



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



CHED MEMORANDUM ORDER

No. 20

Series of 2021

SUBJECT: GUIDELINES ON THE IMPLEMENTATION OF FLEXIBLE LEARNING OPTIONS AND GRADUAL REOPENING OF CAMPUSES FOR LIMITED FACE-TO-FACE CLASSES DURING THE COVID-19 PANDEMIC PERIOD FOR THE BACHELOR OF SCIENCE IN MARINE TRANSPORTATION (BSMT) AND BACHELOR OF SCIENCE IN MARINE ENGINEERING (BSMarE) PROGRAMS

In accordance with the pertinent provisions of Republic Act (RA) No. 7722, otherwise known as the "Higher Education Act of 1994"; Republic Act No. 11469, otherwise known as the "*Bayanihan* to Heal as One Act", in accordance with relevant Inter-Agency Task Force (IATF) Resolutions, CHED Memorandum Order (CMO) No. 4, s. 2020 "Guidelines on the Implementation of Flexible Learning," and CHED-DOH Joint Memorandum Circular "Guidelines on the Gradual Reopening of Higher Education Institutions (HEIs) for Limited Face-to-Face Classes During COVID-19 Pandemic," and by virtue of Commission en Banc (CEB) Resolution No. 410-2021 and CEB Resolution No. 530-2021, the Commission on Higher Education (CHED) hereby adopts and promulgates the following Guidelines on the Implementation of Flexible Learning Options and Gradual Reopening of Campuses for Limited Face-to-Face Classes During the COVID-19 Pandemic Period for the BS Marine Transportation and BS Marine Engineering Programs, to be implemented by public and private Maritime Higher Education Institutions.

I. RATIONALE

Maritime Higher Education Institutions (MHEIs), being at the forefront, are challenged to minimize educational disruptions and be able to provide innovative teaching solutions in this time of pandemic or national calamities. At the same time, MHEIs should remain compliant with the local requirements and the International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers, 1978, as amended (STCW Convention, 1978, as amended).

Against such background, MHEIs necessitate adjusting to new ways of teaching and learning while ensuring quality in the delivery of maritime education and training. Thus, flexible learning and limited face-to-face classes are being adopted to keep education resilient in any unprecedented situation. This arrangement will allow the MHEIs to continue the delivery of its programs especially the conduct of laboratory, basic training, and onboard training.

The CHED-DOH Joint Memorandum Circular (JMC) No. 2021-001 also catalyzed the development of guidelines that will cater to the unique requirements of the Bachelor of Science in Marine Transportation (BSMT) and Bachelor of Science in Marine

Engineering (BSMarE) programs, particularly the Basic Training and Onboard Training or “practicum,” which is a requirement for graduation.

II. SCOPE AND COVERAGE

All recognized MHEIs and those institutions under permit status to operate the BSMT and BSMarE are covered by these general guidelines on the implementation of flexible learning and gradual reopening of classes using the limited face-to-face approach for laboratory activities. Flexible learning as a delivery mode of instruction may be adopted starting Academic Year (AY) 2021-2022, subject to regular CHED-MARINA monitoring. It covers all ongoing students enrolled in the MHEIs, including the incoming first-year students of every academic year.

For MHEIs under the Modified General Community Quarantine (MGCQ) and General Community Quarantine (GCQ), the Commission may give authority to conduct limited face-to-face classes subject to compliance with this CMO, other policies of the IATF, minimum public health standards and COVID-19 related protocols of the Department of Health (DOH), health and safety protocols of the LGUs, policies/guidelines/advisories issued by CHED, and policies of relevant government agencies, provided that the applicant MHEI is offering technical course/s which laboratory component cannot be delivered without the limited face to face classes.

For MHEIs whose students live in dormitories within the campus (operating as boarding schools), a bubble environment following strictly the health and safety protocols of DOH or IATF shall be created and maintained. In doing so, limited face-to-face classes shall be allowed for other student activities such as student orientations, immersions, or campus familiarization.

The continuity and completion of students’ BSMT or BSMarE program support the position of the Philippines as the major supplier of qualified and competent seafarers who are considered as essential workforce and prime movers of the country’s economy. These guidelines reiterate the urgency of completing the Basic Training (BT), as a pre-requisite to On-Board Training (OBT). Likewise, the carrying out of the On-Board Training of qualified maritime students in accordance with Annex B of the Joint CHED-MARINA Memorandum Circular (JCMMC) No. 1, series of 2019 is paramount importance in the completion of the maritime programs. For the purposes of ensuring safety amidst the pandemic, additional guidelines are covered in this CMO.

III. DEFINITION OF TERMS

Gradual Reopening – pertains to the progressive reopening of MHEIs campus/es for limited face-to-face classes. The reopening shall be done by considering the following: (a) community quarantine status or health situation of localities of HEIs; (b) priority year level of the programs; (c) courses requiring the conduct of laboratory activities, exercises, or assessment using the face-to-face environment.

Face-to-Face Classes – pertains to a teaching-learning environment wherein faculty, instructors and students are physically present in one room/facility/area at the same time.

Limited Face-to-Face Classes – pertains to restricting the number of students to attend face-to-face classes by using cyclical student shifting or rotating schedules, physical distancing, and other health and safety protocols.

Retrofitting – pertains to making changes in the facilities of the MHEIs to ensure the health and safety of students and staff while inside the campus/es. Examples of these changes are putting up safety barriers, posting signages, rearranging rooms and communal areas, etc.

Bubble Environment – is a bio-secure bubble which is operationally described as a hosting arrangement for carrying out academic and co-curricular activities necessary for the attainment of program outcomes which have been affected by the COVID-19 pandemic; such activities are held at a centralized site within an enclosed environment, often behind closed doors, with strict quarantine, health and safety protocols for the students, faculty and other school personnel who will be engaged with the students inside the bubble until the completion of courses. This arrangement will be strictly enforced in order to prevent the entry and transmission of the Coronavirus disease.

IV. GUIDELINES

A. Flexible Learning

These guidelines are based on the CHED Memorandum Order No. 04, series of 2020 entitled “CHED Guidelines on the Implementation of Flexible Learning” and shall hereby be adopted.

