DUT
DURBAN
UNIVERSITY OF
TECHNOLOGY

2018 HANDBOOK
MARITIME STUDIES

FACULTY OF
APPLIED
SCIENCES

HANDBOOK FOR 2018

FACULTY OF APPLIED SCIENCES

DEPARTMENT of MARITIME STUDIES

IMPORTANT NOTICES

- Your registration is in accordance with all current rules of the Institution. If, for whatever reason, you do not register consecutively for every year/semester of your programme, your existing registration contract with the
- Institution will cease. Your re- registration anytime thereafter will be at the discretion of the institution and, if permitted, will be in accordance with the rules applicable at that time.
- The rules in this departmental handbook must be read in conjunction with the General Rules (G Rules) contained in the DUT General Handbook for Students as well as the relevant Study Guides.
- With respect to an appeal, your attention is specifically drawn to Rules G1(8) and (9), and to the process of dealing with students issues.

STRATEGIC DIRECTION (2015-2019)
FACULTY OF APPLIED SCIENCES

[Educate. Engage. Innovate.]

VISION

Leading innovation through science and technology

MISSION STATEMENT

Educate students
Generate new scientific knowledge
Engage communities

VALUES

1. Accountability: We take ownership of all activities, resources and tasks required of us. We deliver on our promises and responsibilities.
2. Integrity: We adhere to moral standards and principles. We are transparent and consistent in all our actions, and lead by example.
3. Dedication: We are committed to achieving our goals and expectations.
4. Professionalism: We operate within clear boundaries with respect to our code of conduct.
5. People Oriented: We are committed to sustaining the morale and holistic development of staff and student. We value diversity in all forms.

DEPARTMENT OF MARITIME STUDIES

VISION

To be at the forefront of maritime education and training in South Africa

MISSION STATEMENT

EDUCATE through student centeredness, general education and the attainment of graduate attributes
DEVELOP Post graduate qualifications to meet the demands of South Africa's Blue Economy
ENGAGE with maritime communities; nationally and internationally

CONTENTS

1. DEPARTMENTAL & FACULTY CONTACT DETAILS

All departmental queries to:

Secretary:	Mrs Arshna Ramouthar
Tel No:	031 373 2144
Fax:	031 373 2137
Email:	arshnar@dut.ac.za
Location of Department:	Steve Biko Campus, S6 Level 5

All Faculty queries to:

Faculty Officer:	Ms G Shackleford
General Enquiries No:	031 373 2506
Facsimile No:	031 373 2175
Email:	dutfas@dut.ac.za
Location:	Block S4 Level 3, Steve Biko Campus

Faculty Assistant:	Ms J Nagan
General Enquiries No:	031 373 2717
Facsimile No:	031 373 2175
Email:	jessican@dut.ac.za
Location:	Block S4 Level 3, Steve Biko Campus

Executive Dean:	Prof S Singh
Executive Dean's Secretary:	Vacant Telephone
No:	031 373 2720
Facsimile No:	031 373 2724
Email:	dutfas@dut.ac.za
Location:	Between Block S6 and S7, Level 4, Steve Biko Campus

2. DEPARTMENTAL STAFF

Head of Department	Mr L Govender, NHD Maritime Studies, BTech (Management); MSc Shipping Operations (SSU)
Lecturers	
	Mr NM Manqele, B MilSc (Stellenbosch), BSc Hons (UNISA), MSc Environmental Sciences (UKZN)
	Miss MM Gounder, MICS, MCILT, MCom Maritime Studies (UKZN)
	Mrs BM Masuku, BEd, MSc Shipping Adminsitation
	Vacant Post: TBA Vacant Post: TBA
Secretary	Ms A Ramouthar, BT: Commercial Administration (DIT); NC: Hotel Reception (MLS)

3. QUALIFICATIONS OFFERED BY THE DEPARTMENT

Programmes are offered in this Department which will, upon successful completion, lead to the award of the following qualifications:

Diploma

Qualifications	Qual Code	Important Dates	SAQA NLRD ID
Dip: Nautical Studies	DINAU1	1st Offered Jan 2016	94831
Dip: Shipping and Logistics	DISHL1	1st Offered Jan 2016	97687

National Diploma (ND)

Qualifications	Qual Code	Important Dates	SAQA NLRD ID
ND: Maritime Studies (Navigation)	NDMTS1	Phased out – December 2019	72250
ND: (ECP) Maritime Studies (Navigation)	NDMSF1	Phased out – December 2019	72250
ND: Maritime Studies (Shore-based)	NDMTS1	Phased out – December 2019	72250

The ND: Maritime Studies comprises both navigation (sea-going) and shore-based programmes.

The present ND: Maritime Studies Navigation and Shore-based programmes will be phased out at the end of 2019.

