

Undergraduate Student Handbook



Academic Year
2020-21

Department

of **M**arine
Engineering

Ocean University
of Sri Lanka





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Department of Marine Engineering
Faculty of Engineering & Management
Ocean University of Sri Lanka, Crow Island, Colombo 15, Sri Lanka [http://
www.ocu.ac.lk](http://www.ocu.ac.lk)

Vice Chancellor's Message

future prosperity of Sri Lanka depends on how well we manage the potential of Sri Lanka's geographical location as a hub of ocean affairs. Our location in the Indian Ocean has shaped our history over a long period of time and will continue to do so in the future. New consumer markets are emerging all across the Indian Ocean connecting major economies of the east and west that contribute to the growth of maritime activities in the busy east-west shipping route, only a few nautical miles south of Sri Lanka. On this Silk Route, more than 150,000 ships annually carry two-thirds of the world's oil supply and a half of the ocean freight. Furthermore, Sri Lanka has its jurisdiction up to 200 nautical miles and we have claimed extended exclusive economic zone beyond 200 nautical miles seabed under the United Nations Convention of the Law of the Sea. In addition, Sri Lanka is situated between the east west natural nautical corridors and has become an important contribution to the future of our country. As a nation, we are responsible for repositioning our strategies to maximize utilization of these advantages. Human resources development is the mandate of the Ocean University, an essential element to fully tap this potential and has the capacity to cater this important task. At present, the University offers degree programs in the fields of Marine Engineering, Oceanography, Fisheries and Aquaculture, Maritime Transport Logistics, Coastal and Marine Resources Management. Further, it offers skill sector, NVQ level diploma and certificate courses in the related areas within network of regional centres.

This handbook would guide you to the information on the Department of Marine Engineering in the Faculty of Engineering and Management at the University. I hope that you would be benefited by this important learning opportunity to mould yourself towards a successful carrier in ocean related industries.

I wish you all the success!

Prof. Nalin Ratnayake
B.Sc. Hons (Peradeniya), M.Sc. (Japan), Ph.D. (Japan), C. Geol.,
Professor in Marine Geology.

Vision

To provide innovative solutions for marine, maritime and fisheries sectors

Mission

To be the centre of excellence in marine and fisheries education in the region

We adhere to the following values in everything we do:

- Integrity** : We let our thoughts demonstrate strong moral principles and ethical practices
- Quality** : Being practiced as habitual actions in everything we do
- Excellence** : Never satisfied with something less than the best
- Sustainability** : we agree without debate that we are liable to the wellbeing of all the stakeholders (3BLs)

Contact Details

Name	Designation	Telephone	E mail
Prof. Nalin Ratnayake	Vice Chancellor	+94 114346971	vc@ocu.ac.lk
Dr. H.B. Jayasiri	Dean, Faculty of Engineering and Management	+94 717507838	jayasiriBocu.ac.lk
Mr. S.U.P. Jinadasa	Head, Department of Marine Engineering	+94 719352999	priyanthaj@ocu.ac.lk
Mr. Hemantha Rathnayake	Registrar	+94 114343973	registrar@ocu.ac.lk
Mr. Rashintha Thushara	Senior Assistant Registrar, Examinations	+94 114346976	rashintha.thushara@ocu.ac.lk
Mr. Dilantha Perera	Assistant Registrar, Student Affairs	+94 114346979	studentenroll@ocu.ac.lk
Ms. Manjula Kahawita	Director Finance	+94 114346974	Manjula.kahawita@ocu.ac.lk
Ms. Manel Rupika	Librarian	+94 114346980	Manel.Rupika@ocu.ac.lk

General Contact Information

Administration

admin@ocu.ac.lk

Carriers

carriers@ocu.ac.lk

Information

info@ocu.ac.lk

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1 Introduction

1.1 The Ocean University of Sri Lanka

The Ocean University of Sri Lanka was established based on the Sri Lanka Ocean University Act No: 31 of 2014. The Ocean University is conducting Higher Education and Vocational Education in Ocean and Marine Sciences including Maritime sector to fulfil the needs of related industries. Currently, Higher Education offers B.Sc. degree programs in (1) Marine Engineering, (2) Marine Transportation Management and Logistics, (3) Coastal and Marine Resources Management, (4) Fisheries and Marine Sciences, and (5) Oceanography and B.Tech.in Seafood Technology. Study curriculum consists of theory and mandatory practical sessions which are conducted compatible with the international standards.