MHEIs shall be guided by the following additional/modified guidelines:

1. Flexible Learning should be aligned with the Outcomes-Based Education approach which allows flexibility for the MHEIs to employ various means of delivery. Thus, the curriculum per JCMCC No. 1, s 2019 “Policies, Standards and Guidelines for BS Marine Transportation and BS Marine Engineering Programs” shall still be observed.
2. Section IV, General Guidelines of CMO No. 04, s. 2020, shall be revised/modified as follows:
 - a) The Learning Continuity Plan (LCP) shall be submitted in electronic (PDF) and hard copy to the Maritime Education Section, Division of Programs with International Conventions, Office of Programs and Standards Development, CHED Central Office copy furnished CHED Regional Office at the beginning of the academic year 2021-2022, for information.
 - b) Hence, the LCP shall be subjected to the usual monitoring procedures of CHED and MARINA.
 - c) The LCP shall reflect the framework and system for the transition and integration of flexible learning approaches and overall absorptive capacity of the MHEI to articulate its preparedness and response interventions that reduce the disruption of classes and impact of natural calamities making continuity of learning more resilient.”



The LCP to this effect shall be embodied in the MHEI's Quality Standards System indicating the following but not limited to:

- a) systems and procedures adopted for the transition to Flexible Learning including key people, modalities, resources, retrofitting of facilities, support services for students and faculty, assessment of effectiveness, teaching and learning activities and requirements, expected outcomes, including that for On-Board Training, among others;
- b) policies on enrollment, attendance, reporting and updating of student-teacher engagement, grading system, teaching complement, Intellectual Property Rights (IPR), and Open Educational Resources (OER) for plagiarism among others;
- c) constant coordination with the concerned IATF and Local Government Unit (LGU), and other relevant stakeholders relative to appropriate mandated localized advisories and health and safety protocols;
- d) overview and orientation Guide for Students and Teachers;
- e) mechanisms for continuous quality improvement.

Accordingly, the following is the suggested program implementation for Academic Year 2021-2022

AREAS	MODES OF DELIVERY		
	OFFLINE	BLENDED	ONLINE
1. Program of Study Modification	<p>Separate lecture offering from laboratory</p> <p>e.g. Split into Nav 1 lecture and Nav 1 laboratory</p> <p>The completion of the lecture phase of the course is considered as compliance with the prerequisite requirement</p> <p>e.g. Nav 2 lecture can be taken after completion of Nav1 lecture</p>	<p>Separate lecture offering from laboratory</p> <p>e.g. Split into Nav 1 lecture and Nav 1 laboratory</p> <p>The completion of the lecture phase of the course is considered as compliance with the prerequisite requirement</p> <p>e.g. Nav 2 lecture can be taken after completion of Nav 1 lecture</p>	<p>Separate lecture offering from laboratory</p> <p>e.g. Split into Nav 1 lecture and Nav 1 laboratory</p> <p>The completion of the lecture phase of the course is considered as compliance with the prerequisite requirement</p> <p>e.g. Nav 2 lecture can be taken after completion of Nav 1 lecture</p>
2. Course Delivery (Modalities)	<p>Printed self-instructional modules</p> <p>To improve retention and maximize student learning, a spiraling strategy is advised to be used in the course delivery</p>	<p>Uses educational technology and learning platforms, and limited face to face in the delivery of course outcomes</p> <p>To improve retention and maximize student learning, a spiraling strategy is advised to be used in the course delivery</p>	<p>Uses educational technology and learning platforms in the delivery of course outcomes</p> <p>To improve retention and maximize student learning, a spiraling strategy is advised to be used in the course delivery</p>

3. Learning Resources	Teaching-Learning materials should be available offline and/or printed modules	Teaching-Learning materials should be available online, offline and/or printed modules	Learning resources should be available online
4. Student Engagement	Scheduled limited face-to-face/in-person classroom instruction, as needed to attain the required outcomes	Scheduled limited face-to-face and/or online meeting/lecture, as needed to attain the required outcomes	Scheduled online meeting, as needed to attain the required outcomes
5. Academic Calendar	Based on the latest promulgation by IATF and/or relevant government agency	Based on the latest promulgation by IATF and/or relevant government agency	Based on the latest promulgation by IATF and/or relevant government agency
6. Laboratory Activities/ Exercises	In general, scheduled face-to-face laboratory classes with a minimal number of students and observing the necessary health and safety protocols.	In general, scheduled face-to-face laboratory classes with a minimal number of students and observing the necessary health and safety protocols.	Applicable to MHEIs who have the capability to conduct simulation remotely

In terms of the implementation of Lecture, Laboratory, and Assessment depending on the Category of Students relative internet connectivity and availability of learning resources, the following are the suggested teaching and learning approaches:

AREAS	APPROACHES BASED ON THE DIFFERENT CATEGORIES OF STUDENTS IN TERMS OF INTERNET CONNECTIVITY AND AVAILABILITY OF LEARNING RESOURCES		
	Category 1 (No capacity and connectivity)	Category 2 (Limited capacity and/or weak/ intermittent connectivity)	Category 3 (With capacity and full connectivity)
Lecture	Mode of delivery depends on the topic; if it requires performance output, limited face-to-face instruction may still be required. Modules/activities/ portfolios may be sent through courier or students may get from the school the hard copy (printed) or the	Mode of delivery depends on the topic; if it requires performance output, limited face-to-face instruction may still be required. Materials should be downloadable for use in offline mode. The courseware should be similar to the hard copy (printed) of the course	Mode of delivery depends on the topic; if it requires performance output, limited face-to-face instruction may still be required. Materials should be downloadable for use in offline mode. The courseware should be similar to the hard copy of the course package.