4. DIPLOMA: NAUTICAL STUDIES

Purpose of Qualification

The Diploma in Nautical Studies represents a level of qualification that recognises the ability to gain and apply a range of focused, specialised knowledge, skills and understanding. Graduates of the diploma would be able to display competence in the application of knowledge in a broad range of varied work activities associated with an international career at sea.

4.1. PROGRAMME STRUCTURE

Code	Modules	Core Fundamental Elective	Assess - ment	Semester Of Study	HEMIS Credits	Pre-requisite Modules
MRNM101	Marine Mathematics 1	F	CA	S1	0.100	
MRSN101	Marine Science 1	F	EX	S1	0.100	
CSIL101	Computer Skills and Information Literacy	F	CA	S1	0.100	
CMSS101	Communication Skills	F	CA	S1	0.100	
CSTN101	IGE: DUT Cornerstone 101	F	CA	S1	0.100	
MRNM201	Marine Mathematics 2	F	CA	S2	0.100	Marine Mathematics 1
MRSN201	Marine Science 2	F	EX	S2	0.067	Marine Science 1
ISOP101	Introduction to Shipboard Operations	F	CA	S2	0.100	
NENS101	Navigation – Electronic Navigation Systems 1	C	CA	S2	0.067	
LDSH101	IGE: Leadership	E	CA	S2	0.067	
VWKP101	IGE: Values in the Workplace	E	CA	S2	0.067	
VNVL101	IGE: Violence and Non-Violence	E	CA	S2	0.067	
APSS101	FGE: Applied Sciences and Society	E	CA	S2	0.100	
NMEN101	Navigation – Meteorology and Environment Management 1	C	EX	S3	0.100	Marine Science 2
NENS201	Navigation – Electronic Navigation Systems 2	C	EX	S3	0.100	
SHPM101	Shipboard Management 1	C	EX	S3	0.133	Introduction to Shipboard Operations
SSCN101	Ship Stability and Construction 1	F	EX	S3	0.100	Marine Mathematics Marine Science
GENV101	IGE: The Global Environment	E	CA	S3	0.067	
TENE101	IGE: The Entrepreneurial Edge	E	CA	S5	0.067	
NMEN201	Navigation – Meteorology and Environment Management 2	C	EX	S4	0.100	Navigation – Meteorology and Environment Management 1
NENS301	Navigation – Electronic Navigation Systems 3	C	EX	S4	0.100	Navigation – Electronic Navigation Systems 2
SHPM201	Shipboard Management 2	C	EX	S4	0.100	Shipboard Management 1
SSCN201	Ship Stability and Construction 2	C	EX	S4	0.100	Ship Stability and Construction 1
ASWL101	FGE: Applied Science and Wellness	F	CA	S4	0.100	
NVCL101	Navigation – Calculations 1	C	EX	S5	0.100	Marine Mathematics 2
NOCN101	Navigation – Ocean and Coastal Navigation 1	C	EX	S5	0.167	Marine Mathematics 2
SHPM301	Shipboard Management 3	C	EX	S5	0.100	Shipboard Management 2
SSCN301	Ship Stability and Construction 3	C	EX	S5	0.100	Ship Stability and Construction 2
EQDV101	IGE: Equality and Diversity	E	CA	S5	0.067	
HCDK101	IGE: HIV and Communicable Diseases in KZN	E	CA	S5	0.067	
NVCL201	Navigation – Calculations 2	C	EX	S6	0.067	Navigation – Calculations 1
NOCN201	Navigation – Ocean and Coastal 2	C	EX	S6	0.100	Navigation – Ocean and Coastal Navigation 1
NSMR101	Navigation – Simulation (Radar and ARPA)	C	CA	S6	0.067	Navigation – Electronic Navigation Systems 3
NSME101	Navigation – Simulation (ECDIS)	C	CA	S6	0.100	Navigation – Electronic Navigation Systems 3
MESY101	Marine Engineering Systems	C	EX	S6	0.100	Marine Science 2
ASES101	FGE: Applied Sciences for Environment Sustainability	E	CA	S6		
ASCE101	FGE: Applied Sciences and Community Engagement	E	CA	S6		

4.2. PROGRAMME INFORMATION

This information must be read in conjunction with the programme rules that follow.

4.2.1 Academic Integrity

Refer to the DUT General Rules pertaining to academic integrity G13 (1) (o) – covering falsification of academic records, plagiarism and cheating. These will be enforced wherever necessary to safeguard the worthiness of our qualifications and the integrity of the Faculty of Applied Sciences at DUT.

4.2.2 Code of Conduct for Students

A professional code of conduct pertaining to behaviour, appearance, personal hygiene and dress shall apply to all students registered with the Faculty of Applied Sciences, at all times. Refer to Programme Rule 4.3.8 below.