Vocational Education offers NVQ level diploma and certificate courses in fisheries and marine sector. This section is more focused on shipboard skill development and provides Diploma and Certificate courses in National Vocational Qualification (NVQ 3–5) and that can be upgraded to a degree level academic qualifications.

1.2 Faculties

The university consists of two faculties

- I. Faculty of Engineering and Management (FEM)
- II. Faculty of Fisheries and Ocean Sciences (FFOS)

1.4 Department of Marine Engineering (DMaE)

Marine engineering applies basic engineering principles to systems design, construction and operation predominately in maritime environments. This includes not only all types of seafaring vessels, docks, harbours, freight-handling facilities, oil platforms, and ocean renewable Energies, shipbuilding facilities, but also engines, motors, navigational and communications equipment, rigging, foul-weather gear and

safety equipment.

Marine Engineering employs techniques from many engineering disciplines. A 4-year program is evidently sufficient to acquaint the student with the breadth of subject areas pertinent to Marine Engineers.

B.Sc. Engineering degree programme at the Department of Marine Engineering was designed to produce graduates with comprehensive theoretical knowledge and practical competencies, who would be able to serve in the shore-based industry as well as on-board vessels after a successful completion of industrial and sea training period. Therefore, curriculum and syllabi comply with the STCW regulation 1978 as amended. The students who successfully complete the course, need to follow the already implemented bridging programme to become sea going B.Sc. Marine engineering graduates holding the Continuous Discharge Certificate (CDC). The offering of CDC is depended upon the requirement and available placements.

The Department of Marine Engineering admits students with GCE (Advanced level) qualifications of 2Cs and 1S passes in one sitting within three attempts in physical science stream (as per UGC norms). Students with higher Z-Scores are allowed to follow the B.Sc. (Hons) in Marine Engineering degree programme.

2 Introduction to Marine Engineering Degree Programme

2.1 Program Educational Objectives

Department of Marine Engineering has developed following Programme Educational Objectives in accordance with the Programme objectives stated in Section 5.5 of the IESL Accreditation Manual as IESL criteria on graduate abilities.

- Equipped with skills and knowledge to identify complex marine and ocean engineering problems, and to appreciate the impact of solutions, gained

- through theoretical as well as practical knowledge, on society as a whole.
- Extensive awareness of impact of pressing matters in ocean engineering and solutions, on oceans, coasts and environment in general.
 - Ability to utilize written, oral and graphical communication in broadly defined technical, as well as non-technical working environments; and an ability to identify and choose appropriate technical literature.
 - Demonstrate a sound understanding in professional and ethical responsibilities in maritime working environments; and a capability of maintaining an effective leadership and public relationship skills.
 - Ability in managing and leading human resource with extensive competency in solving business, ethical, social, environmental, political and economic matters with sound decision-making capabilities.
 - Practice and engage with commitment in continuous professional development through lifelong learning, understanding humane ethics and environmental impacts of discipline specific engineering solutions.

2.2 Program Outcomes

To achieve the course specific PEOs in accordance with IESL criterion, following programme outcomes are defined, in order for the graduate to meet the educational requirements towards registration as a professional engineer, at the end of four-year degree programme.

- Apply knowledge of mathematics, basic sciences and engineering fundamentals to the analysis of complex engineering problems.
- Identify, formulate, research literature, conduct investigations and solve complex engineering problems to provide valid conclusions.
- Design systems, components or processes that meet specified needs.
- Conduct investigations of complex problems using research based knowledge and research methods.
- Create, select and apply appropriate techniques, resources, and modern engineering and IT tools to complex engineering activities.
- Assess societal, health, safety, legal, cultural and environmental issues

- related to professional engineering solutions.
- Demonstrate broad knowledge of sustainable development concepts and practices required for dealing with contemporary issues related to professional engineering practice.
 - Demonstrate broad knowledge of ethical responsibilities and professional standards.
 - Demonstrate ability to function effectively as an individual and in multidisciplinary and multi-cultural teams, with the capacity to be a leader or manager as well as an effective team member
 - Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
 - Demonstrate broad knowledge of management and business practices, including financial management, risk and change management.
 - Engage in independent and lifelong learning in the broad context of technological change.