	<p>portable drive</p> <p>SMS may be used for simple lecture clarifications.</p> <p>Submission of outputs based on timelines/schedule agreed between student and instructor</p> <p>For failure to submit on time, make-up written schoolwork may suffice.</p>	<p>package.</p> <p>Modules/ activities/ portfolios may also be sent through the following modes:</p> <ol style="list-style-type: none"> 1. through a link where the students may access, whenever possible, the electronic copy of the learning materials 2. hard copy or portable drive through courier <p>Communication may be sent through SMS, e-mail, Messenger, etc.</p> <p>Submission of outputs based on timelines/schedule agreed between student and instructor.</p> <p>If connectivity is limited, but students at least have gadgets that can connect with FB, Messenger, e-mail, Viber, or Skype, these can be used for a limited but productive period of time for teacher-student interaction to discuss assignments and home readings.</p>	<p>Modules/ activities/ portfolios should be available in the LMS or other online platforms.</p> <p>Regular online classes should be conducted. Submission of outputs based on timelines/schedule agreed between student and instructor.</p>
Laboratories	<p>In general, workshop activities need to be done in scheduled face-to-face laboratory classes with a minimal number of students and observing the necessary health and safety protocols.</p> <p>Make-up laboratory</p>	<p>In general, workshop activities need to be done in scheduled face-to-face laboratory classes with a minimal number of students and observing the necessary health and safety protocols.</p> <p>For laboratory courses</p>	<p>In general, workshop activities need to be done in scheduled face-to-face laboratory classes with a minimal number of students and observing the necessary health and safety protocols.</p> <p>For laboratory courses</p>

	<p>classes may be delayed/rescheduled until after the lifting of ECQ or when limited face-to-face classes are allowed</p>	<p>that do not require the use of equipment, depending on the ILOs, HEIs could provide activities, worksheets, case studies, videos, recorded footage, and the like. These materials can be made available to the students using Facebook, e-mail, Skype, Viber, etc.</p> <p>Intermittent online meetings between teachers and students may be conducted, but actual laboratory activities may be done after the lifting of ECQ or when limited face-to-face classes are allowed</p>	<p>that do not require the use of equipment, depending on the ILOs, HEIs could provide activities, worksheets, case studies, videos, recorded footage, and the like. These materials can be made available to the students using Facebook, e-mail, Skype, Viber, etc.</p> <p>Regular online meetings between teachers and students should be conducted, but actual laboratory activities may be done after the lifting of ECQ or when limited face-to-face classes are allowed</p>
<p>Final Assessment</p>	<p>Assessment materials may be sent as hard copies or via portable drives through courier.</p> <p>Submission of outputs may be in the same mode (through courier) and shall be based on the timelines/ schedule set by the Instructor or Assessor.</p> <p>Assessment may also be done after quarantine is relaxed or lifted due to integrity concerns.</p> <p>Students who fail will be graded "Incomplete" and be given additional time to complete based on the institution's new policy under COVID-19</p>	<p>Assessment materials may be sent through the electronic address or link where the students may access, whenever possible. Assessment should be done online, employing appropriate procedures to ensure that the enrolled student is the one taking the test.</p> <p>Students who fail will be graded "Incomplete" and be given additional time to complete based on the institution's new policy under COVID-19</p>	<p>For schools with LMS, assessment materials should be incorporated.</p> <p>Assessment should be done online, employing appropriate procedures to ensure that the enrolled student is the one taking the test.</p> <p>Students who fail will be graded "Incomplete" and be given additional time to complete based on the institution's new policy under COVID-19</p>



B. LIMITED FACE-TO-FACE CLASSES (LF2F)

The following are the general guidelines relative to the gradual reopening of limited face-to-face classes in maritime programs. These guidelines shall have a supplementary effect on the CHED-DOH Joint Memorandum Circular 2021-001.

1. The MHEI applying for LF2F shall identify the specific learning outcome/activities for the laboratory distinct from the lecture component.
2. It is within the discretion of the MHEIs when to conduct the limited face-to-face classes for the laboratory component of courses during the pandemic.
3. MHEIs wishing to hold limited face-to-face classes shall follow the application and evaluation procedures provided in CHED-DOH JMC 2021-001. The validity of the authority to be given to the MHEIs shall be in accordance with the provisions in said guidelines.
4. The MHEI with complete application documents and information shall be inspected by an evaluation team organized by the CHEDRO and may be composed of CHED, LGU, DOH, and/or IATF. The evaluation instrument for retrofitted facilities (refer to Annex A) shall be used by the evaluation team during the on-site inspection. If the MHEI still needs to improve the retrofitting of its facilities, it may request another on-site inspection after the completion of improvements.
5. MHEIs authorized to conduct limited face-to-face classes shall strictly implement minimum health and safety protocols as specified in CHED-DOH JMC 2021-001 such as but not limited to wearing of Personal Protective Equipments (PPE), physical distancing of 1.5 meters, without prejudice to MHEIs increasing the prescribed physical distance, etc.
6. If the student prefers to do flexible learning during the pandemic, the MHEI shall permit and let the student take the face-to-face class whenever possible without prejudice to readmission and maximum residency.
7. MHEIs shall register students who prefer and are allowed to attend limited face-to-face classes with PhilHealth or equivalent medical insurance that covers medical expenses related to COVID-19.
8. Students reporting to MHEI daily for limited face-to-face classes must pass health and safety protocols through the triage section while dorm-in students should be quarantined prior to billeting at the dormitory.
9. Students, faculty members, instructors, and staff shall strictly adhere to the health and safety protocols of their respective MHEIs and be transparent in declaring health conditions, including those of family members.
10. Dormitories inside the MHEI campus shall be covered by inspection of their respective LGUs for clearance and compliance to health and safety protocols of IATF (refer to Annex A)
11. Basic Training



Maritime students may undergo Basic Training in Maritime Training Institutions approved by the MARINA, per MARINA Advisory 2020-36 series 2020, provided that the MHEI has been given approval by CHED to conduct limited face-to-face, following minimum health and safety protocols.

12. On-Board Training (OBT)

Maritime students who have completed the required classroom instruction for shipboard training based on the MHEIs' approved Program of Study shall be allowed by the institution to undergo On-Board Training, subject to compliance with Annex B of JCMMC No. 1, series 2019, and other requirements of manning or shipping companies prior to boarding and deployment.

Likewise, maritime students who have completed the required theoretical component of the BSMT or BSMarE program whether under the 2-1-1 or 3-1 scheme, may also be allowed to be deployed for On-Board Training, and to complete the laboratory component upon the return of the students prior to graduation.

The OBT of maritime students is equivalent to the on-the-job training or practicum of many other degree programs. Enrolled students to OBT are required to undergo practical training onboard the ship within 12 months. Under the regulatory requirements of the International Maritime Organization (IMO), its Maritime Safety Committee (MSC) issued MSC 1/Circ.1636/Rev.1 dated 22 Apr 2021 that requires the implementation of Protocols for Ensuring Safe Ship Crew Changes and Travel during the COVID-19 Pandemic.