4.2.3 Attendance

Students are expected to achieve 100% attendance for all planned academic activities as these are designed to provide optimal support for the required competency. Students are expected to be punctual for all academic activities. Penalties may be invoked for late attendance. Refer to Programme Rule 4.3.9 below.

4.2.4 Assessment and Moderation

Students are expected to work steadily through the period of registration in order to achieve the highest results possible.

Assessment details are listed under each module at the back of this handbook.

Assessments could include a variety of testing methods including, but not limited to, written tests, oral tests, theoretical and/or practical examinations, group work and assignments.

Assignments must be handed personally to the lecturer who will record their receipt. Late submission will be penalised.

In the case of a continuous assessment modules (a module which has no final examination/s or supplementary examination/s) opportunities for reassessment are provided for students who fail assessments. These are stipulated in the relevant study guide.

Moderation follows the DUT Assessment Policy stipulations.

Refer to Programme Rule 4.3.9 below.

4.2.5 Employment Opportunities: Sea-going

The first line of employment may lie within a shipping company or with Transnet National Ports Authority (TNPA), where the graduate will enter the industry as a Deck Cadet, and on completion of the requisite sea-time, further study/training and ancillary courses, could one day aspire to the command of an ocean-going vessel or work in a number of divisions within TNPA (including tugs, pilotage, dredging and vessel traffic services).

Opportunities also exist with the South African Navy (SAN). However, the student will need to meet the stringent physical and medical requirements of SAN.

A graduate with the Dip: Nautical Studies with sea-going experience can transit ashore into a number of positions in areas such as surveying; technical management; education, training and development; and crewing management.

4.2.6 SAMSA Eyesight Requirement

Students taking the sea-going option must, on registration, provide the Department with the result of a SAMSA (South African Maritime Safety Authority) eye test from a SAMSA-approved medical practitioner. The SAMSA office is situated on 17th floor of Durban Bay House, 333 Anton Lembede (formerly Smith) Street, Durban (Tel: 031 307 1501). A SAMSA regional office may also be consulted. Failure in this assessment will mean that a sea-going career will not be possible.

4.2.7 The selection criteria for the National Cadetship Programme

The following industry selection criteria applies for students seeking employment on completion of the Diploma in Nautical Studies

Physical fitness

The student will be required to pass a SAMSA medical examination by a SAMSA approved Doctor, as described in the Merchant Shipping (Eyesight and Medical Examination) regulation of 2004, and amended in 2015. This also includes body mass indexing which must meet standards. Note that some flags will not issue a Seamans Record Book (Discharge Book) if the applicant has a life-threatening disease or condition.

Academic qualifications

Student must meet the requirements stipulated in the 'SAMSA Code', by having passed the minimum required tertiary Modules University of Technology or other SAMSA approved institution of learning. Fluency in English language ("the language of the sea") is required for safety reasons.

Personality profile

A profile of the student's personality (including preferences and dislikes) will be tested against the benchmarks set for the industry. A typical application is the PI (Predictive Index) which is widely used in the maritime industry.

Aptitude Tests

A test, which assesses the students' aptitude to handle the complexities of the career and the ability to cope with the academic programme, will be conducted. Only those students that meet the benchmark will be considered. A typical application is the APRO test. Most companies have their own in –house test which all students must complete prior to the interview.

Criminal Record

Students should not have a criminal record. If not ascertained this will be picked up when applying for various visas some of which directly prohibit employment. This would also compromise the perceived reputation of integrity of South African seafarers, to the detriment of all.

Personal interviews

Interviews will indicate the students' preparedness for the cadetship, the motivating factors behind the career choice as well as long term plans for the future career. Only students with that meet the interview standards will be considered.

Gender

Participating companies have indicated their preferences in gender, which are driven by on-board conditions. Where possible, females will be appointed to those companies that have no restrictions on this category of student. An assessment of companies who may be prepared to accommodate female cadets indicates +/-10% of current total cdet berths currently available for the National Cadet Project.

Age

Generally accepted by Shipping Companies to be between 18 – 25 years of Age. Applicants exceeding this limit will have significantly reduced chances of employment.