2.3 Career Opportunities

Graduates of the Department of Marine Engineering are sought after by both private and public owned establishments. Due to the versatility of the curriculum and the integration of syllabi from different domains in Marine engineering, the graduates are given the capability of working not only in the field of marine and offshore engineering, but also in the fields that include sub-disciplines such as mechanical, energy, HVAC and maintenance.

Name of the Organization	Ownership	Field of specialization
Sri Lanka Port Authority	Public	Marine Engineering
Colombo Dock Yard	Private	Marine Engineering
CINEC Campus	Private	Academic
SLIIT Campus	Private	Academic
Neil Marine	Private	Marine Engineering
North Sails	Private	Marine Engineering
CEB	Public	Marine Engineering
Sri Lanka Navy	Public	Marine Engineering
Dhanusha Marine Lanka Exports Pvt Ltd	Private	Marine Engineering
GL Yachting Asia Pvt Ltd	Private	Marine Engineering
Neil Fernando & Co Pvt Ltd	Private	Marine Engineering
North West Marine Lanka Pvt Ltd	Private	Marine Engineering
AJ Fishing Industries Pvt Ltd	Private	Marine Engineering
BAFF Polymech Pvt Ltd	Private	Marine Engineering
Blue Boat Pvt Ltd	Private	Marine Engineering
Jostein Viksund Design and MOD Centre Pvt Ltd	Private	Marine Engineering
Walkers Colombo Ship Yard Pvt Ltd	Private	Marine Engineering
Ranil Marine Pvt Ltd	Private	Marine Engineering
Solas Marine Lanka Pvt Ltd	Private	Marine Engineering
Paramount Rectag Pvt Ltd	Private	Marine Engineering
Sealanie Boat Pvt Ltd	Private	Marine Engineering
Viksund Design & Model Centre	Private	Marine Engineering

Silver Marine Boat Yard Pvt Ltd	Private	Marine Engineering
Sindatri Boat Yard	Private	Marine Engineering
Duneesha Marine Boat Yard	Private	Marine Engineering
FRP Technologies	Private	Marine Engineering
ODERN Maintenance Products	Private	Marine Engineering
NIKINI Marine Pvt Ltd	Private	Marine Engineering
Consolidated Marine Engineers Pvt Ltd	Private	Marine Engineering
Ascentra Oceanic Corporation Pvt Ltd	Private	Marine Engineering
SARAM Marine Solutions Pvt Ltd	Private	Marine Engineering
Building Future Foundation	Private	Academic
Boat Building Technology Improvement Institute Lanka Pvt Ltd	Private	Academic

2.4 Structure of the Degree Programme

The Bachelor of the Science in Marine Engineering (B.Sc. Hons Eng.) degree programme is a fulltime course of a modular structure, organised on a two-semester-a-year system, over a duration of four academic years. Examinations and evaluations are held throughout each semester. The medium of instruction is English. Answers at examinations and all other formal submissions shall be presented in English. Therefore, all students are strongly encouraged to apply the English language in everyday use as much as possible.

Course Title: Bachelor of the Science of Engineering Honours Degree in Marine Engineering

Course duration: 4 years full time

Medium of instruction: English

Total credit requirement: 135

The program is explicitly designed for the students with an extensive background in Mathematics, Physics and Computer techniques and an understanding of Engineering Sciences and Principles. Throughout the course, students are exposed and expected to study the sub-domains of engineering such as; Control theory, principles of electrical engineering, fluid mechanics, naval architecture and thermodynamics.

With the exposure to all vital sub-domains in marine engineering, the curriculum covers specific modules including workshop practices and manufacturing processes, steam engineering, marine diesel engines and auxiliaries, gas turbines, chemistry of fuels and combustion, propulsion systems and accessories, generation of high voltage and application, electrical machinery, naval architecture, ship construction, marine facilities, marine law and refrigeration and air-conditioning.