The shipping or manning company ensures the health and safety of students by providing the COVID-19 tests and facilitating quarantine prior to departure for OBT.

Students on OBT are covered by medical insurance from Protection & Indemnity (P&I) in case of illnesses, injury, accident, and death onboard per POEA's Standard Contract.

13. Competency Matrix

Due to the pandemic, the outcomes for the practical tasks/output that will lead to the attainment of the competency matrix have been identified for students' demonstration after the completion of the course. To ensure that the MHEIs will be properly guided on the implementation of courses requiring limited face-to-face, Annexes B and C will be used as references.

14. Student Affairs Services

Student Affairs Services shall follow the guidelines under CMO No. 8, series of 2021 entitled "Guidelines on the Implementation of Flexible Delivery of Student Affairs Services (SAS) Programs during the COVID-19 Pandemic".



V. 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.

VI. EFFECTIVITY

This Guidelines shall take effect immediately.

Quezon City, Philippines, Oct. 13, 2021.

For the Commission:



J. PROSPERO E. DE VERA III, DPA
Chairman
Commission on Higher Education





**APPLICATION FOR GRADUAL OPENING OF CAMPUS/ES OF MHEI
FOR LIMITED FACE-TO-FACE CLASSES
Evaluation Instrument for Inspection of Retrofitted Facilities**

Name of MHEI:	
Address:	
Date of On-Site Inspection:	
Semester and Academic Year:	
Degree Program/s and Corresponding Courses:	
Total No. of Classrooms to be used:	
Total No. of Laboratories to be used:	
List of Laboratories to be used: (Please do not abbreviate)	

AREAS OF EVALUATION	COMPLIANCE		REMARKS
	Complied	Not Complied	
A. Classrooms			
1. There is adequate ventilation (air exchange).			
2. The table-chair layout adheres to the physical distancing of 1.5 m.			
3. The faculty will be teaching behind a transparent/clear partition.			
4. There are visible and readable signages of health and safety reminders.			
5. There are markings on the floor to direct one-way foot traffic.			
6. There is a station by the door for hand sanitizer or alcohol.			
B. Laboratories			
1. There is adequate ventilation (air exchange).			
2. The lab station layout adheres to the physical distancing of 1.5 m.			
3. The faculty will be teaching behind a transparent/clear partition.			
4. There are visible and readable signages of health and safety reminders.			
5. There are markings on the floor to direct one-way foot traffic.			
6. There is a station by the door for hand sanitizer or alcohol.			
C. Eating/Dining Area/Communal Areas			
1. There is adequate ventilation (air exchange).			
2. The table-chair layout adheres to the physical distancing of 1.5 m.			
3. For dining areas, there is transparent/clear partition between diners.			
4. There are visible and readable signages of health and safety reminders including avoidance of conversation or socializing with others while dining.			
5. There are markings on the floor to direct one-way foot traffic.			
6. The foot markings on the floor adhere to the physical distancing of 1.5 m.			
7. There is handwashing or sanitizing station by the entry and exit points.			
D. Library			
1. There is adequate ventilation (air exchange).			
2. The table-chair layout adheres to the physical distancing of 1.5 m.			
3. There is a dedicated drop off box/station for returned books.			
4. There are visible and readable signages of health and safety reminders.			
5. There are markings on the floor to direct one-way foot traffic.			
6. The foot markings on the floor adhere to the physical distancing of 1.5 m.			
7. There is a station for hand sanitizer or alcohol by the entry or exit points.			

E. Isolation Room for Symptomatic Individuals			
1. The room accommodates a maximum of one person per use.			
2. There is adequate ventilation (air exchange).			
3. There is a self-closing door, if possible.			
4. There is a single bed.			
5. There is a dedicated comfort room.			
6. It is near the exit gate.			
7. There is a foot-operated "handwash" basin or hands-free sanitizer or alcohol dispenser.			
8. There are dedicated trash bins for various types of wastes.			
9. There are dedicated cleaning and disinfection materials.			
F. Comfort Rooms			
1. There is adequate ventilation (air exchange).			
2. There is adequate supply of water.			
3. There are visible and readable signages of health and safety reminders.			
4. There is a visible and readable signage posted by the door indicating maximum number of persons allowed to use the comfort room at any given time.			
5. There is a station for hand sanitizer or alcohol by the door.			
6. Each toilet cubicle has a dedicated trash bin.			
7. Each comfort room has a dedicated cleaning and disinfection materials.			
G. Stairways/Corridors			
1. There are markings on the floor to direct one-way foot traffic.			
2. The foot markings on the floor adhere to the physical distancing of 1.5 m.			
3. There are visible and readable signages of health and safety reminders.			
4. There are safety barriers/partitions in the middle (lengthwise) of the stairways/corridors to avoid human interaction/intersection. For narrow corridors/stairways, the safety barriers/partitions shall be solid. If not possible, designate the area for entrance and exit traffic flow.			
H. Entry/Exit Gates			
1. There are distinct signages for entry and exit gates/points.			
2. There are visible and readable signages of health and safety reminders.			
3. There is a station for hand sanitizer or alcohol by the door.			
4. There is screening station/s at the entry point.			
5. There is a queueing system for people to enter or exit the campus.			
6. There are markings on the floor to direct one-way foot traffic.			
7. The foot markings on the floor follow the physical distancing of 1.5 m.			
I. Foot Traffic			
1. There is one-way foot traffic.			
2. There are visible markings on the floor or walls to properly direct people.			
3. The foot markings adhere to physical distancing of 1.5 m.			