4.3 PROGRAMME RULES

4.3.1 Minimum Admission Requirements

In addition to DUT Rule G7, the following minimum entrance requirements and the selection criteria outlined in 4.3.2 apply for applicants with reference to:-

4.3.1.1 Academic Achievement

In line with the above, applicants' school leaving academic achievement must comply with one of the following:-

i) a National Senior Certificate (NSC) with endorsement for diploma/degree entry with the following subjects at the stated minimum ratings

Compulsory Subject	NSC Rating
English	4
Mathematics	4
Physical Science	4

ii) A Senior Certificate is matriculation exemption with the following subjects at the stated minimum ratings

Compulsory Subject	HG	SG
English	E	D
Mathematics	E	D
Physical Science	E	D

iii) a National Certificate (Vocational) Level 4 with statutory requirements for a diploma entrance and the following subjects at the stated minimum ratings

Compulsory Subject	Minimum
English	60%
Mathematics	60%
Physical Science (or recognised equivalent)	60%

(IV) a N4 Certificate in appropriate subjects with a pass in English NSC 4 and one of the following credit combinations:

2 recognised 20 credit NSC subjects and Mathematics with a rating of 4 and N4 Engineering Science with a minimum achievement of 50%; or

2 recognised 20 credit NSC subjects and Physical Science with a rating of 4 and N4 Mathematics with a minimum achievement of 50%; or

3 recognised 20 credit NSC subjects with a rating of 4 and N4 Engineering Science and Mathematics with a minimum achievement of 50%

4.3.1.2 Admission Requirements based on Work Experience, Age and Maturity; and Recognition of Prior Learning

The DUT Rules G7(3), and G7(8) respectively, will apply.

4.3.1.3 Admission of International Students

- The DUT's Admissions Policy for International Students and DUT Rules G4 and G7(5) will apply.
- International students must meet the equivalent of programme minimum entrance requirements as stated above.
- An International applicant will be accepted onto the Diploma in Nautical Studies only if sponsored by a company.
- An applicant with South African Refugee Status will not be accepted into the) Diploma in Nautical Studies due to the inability to acquire international travel visas.

4.3.1.4 Admission of Students from other Institutions

In addition to the relevant DUT Rules a transferring student will only be accepted if there are places available and the student has met the applicable entrance requirements of the university.

4.3.2 Selection Criteria

4.3.2.1 In addition to the Minimum Admission Requirements (Rule 4.3.1), the following selection process will determine placement in the programme:

- All applicants must apply through the Central Applications Office (CAO).
- Initial shortlisting for selection is based on the applicant's academic performance in Grade 12 (Grade 11 or Grade 12 trial marks will be used for current matriculants).
- Applicant must achieve a minimum score of 270 points. The calculation of the points excludes Life Orientation.

4.3.3. Pass Requirements

In addition to the DUT Rules G12, G14 and G15, the following programme rules apply: 4.3.3.1 As per SAMSA safety specifications, a final mark of not lower than 60% is required for a pass in the following subjects:

- Ship Stability and Construction 1, 2 and 3
- Navigation – Calculations 1 and 2
- Navigation – Ocean and Coastal Navigation 1 and 2

4.3.4. Reregistration Rules

In addition to the DUT Rule G16, and all prerequisite modules as identified in the Learning Table Structure (4.1), the following programme rules apply:-

4.3.4.1 Promotion from Semester 1 to Semester 2:
Students must pass a minimum of 3 modules

4.3.4.2 Promotion from Semester 2 to Semester 3:
Students must pass a minimum of 3 modules

4.3.4.3 Promotion from Semester 3 to Semester 4:
Students must pass a minimum of 3 modules

4.3.4.4 Promotion from Semester 4 to Semester 5:
Students must pass a minimum of 3 modules

4.3.4.5 Promotion from Semester 5 to Semester 6:
Students must pass a minimum of 3 modules

4.3.5 Exclusion Rules

In addition to DUT Rule G17, a first semester student who fails three or more modules with a final result of less than 40% in each module is not permitted to reregister in this programme. Deregistration from any modules is subject to the provision of DUT Rule G6.

4.3.6. Interruption of Studies

In accordance with Rule G21A(b), the minimum duration for this programme will be 3 years of registered study and the maximum duration will be 5 years of registered study. Should a student interrupt their studies by more than one (1) year, the student will need to apply to the department for permission to reregister and will need to prove currency of appropriate knowledge prior to being given permission to continue with registration.

4.3.7. Code of Conduct

In addition to the Student Code of Conduct in the DUT General Handbook for Students, and the relevant requirements as stated in the appropriate Study Guides, the following rules apply:

4.3.7.1 **Conduct of Students in Practical Facilities**

Strict adherence to instructions issued by technical, supervisory or academic staff is required due to the need to ensure effective and safe practice in these facilities. Misconduct or disregard for instructions will be referred to the relevant disciplinary procedure.

4.3.7.2 **Uniforms**

Students must adhere to instructions issued by technical, supervisory or academic staff regarding the specific dress code required during practicals. Non-compliance will result in the student being denied access to the venue.

4.3.8. Attendance and Assessment

4.3.8.1 A student who, for any valid reason(Refer to Programme Rule 4.3.8.2 below), is absent from a particular practical or test, must provide written proof of the reason for the absence to the lecturer concerned, within five (5) working days of returning to the institution in order to be considered for a special assessment.