The degree programme is conducted in following manner,

Academic year	Activities
First year	Course modules, field work and laboratory experiments
Second year	Course modules, field work and laboratory experiments
Third year	Course modules, field work and laboratory experiments + Six-month industrial training
Fourth year	Course modules, field work, undergraduate project, and laboratory experiments

2.5 Facilities

2.5.1 Teaching Facilities

Classrooms equipped with infrastructure and teaching-aid including, but not limited to, smart-boards, multimedia projectors, whiteboards and flipcharts, are to be used by students for in-class learning and, to facilitate formal and informal subgroup discussions/meetings. Moreover, numerous replicated engines, posters, displays and engine room equipment are used from various establishments in developing the practical competence required by STCW 2010.

The following detailed infrastructure is identified, provided and maintained throughout the classroom-based teaching and training in University:

- Well-ventilated, air-conditioned rooms and halls are provided to conduct lectures. Smart boards, Multimedia projectors, educational models and pictures of machinery and equipment displayed facilities available in lecture rooms.
- Laboratories and workshops equipped with instruments and machines are provided to conduct recommended practical sessions, which are included in syllabus.
- A library facilities are provided with recommended Text books, Journals,

Magazines, charts, notices, regulations etc., for the use of students and facilitators attached to DMaE.

- A computer laboratory is provided to facilitate the e-learning and, to enhance the learning capacity of students with specific computer applications and dedicated engineering software packages with academic licensing.
- Sound working condition of equipment and machineries are inspected, tested and maintained by technical staff under the supervision of the lecturer in charge of the laboratory.

2.5.2 Library Facilities

1. **The library:** provides access to academic staffs and all students of the university. The library has two branch libraries in Mattakkuliya and Tangalle premises which serve for different degree programs.
2. **Library Collections:** consisted of several sections for lending, reference, periodicals and special collections.
3. **Lending Section:** issues books for a period of two weeks to undergraduates. If needed which can be extended for another two weeks and must meet assigned librarian.
4. **Reference Section:** includes reference materials that are issued to students for overnight use and could be borrowed between 3.00 p.m. to 4.00 p.m. and should be returned before 10.00 a.m. of the following day. Permanent reference materials (such as encyclopaedias, dictionaries, glossaries and other valuable books) are intended strictly for reference within the library. Reading facilities are provided in this section.
5. **Borrowing Library Resources:** with the exception of certain categories (i.e. Permanent reference materials, dictionaries, atlases, books under special collections etc.) all other books may be borrowed. The university record book or identity card must be produced when borrowing books. Books may be borrowed before 4.00 p.m. Details about the number of books can be borrowed is given in Table 04

Table 04: Details f the number of books can be borrowed from the library

Semester	Lending books	Reference books	Electronic media
1	01	01	01
2	01	01	01
3	01	01	01
4	01	01	01
5	02	01	01
6	02	01	01
7	02	02	01
8	02	02	01

6. **f) Returning Library Resources:** borrowed from the library must be returned by 10.00 a.m. on the due date. Borrowers are responsible for the materials issued to them and in case of lost or damaged, the materials should be reported immediately to the library. Borrower has to replace it with a new copy of the same edition or subsequent edition within due date. If the book is not available in the market, the borrower will be charged for the replacement cost of the material/s and a processing fee of 25% value of the book. All library resources borrowed must be returned and all outstanding fines must be paid when a student leaves the university. Users who fail to fulfill their obligations may have their degree certificate withheld until they return the borrowed resources and pay the fine.

2.5.3 Industrial Training

An industrial training of six months is included in the course programme to provide hands-on experience for the undergraduate students. This includes training at engineering establishments such as Colombo Dockyard PLC, Sri Lanka Ports Authority or a power plants, in order to comply with STCW requirements in achieving relevant competencies in various industrial applications.

Industrial training is mandatory for all students in order for the fulfilment of degree course. However, students who are registered as seafarers are required to follow a 10 months industrial training to obtain the degree.