J. Elevators (if applicable)			
1. There is queueing system for the use of the elevator.			
2. There are visible markings on the elevator floor to direct where user/s will stand.			
3. There are foot markings on the floor for people standing in line. These foot markings adhere to physical distancing of 1.5 m.			
4. There is no elevator attendant.			
5. There are visible and readable signages of health and safety reminders.			
6. There are safety barriers/partitions for people standing in line.			
K. Dormitories			
1. There is adequate ventilation for single occupancy, and if group occupancy, there must be air exchange through the use of exhaust/ intake fans			
2. The bunks/beds adhere to the physical distancing of 1.5 m			
3. There are visible and readable signages of health and safety reminders			
4. There are markings on the floor to direct one-way foot traffic			
5. There is a station by the door for hand sanitizer or alcohol			
6. There is a dedicated comfort room			
7. There are dedicated trash bins for various types of wastes			
8. There are dedicated cleaning and disinfection materials			
9. There are safety barriers/partitions in the middle (lengthwise) of the stairways/corridors of the dorm to avoid human interaction/intersection. For narrow corridors/stairways, the safety barriers/partitions shall be solid. If not possible, designate the area for entrance and exit traffic flow			
10. There is a queueing system for people to enter or exit the dormitory			
RESULT OF INSPECTION: <input type="checkbox"/> Compliant <input type="checkbox"/> Not Compliant			
COMMENTS:			

Inspected by:

Name and Signature of CHED Official	Name and Signature of DOH Official	Name and Signature of IATF Official	Name and Signature of LGU Official

Conforme:

Name and Signature of Head of MHEI or Chair of the Crisis Management Committee



**MATRIX OF LIMITED FACE-TO-FACE COMPETENCY TASKS FOR
COURSES OF BACHELOR OF SCIENCE IN MARINE TRANSPORTATION**

Course	STCW Code and Competence	Tasks Requiring Limited Face to Face Delivery	Equipment to be used
NAV 1 Navigational Instruments with Compasses	A-II/1.F1.C1 Plan and conduct a passage and determine position of the Ship	Operate electronic navigational equipment such as GPS, AIS, echo-sounder, gyro and magnetic compass	Navigation simulator, GPS, AIS, echo sounder, gyro and magnetic compass
NAV 2 Terrestrial and Coastal Navigation 1	A-II/1.F1.C1 Plan and conduct a passage and determine position of the Ship	Update navigational charts and publications in accordance with the latest information available	Notices to mariners, navigational charts, different publications, compass divider, parallel ruler & navigational triangle
NAV 3 Terrestrial and Coastal Navigation 2	A-II/1.F1.C1 Plan and conduct a passage and determine position of the Ship	Measure the distance between two points on a Mercator chart Apply relevant information obtained from Charts, Lists of Lights and Other Publications in passage planning Plot position lines to determine ship's position using terrestrial observation.	Navigational charts, compass divider, parallel ruler and navigational triangle Navigational charts, different publications Navigational charts, parallel ruler, navigational triangle, simulator & compass divider



<p>NAV 4 Celestial Navigation</p>	<p>A-II/1.F1.C1 Plan and conduct a passage and determine position of the Ship</p>	<p>Determine errors of magnetic and gyro compass and apply corrections in obtaining true course and bearing</p> <p>Determine compass error using celestial bodies</p> <p>Plot ship's position using celestial observation</p> <p>Adjust the error of the sextant</p>	<p>Navigation charts, navigation simulator, azimuth circle, gyro compass repeater</p> <p>Navigation charts, azimuth circle, gyro compass repeater, chronometer, stop watch, star finder.</p> <p>Navigation charts, parallel ruler, navigational triangle, sextant, chronometer, stop watch, star finder, & position plotting chart</p> <p>Sextant</p>
<p>DWK 2 Deck Watchkeeping With Bridge Resource Management</p>	<p>A-II/1.F1.C2 Maintain a safe navigational watch</p>	<p>Perform assigned watchkeeping duties as part of the bridge team, in different weather, sea and traffic conditions, utilizing all bridge equipment in ensuring the safety of navigation</p> <p>Perform manual radar plotting techniques using information obtained from radar observations in a crossing situation</p>	<p>Navigation Simulator, Ship's Logbook and Bell book</p>
<p>NAV 5 Operational Use of RADAR/ARPA</p>	<p>A-II/1.F1.C3 maintain safety of Navigation through the Use of RADAR and ARPA</p>	<p>Use RADAR/ARPA in collision avoidance during restricted visibility</p> <p>Use Parallel Indexing to monitor and maintain the vessel on track</p> <p>Demonstrate Manual Target acquisition in ARPA</p> <p>Demonstrate how to use the Trial Maneuver function of ARPA</p>	<p>Navigation Simulator</p>

<p>NAV 6 Operational Use of ECDIS</p>	<p>A-II/1.F1.C4 maintain the safety of navigation through the Use of ECDIS</p>	<p>Demonstrate proficiency in operation, interpretation and analysis of information obtained from ECDIS to maintain safety of navigation</p>	<p>Navigation Simulator or ECDIS Simulator</p>
<p>NAV 7 Voyage Planning</p>	<p>A-II/2.F1.C1 Plan a voyage and conduct navigation</p>	<p>Execute the voyage plan and monitor in accordance with the plan</p>	<p>Navigation simulator, navigational charts, parallel ruler, navigational triangle, & compass divider</p>
<p>MARCOM Maritime Communications (GMDSS for GOC)</p>	<p>A-II/1.F1.C6 Respond to a distress signal at sea</p>	<p>Transmit and receive "Distress, Urgency, Safety and Routine" communications using GMDSS sub-systems and equipment</p>	<p>Navigation Simulator or GMDSS Simulator</p>
<p>Seam 1 Ship, Ship Routines and Ship Construction</p>	<p>A-II/5.F3.C1 Contribute to the safe operation of deck equipment and machinery</p>	<p>Perform marlinespike seamanship skills and riggings in accordance with shipboard instructions and safety standards</p>	<p>Boatswain's chair, rigging stage, pilot ladder, wire rope, nylon rope, Manila rope, marlinespike, vises attached to work benches</p>
<p>A-II/5.F4.C1 Contribute to shipboard maintenance and repair</p>	<p>Perform deck maintenance works in accordance with shipboard instructions and safety standards</p>	<p>Hand and power tools, chipping hammer, scraper, paint brush, paint roller, wire brush, grease gun</p>	<p>Navigation Simulator</p>
<p>SEAM 5 Ship Handling and Maneuvering</p>	<p>A-II/1.F1.C9 Maneuver the ship</p>	<p>Demonstrate the application of the principles of ship handling, to counter the effect of deadweight, draught, trim, speed and under keel clearance on ships's turning circle and stopping distances and effect of wind and current on ship handling while maintaining safety of navigation</p>	<p>Navigation Simulator</p>