4.3.8.2 The DUT Rule G13(3)(a) which refers to special examinations also refers to special assessments set within departments for students who have missed coursework assessments. In these cases the department will determine the validity of the student's reason for not taking the assessment, and the nature of the special assessment.

4.3.9. Health and Safety

Students must adhere to all Health and Safety regulations both while at DUT. Failure to do so will be treated as a breach of discipline. Refer to the appropriate Health and Safety policies.

4.3.10. General Education

Students must complete the university's General Education Requirement. This includes following:

- DUT Cornerstone 101 and three 8 credit institutional modules
- Three 12 credit Faculty of Applied Sciences modules

5. DIPLOMA: SHIPPING AND LOGISTICS

Purpose of the Qualification

The Diploma: Shipping and Logistics represents a level of qualification that recognises the ability to gain and apply a range of focused, specialised knowledge, skills and understanding. Graduates of the diploma would be able to display competence in the application of knowledge in a broad range of varied work activities associated with a career in shipping and logistics.

5.1 PROGRAMME STRUCTURE

Code	Modules	Core Fundamental Elective	Assessment	Semester of Study	HEMIS Credits	Pre-requisite Modules
ECNC101	Economics (Micro)	F	EX	S1	0.100	
ISTS101	Introduction to Statistics	F	CA	S1	0.100	
CSIL101	Computer Skills and Information Literacy	F	CA	S1	0.100	
CMSS101	Communication Skills	F	CA	S1	0.100	
CSTN101	IGE: DUT Cornerstone 101	F	CA	S1	0.100	
ECNC201	Economics (Macro)	F	EX	S2	0.100	Economics (Micro)
STSC101	Statistics 1	F	CA	S2	0.100	Introduction to Statistics
ISHP101	Introduction to Shipping	C	CA	S2	0.133	
CLHR101	IGE: Constitutional Law and Human Rights	E	CA	S2	0.067	
CLDV101	IGE: Cultural Diversity	E	CA	S2	0.067	
VNVL101	IGE: Violence and Non-Violence	E	CA	S2	0.067	
IASC101	FGE: Introduction to Applied Sciences	F	CA	S2	0.100	
SHLP101	Shipping and Legal Practice 1	C	EX	S3	0.067	Introduction to Shipping
LGTS101	Logistics 1	C	EX	S3	0.100	
BSMT101	Business and Management 1	C	EX	S3	0.100	
PTMN101	Port and Terminal Management 1	C	EX	S3	0.100	
GENV101	IGE: The Global Environment	E	CA	S3	0.067	
HCDK101	IGE: HIV and Communicable Diseases in KZN	E	CA	S3	0.067	
SHLP201	Shipping and Legal Practice 2	C	EX	S4	0.100	Shipping and Legal Practice 1
LGTS201	Logistics 2	C	EX	S4	0.100	Logistics 1
BSMT201	Business and Management 2	C	EX	S4	0.100	Business and Management 1
PTMN201	Port and Terminal Management 2	C	EX	S4	0.100	Port and Terminal Management 1
ASWL101	FGE: Applied Science and Wellness	F	CA	S4	0.100	
SHLP301	Shipping and Legal Practice 3	C	EX	S5	0.100	Shipping and Legal Practice 2
LGTS301	Logistics 3	C	EX	S5	0.100	Logistics 2
BSMT301	Business and Management 3	C	EX	S5	0.067	Business and Management 2
PTMN301	Port and Terminal Management 3	C	EX	S5	0.067	Port and Terminal Management 2
EQDV101	IGE: Equality and Diversity	E	CA	S5	0.067	
TENE101	IGE: The Entrepreneurial Edge	E	CA	S5	0.067	
APSS101	FGE: Applied Sciences and Society	E	CA	S5	0.100	
ASES101	FGE: Applied Sciences for Environment Sustainability	E	CA	S5	0.100	
ASCE101	FGE: Applied Sciences and Community Engagement	E	CA	S5	0.100	
MSWP101	Maritime Shore-based Work Practice	C	CA	S6	0.500	Refer to 5.2.4

5.2 PROGRAMME INFORMATION

This information must be read in conjunction with the programme rules that follow.

5.2.1 Academic Integrity

Refer to the DUT General Rules pertaining to academic integrity G13(1)(o) – covering falsification of academic records, plagiarism and cheating. These will be enforced wherever necessary to safeguard the worthiness of our qualifications, and the integrity of the Faculty of Applied Sciences at DUT.

5.2.2 Code of Conduct for Students

A professional code of conduct pertaining to behavior, appearance, personal hygiene and dress shall apply to all students registered with the Faculty of Applied Sciences, at all times. Refer to Programme Rule 5.3.8 below.

5.2.3 Attendance

Students are expected to achieve 100% attendance for all planned academic activities as these are designed to provide optimal support for the required competency. Students are expected to be punctual for all academic activities. Penalties may be invoked for late attendance. Refer to Programme Rule 5.3.9 below.