The purpose of having such training is to gain knowledge and experience on one or more of the following areas

- Manufacturing technologies
- Manufacturing systems
- Marine compressed air systems
- Marine Engines and Maintenance
- Marine Auxiliaries and Maintenance
- Marine Refrigeration & Air-Conditioning Systems
- Marine Steam Generating and Distributing Systems
- Power Hydraulic Systems and Pneumatic Systems (PHPS)
- Control Systems
- Machine designing.
- Maintenance of Machinery
- Management of organisation
- Electric Drive Systems and Other Electrical Equipment

2.6 Description of Course Curriculum

DEGREE AWARDING CURRICULUM

Curriculum of B.Sc. (Hons) in Marine Engineering				
Semester		Module Name	Credit	
Semester 01	ME 1013	Mathematics for Engineers I	3	
		Engineering Drawing I		
	ME 1022		2	
	ME 1033	Workshop Technology and Practice	3	
	ME 1042	Programming for Engineers I	2	
	ME 1053	Properties of Engineering Materials	3	
	ME 1063	Engineering Mechanics	3	
	ME 1072	Engineering in Context	2	
	ME 1082	Maritime English I		2
	ME 1091	Humanities I		1
		Total	18	3
Semester 02	ME 2013	Mathematics for Engineers II	3	
		Engineering Drawing II	2	
	ME 2033	Thermodynamics	3	
	ME 2043	Electrotechnology	3	
	ME 2053	Fluid Mechanics	3	
	ME 2062	Programming for Engineers II	2	
		Computer Aided Modelling & Manufacturing	2	
	ME 2072			
	ME 2082	Maritime English II		2
	ME 2091	Humanities II		1
		Total	18	3

Semester 03	ME 3013	Applied Electronics	3	
	ME 3022	Probability & Statistics	2	
	ME 3033	Applied Thermodynamics	3	
	ME 3043	Mechanics of Machines	3	
	ME 3053	Manufacturing Technology	3	
	ME 3063	Mechanics of Materials I	3	
	ME 3072	Engineering Knowledge (General) I	2	
	ME 3082	Control System Engineering	2	
		Total	21	0
Semester 04	ME 4012	Principles of Naval Architecture	2	
	ME 4022	Numerical Methods and Optimisation techniques	2	
	ME 4033	Engineering Hydraulics and Fluid Machinery	3	
	ME 4043	Design of Machine Elements	3	
	ME 4052	Mechanics of Materials II	2	
	ME 4063	Electrical Machines	3	
	ME 4073	Engineering Knowledge (Motor) I	3	
	ME 4082	Welding and Fabrication Technology	2	
	ME 4091	Humanities III		1
		Total	20	1
Semester 05	ME 5012	Industrial Economics and Accounting	2	
	ME 5023	Ship Construction	3	
	ME 5032	Machine Design and Projects	2	
	ME 5043	Automation Systems	3	

	ME 5053	Power Electronics	3	
	ME 5062	Ship Stability	2	
	ME 5073	Engineering Knowledge (General) II	3	
	ME 5082	Refrigeration and Air conditioning	2	
	ME 5091	Humanities IV		1
		Total	20	1
Semester 06	ME 6016	Industrial Training	6	
		Total	6	
Semester 07	ME 7012	Computer Aided Engineering	2	
	ME 7022	Industrial Management	2	
	ME 7032	Shipboard Operations	2	
	ME 7042	Ship Resistance and Propulsion	2	
	ME 7053	Shipboard Electricals and High voltage	3	
	ME 7063	Industrial Hydraulics & Pneumatics	3	
	ME 7072	Marine Control Systems & Instrumentations	2	
	ME 7083	Engineering Knowledge (Motor) II	3	
	ME 7091	Health and safety Practices		1
	ME 7102	Research methodology and Project (Individual -Literature review only)	2	
		Total	21	1
Semester 08	ME 8013	Production Management	3	
	ME 8026	Design/Research Project & Dissertation	6	

	ME 8032	Maritime Safety and Maritime Law	2	
	ME 8042	Industrial Engineering	2	
	ME 8053	Design of Marine Vessels	3	
	ME 8061	Professional Ethics		1
		Total	16	1
		Total Credits	140	10

2.7 Programme of Study

2.7.1 Registration for each Academic Year and Semester

- At the commencement of each academic year and semester, students are required to complete a registration form and pay any fees as may be required by the university.
- Students are required to fill individual registration forms indicating each module that they wish to register for the semester through on-line registration system, in consultation with the Academic coordinator.
- A student repeating the end-of-semester written examination of a module is required to complete the repeat registration at least four weeks prior to the commencement of the examination, and if necessary register for that academic year.
- A student repeating both the continuous assessment and the end-of-semester written examination of a module is required to complete the repeat registration prior to the end of the Add/Drop period and, if necessary, register for that academic year.
- Each student is responsible for the completeness and accuracy of his/her module registrations and for registering prior to the set deadlines.