<p>ICT Software Applications and Network Systems used in seagoing ships</p>	<p>A-III/6.F1.C5 Operate computers and computer networks on ships</p>	<p>Perform appropriate maneuvers and procedures in rescuing persons overboard using a simulator</p>	<p>maneuver the ship to avoid risk of collision in crossing, meeting and overtaking situations</p>	
	<p>Troubleshoot Shipboard Computer and Network System</p>		<p>Computers Network Cables</p>	

**MATRIX OF FACE-TO-FACE COMPETENCY TASKS FOR
COURSES OF BACHELOR OF SCIENCE IN MARINE ENGINEERING**

Course	STCW Code and Competence	Task/Output Requiring Face to Face Delivery	Equipment to be used
EWK 2 Engine Watchkeeping with Resource Management	A-III/1.F1.C1 Maintain a safe engineering watch	<p>Perform safe engineering watch by lining up machineries for Main Propulsion as to the following conditions:</p> <ol style="list-style-type: none"> 1. Deadship to running two generators on line. 2. Lining up and starting seawater and freshwater cooling systems for Aux Machineries and ME. 3. L.O. and F.O Purification 4. Preparation and watchkeeping from in-port condition to ME standby 5. Preparation and watchkeeping from ME Standby to Run-up. 	Engine Room Simulator
	A-III/2.F1.C3 Conduct Operation, surveillance, performance assessment and maintain safety of propulsion plant and auxiliary machinery	<ol style="list-style-type: none"> 1. Operate & Monitor engineering equipment and systems according to standard set and maintain records in conformity with the principles to be observed in keeping an engineering watch such as: 2. Full navigation watch with the propulsion engine running and all aux machinery in operation focus on: <ul style="list-style-type: none"> • efficient operation of the plant • surveillance 	

Course	STCW Code and Competence	Task/Output Requiring Face to Face Delivery	Equipment to be used
		<ul style="list-style-type: none"> performance assessment and maintaining safety of propulsion plant <p>Operate propulsion plant and auxiliaries, in Navigation Mode, in crises situation to demonstrate knowledge and ability to apply decision-making techniques such as:</p> <ul style="list-style-type: none"> situation and risk management identify and consider generated options selecting course of action evaluation of outcome effectiveness changeover of remote/automatic to local control of all systems 	
Aux Mach 1 Auxiliary Machinery 1	A-III/1.F1.C4 Operate main and auxiliary machinery and associated control system	Operate, maintain and troubleshoot the following auxiliary machineries in accordance with standard procedure:	<ol style="list-style-type: none"> Various pumps Air compressor Fresh water generator Heat exchanger Deck machinery such as mooring winch and windlass
Aux Mach 2 Auxiliary Machinery 2	A-III/1.F1.C4 Conduct Preparation, operation, fault detection and necessary measures to	<ol style="list-style-type: none"> Operate and troubleshoot purifier systems using manufacturers manual or guidelines set Operate and troubleshoot refrigeration systems using manufacturers manual or guidelines set 	Purifier, Refrigeration System, Steering Gear, In the absence of actual equipment,

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	<p>prevent damage of purifiers, refrigeration, air-conditioning and ventilation systems</p> <p>Perform Operation, surveillance, performance assessment and maintain safety of propulsion plant and auxiliary machinery</p>	<p>3. Operate and troubleshoot steering gear systems using manufacturers manual or guidelines set</p>	<p>the MHEI may use simulators that comply to STCW Regulation 1/12 and Section A-1/12 Part 1 & 2.</p>
<p>IChem Industrial Chemistry and Tribology</p>		<p>With the use of Testing Kit Equipment, test and analyze a given sample of:</p> <ol style="list-style-type: none"> 1. Fuel oil, 2. Lubricating oil, 3. Boiler water and 4. Cooling water 5. Compare results to standard and recommend treatment (if needed) to achieve the set standard. 	<p>Testing Kit Equipment</p>
<p>PPD Power Plant Diesel</p>	<p>A-III/1.F1.C4: Operate main and auxiliary machinery and associated control systems</p>	<p>Preparation, operation, fault detection and necessary measures to prevent damage of</p> <p>(.1) main diesel engine and associated auxiliaries and</p> <p>(.3) auxiliary prime movers and associated systems</p>	<p>Main Diesel Engine and auxiliary prime mover with required cooling, fuel, and lubricating system.</p> <p>In the absence of actual equipment, the MHEI may use simulators that comply to STCW Regulation 1/12</p>

Course	STCW Code and Competence	Task/Output Requiring Face to Face Delivery	Equipment to be used
	<p>A-III/2.F1.C3: Carry out Operation surveillance, performance, assessment and maintain safety of propulsion plant and auxiliary machinery</p>	<p>Demonstrate</p> <ol style="list-style-type: none"> efficient operations, surveillance, performance assessment avoid pollution of marine environment and maintaining safety of <u>diesel propulsion plant</u> and auxiliary machinery 	<p>and Section A-1/12 Part 1 & 2. Main Diesel Engine and auxiliary prime mover with required cooling, fuel, and lubricating system. In the absence of actual equipment, the MHEI may use simulators that comply to STCW Regulation 1/12 and Section A-1/12 Part 1 & 2.</p>
<p>PASGT Propulsion Ancillary Systems & Gas Turbine</p>	<p>A-III/2.F1.C2: Plan and schedule operations of Gas Turbine and Propulsion Ancillary Systems</p>	<p>With the use of ERS or similar device, perform start up and shut down of main propulsion and auxiliary machinery including associated systems demonstrate</p> <ol style="list-style-type: none"> efficient operations, surveillance, performance assessment avoid pollution of marine environment and maintaining safety of <u>Gas Turbine propulsion plant</u> and Ancillary Systems 	<p>Main Diesel Engine and auxiliary prime mover with required cooling, fuel, and lubricating system. In the absence of actual equipment, the MHEI may use simulators that comply to STCW Regulation 1/12</p>

