution and located within the institutional site. There shall be sufficient number of equipment, machinery, apparatus, supplies, tools and other



materials, accessories and consumables contained in **Annex D** of this CMO.

“Sufficient and appropriate” means that the number of such teaching aids and equipment shall be proportionate and adequate to the number of students enrolled in a particular course so as to ensure their sufficient exposure to the equipment and attainment of the required outcomes.

The institution shall provide the necessary audiovisual room and facilities with appropriate equipment in support of the teaching-learning process such as video, sound system, multi-media projectors, and others.

ARTICLE XI RESEARCH AND EXTENSION

Section 33. Organization

MHEIs are expected to fulfill the three-fold functions of higher education institutions—teaching, research and extension. To carry out these functions, they shall designate a coordinator for research and extension.

Section 34. Research

The faculty of MHEIs shall pursue research that reflects scholarship of application, integration, teaching, or, in exceptional instances, scholarship of discovery.

The faculty shall provide opportunities for all students to integrate research into required projects and activities (e.g. formulation of a navigation plan; formulation of a plan for the management of a marine environment, among others).

Section 35. Extension Services

Every MHEI shall have extension services relevant to the maritime industry. The following must be observed:

- a) Annual extension services program
- b) Annual extension services budget
- c) Tracer study program
- d) Linkages to community
- e) Appropriate impact studies (effectiveness of the extension programs)
- f) Proper documentation of all extension activities must be maintained



ARTICLE XII QUALITY STANDARDS SYSTEM

All Maritime Higher Education Institutions shall comply with the minimum standards and guidelines governing a quality standards system pursuant to Regulation I/8, Section A-I/8 and B-I/8 of the STCW Code, as amended.

ARTICLE XIII ADMISSION AND RETENTION

Every MHEI shall establish a guidance system that will monitor the progress of the student's scholastic performance and personality development. Maritime institutions shall adhere to the following admission and retention criteria:

Section 36. Student general admission requirements:

- 1) Academic Qualifications:
 - a) Senior High School graduate
 - b) Students who graduated in High School on or before June 2016. However, to ensure college readiness of the students enrolling under the new higher education curricula, the admitting MHEIs may require bridging program for the general education component. (CMO No. 10, S. 2017)
 - c) First, second, third, fourth, fifth, sixth year college students under the old higher education curricula who stopped schooling and intend to re-enroll by June 2018. (CMO No. 10, S. 2017)
- 2) Admission test
 - a) IQ Test
 - b) Personality Test
 - c) Math, Science and English Aptitude Test
- 3) Physical and medical fitness Test
Meet the requirements under Regulation I/9, Section A-I/9 of the STCW Code:
 - a) have the physical capability, taking into account paragraph 5 below, to fulfil all the requirements of the basic training as required by section A-VI/1, paragraph 2;
 - b) demonstrate adequate hearing and speech to communicate effectively and detect any audible alarms;
 - c) have no medical condition, disorder or impairment that will prevent the effective and safe conduct of their routine and emergency duties on board during the validity period of the medical certificate;
 - d) are not suffering from any medical condition likely to be aggravated by service at sea or to render the seafarer unfit for such service or to endanger the health and safety of other persons on board; and
 - e) are not taking any medication that has side effects that will impair judgment, balance, or any other requirements for effective and safe performance of routine and emergency duties on board.



MHEIs shall establish a student retention policy duly documented in its Quality Standard System. As a general rule all students shall:

- 1) Pass the Pre-Employment Medical Examination for seafarers following the requirements under Regulation I/9 of the STCW;
- 2) Finish the BSMT or BSMarE program within 6 years after completion of academic requirements. Otherwise, the student shall take remedial programs depending on the MHEIs Quality Standards Systems (QSS) requirements.

ARTICLE XIV COMPLIANCE OF HEIs

Using the CHED Implementation Handbook for OBE and ISA as reference, a HEI shall develop the following items which will be submitted to CHED when they apply for a permit for a new program or the approval of the transformation of existing programs to outcomes-based framework:

Section 38. A complete set of institutional and program outcomes, including its proposed additional program outcomes

Section 39. Proposed curriculum, and its justification, including a curriculum map

Section 40. Proposed performance indicators for each outcome. Proposed measurement system for the level of attainment of each indicator

Section 41. Proposed outcomes-based syllabus for each course, arranged in sequence following the curriculum matrix

Section 42. Administration, faculty, and staff profile with supporting documents

Section 43. Teaching assignments vis-à-vis faculty qualifications per term

Section 44. List of library, laboratory, and classroom facilities and equipment, with supporting documents

Section 45. List of available support services, with supporting documents

Section 46. Proposed system of program assessment and evaluation

Section 47. Proposed system of program Continuous Quality Improvement (CQI).