5.2.4 Work Integrated Learning (WIL)

This programme requires the student to undergo a 6 month period of Work Integrated Learning (WIL) during study period 6. The student must pass a minimum of 3 core modules in study period 5 to be eligible for WIL placement. However, preference will be given to students who have completed all modules.

During the shore-based period the student is to complete a log book under the supervision of a training manager/supervisor who is obliged to submit quarterly reports to the Department, as well as a final report. These reports will form the evidence required to show completion of the experiential learning component.

The following subject comprises the experiential learning component of the programme for shore-based students:

Register Code	Subject
MSWP101	Maritime Shore-based Work Practice

Refer to Programme Rule 5.3.11 below.

5.2.5 Assessment and Moderation

Students are expected to work steadily through the period of registration in order to achieve the highest results possible.

Assessment details are listed under each module at the back of this handbook.

Assessments could include a variety of testing methods including, but not limited to, written tests, oral tests, theoretical or practical examinations, group work and assignments.

Assignments must be handed personally to the lecturer who will record their receipt. Late submission will be penalised.

In the case of a continuous assessment module (a module which has no final examinations or supplementary examinations) opportunities for reassessment are provided for students who fail assessments. These are stipulated in the relevant study guide.
Moderation follows the DUT Assessment Policy stipulations.
Refer to Programme Rule 5.3.9 below.

5.2.6 Employment Opportunities: Shore-based

A number of employment opportunities exist within the shore-based sector of the maritime industry. These include port agency, stevedoring, clearing and forwarding, surveying, warehousing, project management and terminal management.

5.3 PROGRAMME RULES

5.3.1 Minimum Admission Requirements

In addition to DUT Rule G7, the following minimum entrance requirements and the selection criteria outlined in 5.3.2 apply for applicants with reference to:-

5.3.1.1 Academic Achievement

In line with the above, applicants' school leaving academic achievement must comply with one of the following:-

i) a National Senior Certificate (NSC) with endorsement for diploma/degree entry with the following subjects at the stated minimum ratings

Compulsory Subject	NSC Rating
English	4
Mathematics	3
Business, Commerce or Management Subject	4

ii) a Senior Certificate is matriculation exemption with the following subjects at the stated minimum ratings

Compulsory Subject	HG	SG
English	E	D
Mathematics	E	D
Business, Commerce or Management Subject	E	D

iii) a National (Vocational) Level 4 with statutory requirements for a diploma entrance and the following subjects at the stated minimum ratings.

Compulsory Subject	Minimum
English	60%
Mathematics	60%
Business, Commerce or Management Subject	60%

iv) a recognized Maritime or Shipping NQF 4 or above qualification from an accredited college; with a minimum of 60% in all subjects. In addition to this, the incumbent must possess a NSC, with the following subjects being passed:

Compulsory Subject	NSC Rating
English	4
Mathematics	3

5.3.1.2 **Admission Requirements based on Work Experience, Age and Maturity; and Recognition of Prior Learning**
The DUT Rules G7(3), and G7(8) respectively, will apply.

5.3.1.3 **Admission of International Students**

- The DUT's Admissions Policy for International Students and DUT Rules G4 and G7(5) will apply.
- International students must meet the equivalent of programme minimum entrance requirements as stated above.

5.3.1.4 **Admission of Students from other Institutions**
In addition to the relevant DUT Rules a transferring student will only be accepted if there are places available and the student has met the applicable entrance requirements of the university.

5.3.2 Selection Criteria

5.3.2.1 In addition to the Minimum Admission

- Requirements (Rule 5.3.1), the following selection process will determine placement in the programme:
- All applicants must apply through the Central Applications Office (CAO).
- Initial shortlisting for selection is based on the applicant's academic performance in Grade 12 (Grade 11 or Grade 12 trial marks will be used for current matriculants).
- Applicant must achieve a minimum score of 270 points. The calculation of the points excludes Life Orientation.

5.3.3 Pass Requirements
The DUT Rules G12, G14 and G15 apply.

5.3.4. Reregistration Rules
In addition to the DUT Rule G16, and all prerequisite modules as identified in the Learning Table Structure (4.1), the following programme rules apply:-

5.3.4.1 Promotion from Semester 1 to Semester 2:
Students must pass a minimum of 3 modules

5.3.4.2 Promotion from Semester 2 to Semester 3:
Students must pass a minimum of 3 modules

5.3.4.3 Promotion from Semester 3 to Semester 4:
Students must pass a minimum of 3 modules

5.3.4.4 Promotion from Semester 4 to Semester 5:
Students must pass a minimum of 3 modules

5.3.4.5 Promotion from Semester 5 to Semester 6:
Student must pass a minimum of 3 core modules

5.3.5 Exclusion Rules
In addition to DUT Rule G17, a first year student who fails three or more modules with a final result of less than 40% in each module is not permitted to reregister in this programme. Deregistration from any module is subject to the provision of DUT Rule G6.