2.7.2 Course Attendance Requirement

- By regulations, minimum 80% attendance for lectures is mandatory for every course module offered by the department.
- Students who fail to get minimum attendance requirement and/or incompleteness of any course work of any course module will not be permitted to sit for the end examination at any level by DMaE.

2.7.3 Examinations and Evaluation

- Performance of students in each subject will be assessed by continuous assignments, attendance, practical sessions, fieldworks and semester end examinations.
- Though the examinations will be held at the end of every semester, there is a provision to carry out mid semester examinations during the semester.
- Students are required to produce both the **Identity Card and the Student Record Book** during the examination.
- All marks obtained in the examinations will be counted in the process of calculating the final grade of the module.
- Students should obtain a minimum of 40% (C- grade) for each module and a Semester Grad Point Average (SGPA) of 2.0 at the end semester examination for satisfactory completion of the relevant semester. Those who do not fulfil this requirement will have to sit for the repeat examination in the following academic year. **Moreover, seafaring students are expected to obtain a minimum of 50% (C+ grade) for all modules to be eligible for the bridging program to obtain the CDC.**
- **Students who fails to at least acquire the minimum requirement of the cumulative GPA of 2.0 to complete an academic year of the degree programme is ineligible to proceed to the consequent academic year and will not be issued any admission cards by the Examination Division for the consequent academic year and will be declared under “Academic Probation”.**

- However, students will have to decide the subject(s), which require a repeated sitting considering the following.

(a) Maximum grade obtainable for repeated subjects is C+

(b) Should obtain a minimum of 40% each for all course modules and SGPA of 2.0 at the end semester examination to complete the semester.

2.7.4 Eligibility for Examinations

- Students should fulfil the attendance requirements specified under section 2.6.2, Course Attendance Requirement and the completion of all laboratory sessions/field sessions/design sessions/work camp(s)/project(s) or minimum percentage marks defined for continuous assessment are required for a student to be eligible to appear for the end semester examination(s) of the relevant course module.
- Failure to fulfil the above requirements shall disqualify a candidate for sitting end examination for the relevant course module(s) and appear in the successive semester examination. **It is to be noted that it shall be treated as repeat examination of the course module in such instances.**

2.7.5 Semester Credits Requirements

15 contact hours = 1 credit, for course units with lectures only,

30 hours of laboratory work = 1 credit, for course units with laboratory work only

A course unit is a subject module, which has a credit value. A credit is a time-based quantitative measure used in calculating the grade point average.

2.7.6 Grades and Grades Points of the Course Modules

Grades based on the grade point system and corresponding percentage marks are illustrated in the table below and will be used to express the performance at each examination.

Marks (%) out of 100	Grade	Grade point (GP)	Remarks
≥85	A+	4.2	Superior performance
75 – 84	A	4.0	Excellent
70 – 74	A-	3.7	Very good
65 – 69	B+	3.3	Good
60 – 64	B	3.0	
55 – 59	B-	2.7	
50 – 54	C+	2.3	Satisfactory
45 – 49	C	2.0	
40 – 44	C-	1.5	Pass
35 – 39	D	1.0	Conditional pass
<35	F	0	Fail

2.7.7 Calculation of Grade Point Averages

Semester Grade Point Average (SGPA)

The Semester Grade Point Average (SGPA) will be calculated at the end of each semester using the formula given below.

Where, n is the number of credits for the subject in a given semester and $\sum GP$ is the grade point earned for that module.

Overall Grade Point Average (OGPA)

The Overall Grade Point Average (OGPA) will be calculated at the end of the course using the formula given below.