Course	STCW Code and Competence	Task/Output Requiring Face to Face Delivery	Equipment to be used
<p>PPS Power Plant Steam</p>	<p>A-III/2.F1.C2: Plan and schedule operations of Steam Propulsion System</p>	<p>Safely operate (from cold condition) the steam boiler and associated auxiliaries in accordance with the established rules and procedures to ensure safety of operations and avoid pollution of marine environment demonstrate</p> <ul style="list-style-type: none"> e. efficient operations, f. surveillance, g. performance assessment g. avoid pollution of marine environment and h. maintaining safety of <u>power plant steam</u> and auxiliary machinery 	<p>and Section A-1/12 Part 1 & 2.</p> <p>Boiler and associated system</p> <p>In the absence of actual equipment, the MHEI may use simulators that comply to STCW Regulation 1/12 and Section A-1/12 Part 1 & 2.</p>
<p>Auto 1 Basic Control Engineering</p>	<p>A-III/2.F1.C2 Manage troubleshooting restoration of electrical and electronic control equipment to operating condition</p>	<p>Demonstrate the functions and mechanism of automatic control for auxiliary machinery including the following:</p> <ul style="list-style-type: none"> • steam boilers • oil purifier • refrigeration system • pumping and piping systems • steering gear system • cargo handling equipment and deck machinery <p>Demonstrate the</p> <ul style="list-style-type: none"> • Troubleshooting of electrical and electronic control equipment • Function test of electrical, electronic control equipment and safety devices 	<ul style="list-style-type: none"> • steam boilers • oil purifier • refrigeration system • pumping and piping systems • steering gear system • cargo handling equipment and deck machinery <p>Note: In the absence of actual equipment, the MHEI may use simulators that</p>

Course	STCW Code and Competence	Task/Output Requiring Face to Face Delivery	Equipment to be used
		<p>Troubleshooting of monitoring systems</p> <p>Software version control</p>	<p>comply with STCW Regulation 1/12 and Section A-1/12 Part 1 & 2.</p> <p>Main Diesel Engine and auxiliary prime mover with required cooling, fuel, and lubricating system.</p> <p>In the absence of actual equipment, the MHEI may use simulators that comply to STCW Regulation 1/12 and Section A-1/12 Part 1 & 2.</p>
<p>Auto 2 Marine Automation</p>	<p>A-III/1. F1.C4: Operate main and auxiliary machinery and associated control systems</p>	<p>Demonstrate the function and performance tests of the following equipment and their configuration:</p> <ul style="list-style-type: none"> • monitoring systems • automatic control devices protective devices <p>Demonstrate the operation of automatic control equipment and safety devices of the following machinery;</p> <ol style="list-style-type: none"> 1. Main engine <ul style="list-style-type: none"> • over speed trip • low LO press. , Etc. 2. Generator and <ul style="list-style-type: none"> • over speed trip • low LO press. , Etc. 3. Distribution system 	<p>Main Diesel Engine required cooling, fuel, and lubricating system.</p> <p>Diesel Generator with MSB and distribution system.</p> <p>Steam boiler and associated system</p>

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		<ul style="list-style-type: none"> • Under voltage trip • MSB alarms • trips, Etc. 4. steam boiler <ul style="list-style-type: none"> • low water level • low low water level 	<p>In the absence of actual equipment, the MHEI may use simulators that comply to STCW Regulation 1/12 and Section A-1/12 Part 1 & 2.</p>
		<p>With the use of pneumatic trainer or similar device, construct and operate a pneumatic control circuit for a specific application:</p> <ol style="list-style-type: none"> 1. Main propulsion plant operation control <ul style="list-style-type: none"> • Ahead • Astern 	<p>Pneumatic trainer or similar device</p>
<p>Electro 1 Basic Electricity</p>	<p>A-III/1.F2.C1 Operate electrical, electronic and control systems</p> <p>A-III/1.F2.C2 Maintain and repair of electrical and electronic equipment</p> <p>A-III/1.F2.C2</p>	<ol style="list-style-type: none"> 1. Conduct individual operational testing on Insulation tester, Continuity tester, Multi-tester and Clamp meter. Individual testing of battery voltage, and specific Gravity and compare to standard parameters. 2. Demonstrate function test of each parts, resetting, replacement, etc. of Circuit Protection Devices 3. With the use of Electrical training board, or similar devices demonstrate: <ol style="list-style-type: none"> a. Wiring and Testing of a direct-on-line (DOL) motor starter using a control circuit 	<ol style="list-style-type: none"> 1. Insulation tester, 2. Continuity tester, 3. Multi-tester and 4. Clamp meter



Course	STCW Code and Competence	Task/Output Requiring Face to Face Delivery	Equipment to be used
	<p>Maintain and repair of electrical and electronic equipment</p> <p>A-III/1. F2.C3 Manage troubleshooting restoration of electrical and electronic control equipment to operating condition</p>	<p>b. Wiring of direct online motor starter (non-reverse and forward reverse)</p> <p>4. Troubleshoot and rectify fault for a given motor starter control</p> <p>With the use of Motor Control Training Board or similar equipment, demonstrate practical knowledge on troubleshooting of electrical and electronic control equipment</p> <ol style="list-style-type: none"> 1. forward control circuit 2. reverse control circuit <p>With the use of Motor Control Equipment, Electronic Circuit Board Trainer or similar equipment, troubleshoot sequential control and electronic problems using a:</p> <ol style="list-style-type: none"> 1. Live line tester 2. Multi-meter (digital and analog) 	<p>Motor Control Training Board or similar equipment,</p> <p>Motor Control Equipment, Electronic Circuit Board Trainer or similar equipment,</p>
<p>Electro 2 Basic Electronics</p>	<p>A-III/1.F2.C1 Operate electrical, electronic and control systems</p> <p>A-III/1.F2.C2 Maintain and repair of electrical</p>	<p>With the use of Electronic Circuit Board Trainer or similar equipment construct a ladder diagram for a given sequence control circuit</p> <p>Scoring board or similar device</p> <p>With the use of Motor Control Training Board or similar equipment, demonstrate practical knowledge on troubleshooting of electrical and electronic control equipment</p>	<p>Electronic Circuit Board Trainer or similar equipment</p> <p>Motor Control Training Board or similar equipment</p>