5.3.6. Interruption of Studies

In accordance with Rule G21A(b), the minimum duration for this programme will be one (1) years of registered study and the maximum duration will be 5 years of registered study, including any periods of WIL. Should a student interrupt their studies by more than three (3) years, the student will need to apply to the department for permission to reregister and will need to prove currency of appropriate knowledge prior to being given permission to continue with registration.

5.3.7. Code of Conduct

In addition to the Student Code of Conduct in the DUT General Handbook for Students, and the relevant requirements as stated in the appropriate Study Guides, the following rules apply:

5.3.7.1. **Conduct of Students in Practical** Facilities

Strict adherence to instructions issued by technical, supervisory or academic staff is required due to the need to ensure effective and safe practice in these facilities. Misconduct or disregard for instructions will be referred to the relevant disciplinary procedure.

5.3.7.2. **Uniforms**

Students must adhere to instructions issued by technical, supervisory or academic staff regarding the specific dress code required during practicals. Non-compliance will result in the student being denied access to the venue.

5.3.8. Attendance and Assessment

5.3.8.1 A student who, for any valid reason(Refer to Programme Rule 5.3.8.2 below), is absent from a particular practical or test, must provide written proof of the reason for the absence to the lecturer concerned, within five (5) working days of returning to the institution in order to be considered for a special assessment.

5.3.8.2 The DUT Rule G13(3)(a) which refers to special examinations also refers to special assessments set within departments for students who have missed coursework assessments. In these cases the department will determine the validity of the student's reason for not taking the assessment, and the nature of the special assessment.

5.3.9. Health and Safety

Students must adhere to all Health and Safety regulations both while at DUT and in WIL placements. Failure to do so will be treated as a breach of discipline. Refer to the appropriate Health and Safety policies.

5.3.10.1 General Education

Students must complete the university's General Education Requirement. This includes following:

- DUT Cornerstone 101 and three 8 credit institutional modules
- Three 12 credit Faculty of Applied Sciences modules

5.3.11 Work Integrated Learning Rules

In addition to the DUT Rule G28:

- A student is required to attend and complete the Work Preparedness Programme offered by the department prior to undertaking WIL placement.
- The department undertakes to arrange WIL Placement
- As soon as the student has been accepted for a WIL placement he/she must register for the subject Maritime Shore-based Work Practice
- The student must comply with the rules and regulations as set out in the Industrial Environment where placed. The maritime industry operates 24 hours a day 365 days a year and a student on a WIL placement may be required to work on weekends and religious holidays.

6. NATIONAL DIPLOMA: MARITIME STUDIES (NAVIGATION) (NDMTS1)

Purpose of Qualification

Graduates of this qualification will have the requisite theoretical knowledge, understanding and practical proficiency to establish a successful career in the shipping industry

6.1 PROGRAMME STRUCTURE (3 YEAR)

Code	Modules	Common / Specialised	Assess-ment	Semester Of Study	HEMIS Credits	Pre-requisite Modules
MSCI102	Marine Science I	C	Ex	S1	0.083	
INML101	Introduction to Marine Law I	C	Ex	S1	0.042	
CSKI103	Communication Skills I	C	CA	S1	0.042	
CSER101	Computer Skills I	C	CA	S1	0.041	
MRMT101	Marine Mathematics I	C	CA	S1	0.083	
STRN101	Sea Transport I	C	CA	S1	0.083	
PRNV101	Principles of Navigation I	S	Ex	S1	0.083	
NISY102	Navigation Information Systems I	S	CA	S1	0.042	
STRN201	Sea Transport II	C	Ex	S2	0.083	STRN101
MALW101	Marine Law I	C	CA	S2	0.083	INML101
MEST202	Marine Environmental Studies II	S	Ex	S2	0.083	MSCI102
NARC101	Naval Architecture I	S	Ex	S2	0.083	MRMT101 + MSCI102
NAVG112	Navigation I (Theory) Module 1	S	Ex	S2	0.083	MRMT101 + PRNV101
NAVG122	Navigation I (Chartwork) Module 2	S	Ex	S2	0.084	MRMT101 + PRNV101
NISY202	Navigation Information Systems II	S	CA	S2	0.083	NISY102
MALW201	Marine Law II	C	Ex	S3	0.125	MALW201
STRN302#	Sea Transport II	C	Ex	S3	0.125	STRN201
NARC203	Naval Architecture II	S	Ex	S3	0.167	NARC101
NAVG202	Navigation II	S	Ex	S3	0.167	NAVG101
NISY312	Navigation Information Systems III (Mod 1)	S	Ex	S3	0.167	NISY202
MEST302#	Marine Environmental Studies III	S	Ex	S3	0.167	MEST202
MALW301#	Marine Law III	C	Ex	S4	0.250	MALW201
NARC303#	Naval Architecture III	S	Ex	S4	0.250	NARC203
NAVG302#	Navigation III	S	Ex	S4	0.248	NAVG202
NISY322#	Navigation Information Systems III (Mod 2)	S	Ex	S4	0.167	NISY312
STEC202	Ship Technology II	S	Ex	S4	0.167	MSCI102
MPSG201	Marine Practice (Sea-going)	S	CA	Yr3		

KEY: All subjects are compulsory.