OGPA=

Where, is the Semester Grade Point Average calculated for the semester.

2.7.8 Upgrading the Grade

- A student who obtains a grade below C+ in a particular subject may re-sit for the particular examination for the particular subject in the immediately following academic year for the purpose of upgrading and the **Maximum grade obtainable for the subjects is C+.**

2.7.9 Restrictions for number of attempts for end semester examinations

- Number of attempts to sit for an end semester examination shall not be more than three.

2.7.10 Maximum Allowed Duration of Study

The maximum allowable time period to award the B.Sc. in Marine Engineering degree is seven years (Follow the **Performance Criteria** document), unless the student has obtained prior written approval from the Academic Council. Students may forward such requests through the head of department.

2.7.11 Absence for examinations, Examination Offences and Punishments

Absence for examinations and Examinations offences are dealt with, as per the examination by-laws approved by the academic council of the University.

2.8 Awarding of Degree

2.8.1 Eligibility Criteria

- Successful completion of each academic year with a minimum total credit requirement and obtain a minimum OGPA of 2.0 is necessary to obtain the B.Sc. in Marine Engineering.

2.8.2 Scheme of Degree Awards

- Student should complete all the compulsory course modules and relevant electives to earn total number of credits of a semester including specialization / training/ project work to award the degree.
- Students should complete the credit requirements within a period of four academic years to obtain a degree with a class.

2.8.3 Class of Honours

- Awarding of Classes is determined at the completion of all the graduation requirements within four academic years. Overall Grade Point Average as indicated below will be used for the awarding of Classes. Honours Degree as applicable with a class awarded by the University on the recommendation of the Governing Council and the Academic Council.

OGPA	Academic standing
$3.70 \leq \text{OGPA}$	First Class Honours
$3.30 \leq \text{OGPA} < 3.7$	Second Class Honours- Upper Division
$3.00 \leq \text{OGPA} < 3.30$	Second Class Honours-Lower Division
$2.00 \leq \text{OGPA} < 3.00$	Pass

- Under exceptional circumstances, a student who satisfies the OGPA but takes longer than a four academic years as applicable to complete the

course requirements may be deemed to be eligible for the award of the degree in B.Sc. (Hons) in Marine Engineering.

2.8.4 Effective date of award

- The final date of the last written examination of the degree programme will be considered as the effective date of the award of the degree subjected to the satisfactory completion of the graduation requirement which includes the following conditions:
 - Date of submission of the final year project report/thesis/dissertation does not exceed the date of the final written examination
 - Successful completion of, All course modules of the degree programme
 - Final year project report/thesis/dissertation
 - All repeat examinations of all course-modules of previous academic semesters, if any.
- In case of the evaluation of the final year project/thesis/dissertation exceeding the date of the final written examination, the date which occurs later (the submission date of the final year project/dissertation or oral examination date of the final year project/dissertation) will be considered as the effective date of the degree programme.
- Any student who attempts for repeat examinations after the date of the final written examination of the degree programme will be awarded degree with the date of the last repeat examination as the effective date of the degree and may not be deemed to be eligible for the award of the degree with a class of Honours.

3 Academic Regulations and Procedures

3.1 Admission Requirement

Applications are invited from eligible candidates for admission to the Degree Programme in Marine Engineering.

3.1.1 Educational Qualification

Applicants should have obtained at least 2 credit (2C) passes and one simple (1S) pass for the subjects: Physics, Chemistry, and Combined Mathematics/Advanced mathematics in one sitting of General Certificate of Education advanced level [GCE(A/L)] exam conducted in a recent year, within a maximum of three attempts;

AND

A minimum Z-score as desired by the administration at one and the same sitting of a GCE (A/L) examination conducted by the Commissioner General of examinations.

3.1.2 Age

- Applicants should be below 22 years of age on the closing date of the application.
- Applicants below 20 years of age on the closing date of the applications will be given preference.

3.1.3 Medical Clearance

Each applicant should submit a medical clearance certificate to prove that he/she is medically fit for the programme.

3.1.4 Selection criteria

The selection of students for the degree programme will be based on the merit order of GCE Advance level results, (i.e. in the descending order of Z- scores).