Article XV MISCELLANEOUS PROVISIONS

Section 48. Sanctions

Non-compliance with the provisions of this CMO, after due process, shall make it imperative for the Commission to impose sanctions. The sanctions for MHEIs offering the BSMT and or BSMarE programs shall be based on the outcome of the monitoring visits or institutional



performance in shipboard training deployment of students starting AY 2017-2018, thus:

1) Result of the Joint CHED-MARINA monitoring and evaluation in the following different key areas of evaluation:

- a) Quality Standards System;
- b) Curriculum;
- c) Teaching Methods and Media of Delivery (Academic Strategies);
- d) Examination and Assessment System;
- e) Faculty (Instructors, Assessors and including Support Staff);
- f) Admission and Retention;
- g) Facilities and Training Equipment; and
- h) Shipboard Training (excluding shipboard deployment)

Note: Sanctions with respect to the same Non-conformance

Non-Conformance with Areas of Evaluation in PSG	1st Visit	2nd Visit	3rd Visit
1-3 areas	Warning	Limited intake of freshmen (100 freshmen or carrying capacity, whichever is lower)	Phase out if the MHEI failed to comply within the specified timeframe in the policies, standards and guidelines for monitoring
4 areas	Warning	Phase out if the MHEI failed to comply within the specified timeframe in the policies, standards and guidelines for monitoring	
More than 4 areas	Phase out if the MHEI failed to comply within the specified timeframe in the policies, standards and guidelines for monitoring		

2) Performance in the Shipboard Training (SBT) of Cadets

Required Minimum SBT Deployment Percentage (60% of CAR issued)	Year 1 2018	Year 2 2019	Year 3 2020
45-59 %	Warning	Limited intake of freshmen (100 freshmen or carrying capacity, whichever is lower)	Phase out
30-44 %	Limited intake of freshmen (100 freshmen or carrying capacity, whichever is lower)	Phase out	
Below 30%	Phase out Stop admission of Freshmen		



Section 49. Repealing Clause

All issuances, relevant to policies, standards and guidelines which are inconsistent with the provision of this CMO are hereby repealed, amended, modified or superseded accordingly in accordance with the intent of this Order.

Section 50. Separability Clause

If any part or provision of this CMO shall be held unconstitutional or invalid, other provisions hereof which are not affected thereby shall continue to be in full force and effect.

Section 51. Transitory Provisions

While Port State Control, Flag Administrations and Shipping Companies are internalizing the IMO STCW.7/Circ.24 on the interim guidance of the implementation of the STCW, 1978, as amended, MHEIs shall issue certificates of completion together with the Transcript of Records (TOR) for the following courses:

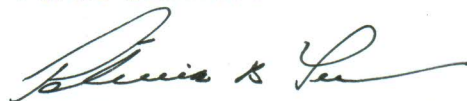
1. Electronic Chart Display and Information System (**ECDIS**)
2. Global Maritime Distress and Safety System (**GMDSS**) for General Operator's Certificate (**GOC**)
3. Deck Watch keeping with Bridge Resource Management
4. Engine Watch Keeping with Resource Management

Section 52. Effectivity Clause

This CMO shall take effect immediately upon approval of the Commission and 15 days after its publication in the Official Gazette or in a newspaper of general circulation.

Quezon City, Philippines, August 15, 2017.

For the Commission:



PATRICIA B. LICUANAN, Ph.D.
Chairperson

Annexes:

- A - Curriculum Mapping
- B - Clarification on the status of Physical Education and other Mandated / Legislated Courses in the New General Education Curriculum (G.E.C)
- B.1 - Clarification on the implementation of CHED Memorandum Order (CMO) No. 20, S. 2013 entitled "General Education Curriculum: Holistic Understandings, Intellectual and Civic Competencies"
- B.2 - Clarification on the Implementation of CHED Memorandum Order (CMO) on the offering of Filipino and Panitikan courses in all Higher Education Programs
- C - Course Specifications
- D - Minimum Required Equipment