Course	STCW Code and Competence	Task/Output Requiring Face to Face Delivery	Equipment to be used
	<p>and electronic equipment</p> <p>A-III/1. F2.C2 Maintain and repair of electrical and electronic equipment</p> <p>A-III/1. F2.C3 Manage troubleshooting restoration of electrical and electronic control equipment to operating condition</p>	<p>1. forward control circuit reverse control circuit</p> <p>With the use of Motor Control Equipment, Electronic Circuit Board Trainer or similar equipment, troubleshoot sequential control and electronic circuit problems using a</p> <ol style="list-style-type: none"> 1. Live line tester 2. Multi-meter (digital and analog) 	<p>Motor Control Equipment, Electronic Circuit Board Trainer or similar equipment,</p>
<p>Electro 3 Marine Electricity & Electrical Maintenance</p>	<p>A-III/1.F2.C1 Operate electrical, electronic and control systems</p> <p>A-III/1.F2.C2 Maintain and repair of electrical and electronic equipment</p>	<p>With the use of MSB simulator, ERS, or similar devices, demonstrate paralleling and changeover of generators according to establish rules and procedures</p> <ol style="list-style-type: none"> 1. Manually adjusting of automatic voltage regulator by the use of external voltage adjuster of the AVR 2. Activation of Preferential trip device by overloading the generator load 3. Adjusting of frequency governor switch to synchronize two generators in parallel 	<p>MSB simulator, ERS, or similar devices,</p>

Course	STCW Code and Competence	Task/Output Requiring Face to Face Delivery	Equipment to be used
	<p>A-III/1. F2.C2 Maintain and repair of electrical and electronic equipment</p> <p>A-III/1. F2.C3 Manage troubleshooting restoration of electrical and electronic control equipment to operating condition</p>	<p>4. Manual paralleling and sharing of load using MSB simulator (use of synchro lamp and synchroscope)</p> <p>With the use of Electrical training board, or similar devices demonstrate Wiring and Testing of a direct-on-line (DOL) motor starter using a control circuit</p> <ol style="list-style-type: none"> 1. Wiring of direct online motor starter (non-reverse and forward reverse) 2. troubleshoot and rectify fault for a given motor starter 3. Locating 440V low insulation by stopping the motor one by one. <p>Demonstrate maintenance and repair of the following:</p> <ol style="list-style-type: none"> 1. Overhauling of electric motor <p>Demonstrate function and conduct performance tests of protective devices such as:</p> <ul style="list-style-type: none"> ● OCR ● Circuit Breaker ● Fuse 	<p>Electrical training board, or similar devices</p> <p>Electric motor</p> <ol style="list-style-type: none"> 1. OCR 2. Circuit Breaker 3. Fuse
<p>Mach 1 Hand and Measuring Tools</p>	<p>A-III/1.F3.C1: Use of hand tools, machine tools and measuring instruments for</p>	<p>Demonstrate appropriate use of measuring instruments to ensure precise and accurate measurements in the maintenance, repair and fabrication works onboard the ship.</p>	<p>Measuring instruments such as:</p> <ol style="list-style-type: none"> 1. Caliper 2. Micrometer 3. Depth Gauge

Course	STCW Code and Competence	Task/Output Requiring Face to Face Delivery	Equipment to be used
Mach 2 Machining Tools	fabrication and repair on board A-III/1.F3.C1: Use of hand tools, machine tools and measuring instruments for fabrication and repair on board	<ol style="list-style-type: none"> Demonstrate the use of lathe machine, drill press, bench grinder, circular cutter and pipe bender Using the correct PPE, apply safety measures when operating different machine tools. Fabricate metal work pieces using the following lathe operations per specification: <ul style="list-style-type: none"> ● turning, ● facing, ● outside threading, ● tapering 	Lathe machine, drill press, bench grinder, circular cutter and pipe bender
Mach 3 Gas & Electric Welding	A-III/1.F3.C1: Use of hand tools, machine tools and measuring instruments for fabrication and repair on board	<ol style="list-style-type: none"> Using all the proper PPE, demonstrate safety measures to be taken to ensure a safe working environment for using electric arc and gas welding equipment. Using low carbon flat bar, demonstrate cutting, joining metals, etc., to designated tolerances and sizes using electric arc and gas welding equipment using flat, vertical, and horizontal welding positions. Using low carbon flat bar, demonstrate cutting, joining metals, etc., of typical ship-related components to designated tolerances and sizes using electric arc and gas welding equipment. 	Electric arc and gas welding equipment.
Maint Maintenance and Repair	A-III/1.F3.C2 Maintain and repair of	Disassemble and assemble the following pumps based on manufacturers manual <ul style="list-style-type: none"> ● Rotary lobe pump 	1. Rotary lobe pump

Course	STCW Code and Competence	Task/Output Requiring Face to Face Delivery	Equipment to be used
	<p>shipboard machinery and equipment A-III/2.F3.C3 Ensure safe working practices</p>	<ul style="list-style-type: none"> • Progressive cavity pump • Rotary gear pump • Piston pump • Diaphragm pump • Screw pump • Gear pump • Hydraulic pump, 	<ol style="list-style-type: none"> 2. Progressive cavity pump 3. Rotary gear pump 4. Piston pump 5. Diaphragm pump 6. Screw pump 7. Gear pump 8. Hydraulic pump,
	<p>A-III/1.F3.C2: Maintain and repair of shipboard machinery and equipment</p>	<p>Demonstrate maintenance and repair, such as:</p> <ol style="list-style-type: none"> 1. dismantling 2. adjustment 3. reassembling of the following machinery and equipment: <ol style="list-style-type: none"> a. Pumps b. Turbocharger c. Air compressor d. Heat exchanger e. Hoist and lifting equipment 	<ol style="list-style-type: none"> 1. Pumps 2. Turbocharger 3. Air compressor 4. Heat exchanger 5. Hoist and lifting equipment
	<p>A-III/1.F3.C2 Maintain and repair of shipboard machinery and equipment</p>	<p>Disassemble and assemble a turbo charger of a marine diesel engine based on manufacturer's manual including explanation of parts and functions.</p>	<p>Turbo charger</p>

Course	STCW Code and Competence	Task/Output Requiring Face to Face Delivery	Equipment to be used
	A-III/2.F3.C2 Detect and identify the cause of malfunctions and correct faults	Perform disassembly and assembly of the following machinery: ·plate type heat exchanger ·shell and tube type heat exchanger	1. Plate type heat exchanger 2. Shell and tube type heat exchanger
	A-III/5.F3.C1 Contribute to the operation of equipment and machinery	Demonstrate the Safe operation of hoists and lifting equipment including uses basic crane, winch and hoist signals	Hoists and lifting equipment
ICT Software Applications and Network Systems used in seagoing ships	A-III/6.F1.C5 Operate computers and computer networks on ships	Troubleshoot Shipboard Computer and Network System	Computers Network Cables