3.2 Application Procedures

3.2.1 Application form

Applications should be submitted online together with the certified copies of following certificates.

- G.C.E (A/L) certificate
- Certificate containing G.C.E (A/L) Z-Score
- School Leaving Certificate
- Birth Certificate
- National Identity Card

Necessary instructions for the submission can be found in the official website: www.ocu.ac.lk.

Hard copy of the application together with the certified copies should reach Assistant Registrar (Student Affairs), Ocean University of Sri Lanka, Crow Island, Colombo-15 on or before the closing date of applications.

3.2.2 Selection Placement Interview

Applicants who are short-listed according to the G.C.E (A/L) performance will be called to appear for the selection placement interview, which will be conducted at the department of marine engineering.

3.2.3 Limitations of students intake per academic year

In order to maintain the ideal student-teacher ratios, the student intake for the degree




program per batch is limited. To provide individual attention to each student trainee during laboratory sessions conducted in workshops/laboratories, not more than ten trainees to each supervisor/instructor is assigned. Modules studied in-class may be limited to classes of 50 students, depending on the available staff, timetables, and utilization of equipment and premises in order to provide an adequate attention to each undergraduate trainee. Exceptions are made to include a larger number of students for common subjects, in the presence of additional staff.

3.2.4 Registration

The selected candidates for admission will be required to produce the originals of the following certificates on the dates of registration.

- Certificate Containing G.C.E (A/L) Z-Score
- G.C.E (O/L) Certificate
- School Leaving Certificate
- Birth Certificate
- National Identity Card
- Medical Clearance Certificate

3.3 Academic Staff

	<p>Mr. S.U.P. Jinadasa Head of Department of Marine Engineering Senior Lecturer, Ph.D. (Reading), University of Notre Dame and University of Ruhuna. M.Sc. in Ocean Mapping Advanced, (USA). M.Phil. in Applied Geophysics, (Open University). B.Sc. Special in Geology (Peradeniya), CMIGSL, AMIMarEST. PriyanthaJ@ocu.ac.lk</p> <p>Research Interest: Offshore circulation, water mass exchange, ocean turbulence and mixing, air sea interaction</p>
	<p>Mr. Mohamed J.M. Ashik Rasul Lecturer, ((M.Sc. (Korea) (Reading), M.Sc. (Norway), B.Sc. Eng.(Hons) (Ruhuna), AMIE(SL)) AshikR@ocu.ac.lk</p> <p>Research Interest: Renewable Energy, Power Electronics, Ship Electrical Propulsion & Hybrid Electrical System, Smart Grid</p>
	<p>Mr. Inosh Weerakoon Lecturer, (M.Sc. (Korea) (Reading), B.Sc. (Hons) in Marine Engineering) SamithaW@ocu.ac.lk</p> <p>Research Interest: Thermodynamics and Heat Transfer, Fluid Dynamics, Mechanics of Machines, Computational Fluid Dynamics (CFD), Fluid Power systems and Machinery, Renewable Energy</p>



Mr. Dimantha Harshapriya

Lecturer, (M.Sc. (Korea) (Reading), B.Sc. (Hons) in Marine Engineering)

DimanthaH@ocu.ac.lk

Research Interest: Ship dynamics and Marine hydromechanics, MASS Ship design and simulations (CFD), Ship Stability and Resistance, Navigation and Nautical risk assessment



Mr. Nisanga Nuwantha

Lecturer, (M.Phil (Reading), B.Sc. (Hons) in Marine Engineering)

NisangaN@ocu.ac.lk

Research Interest: Ship Resistance & Propulsion characteristics, Ship resistance optimization, Hull form optimization and Computer aided engineering



Mr. Sandun Wimalarathne

Lecturer, (B.Sc. (Hons) in Marine Engineering)

SandunW@ocu.ac.lk

Research Interest: Renewable energy, Regression Analysis, Manufacturing systems, Computer aided design and manufacturing



Mr. Binara Balasuriya

Demonstrator, (B.Sc. (Hons) in Marine Engineering)

BinaraB@ocu.ac.lk

Research Interest: Renewable energy, Ship Modeling and optimization, Finite element analysis, Manufacturing systems, Computer aided design and manufacturing