C=Common to both Navigation & Shore Based. S= Specialised (Navigation only) Assessment Method: Ex=Examination; CA=Continuous Assessment

Year of Study: S1 to S4 refers to the grouping of subjects usually registered for in subsequent semesters. Usually S1= First year First semester and S2 = First year, second semester etc.

These subjects are final level subjects.

A pre-requisite subject means this subject must be passed prior to registration for the subsequent subject.

6.2 PROGRAMME INFORMATION

This information must be read in conjunction with the programme rules that follow.

6.2.1 Academic Integrity

Refer to the DUT General Rules pertaining to academic integrity G13 (1)(o) – covering falsification of academic records, plagiarism and cheating. These will be enforced wherever necessary to safeguard the worthiness of our qualifications and the integrity of the Faculty of Applied Sciences at DUT.

6.2.2 Code of Conduct for Students

A professional code of conduct pertaining to behaviour, appearance, personal hygiene and dress shall apply to all students registered with the Faculty of Applied Sciences, at all times. Refer to Programme Rule 4.3.8 below.

6.2.3 Attendance

Students are expected to achieve 100% attendance for all planned academic activities as these are designed to provide optimal support for the required competency. Students are expected to be punctual for all academic activities. Penalties may be invoked for late attendance. Refer to Programme Rule 4.3.9 below.

6.2.4 Work Integrated Learning (WIL)

This programme requires the student/student to undergo a twelve month period of Work Integrated Learning (WIL) on completion of all prescribed compulsory and elective subjects (instructional offerings) in order to be awarded the qualification.

Although the University undertakes to assist the student/student in obtaining suitable experiential learning placement, the onus is on the student/student to find an "employer". As soon as the student has been accepted for work integrated learning (WIL) he/she must register with the Department Secretary.

During the sea-going period the student will be required to complete and record all tasks in an On Board Training Record Book provided by the shipping company or crewing agency. The student must present the On Board Training Record Book to the Head of Department for sighting and signature after every tour of duty.

Failure of any student to comply with the log book or On Board Training Record Book requirements above may cause the experiential learning not to be recognised towards the completion of the ND programme.

The following subject comprises the experiential learning component of the programme for sea-going students:

Register Code	Subject
MPSG201	Maritime Practice (Sea-going)

Refer to Programme Rule 6.3.7 below.

6.2.5 Assessment and Moderation

Students are expected to work steadily through the period of registration in order to achieve the highest results possible.

Assessment details are listed under each subject at the back of this handbook.

Assessments could include a variety of testing methods including, but not limited to, written tests, oral tests, theoretical and/or practical examinations, group work and assignments.

Assignments must be handed personally to the lecturer who will record their receipt. Late submission will be penalized.

In the case of a continuous assessment subject (a subject which has no final examination/s or supplementary examination/s) opportunities for reassessment are provided for students who fail assessments. These are stipulated in the relevant study guide.
Moderation follows the DUT Assessment Policy stipulations.
Refer to Programme Rule 6.3.9 below.

6.2.6 Employment Opportunities: Sea-going

The first line of employment may lie within a shipping company or with Transnet National Ports Authority (TNPA), where the graduate will enter the industry as a Deck Cadet, and on completion of the requisite sea-time, further study/training and ancillary courses, could one day aspire to the command of an ocean-going vessel or work in a number of divisions within TNPA (including tugs, pilotage, dredging and vessel traffic services).
Opportunities also exist with the South African Navy (SAN). However the student will need to meet the stringent physical and medical requirements of SAN.
A graduate with the ND: Maritime Studies with sea-going experience can transit ashore into a number of positions in areas such as surveying; technical management; education, training and development; and crewing management.

6.2.7 SAMSA Eyesight Requirement

Students taking the sea-going option must, on registration, provide the Department with the result of a SAMSA (South African Maritime Safety Authority) eye test from a SAMSA-approved medical practitioner. The SAMSA office is situated on 17th floor of Durban Bay House, 333 Anton Lembede (formerly Smith) Street, Durban (Tel: 031 307 1501). A SAMSA regional office may also be consulted. Failure in this assessment will mean that a sea-going career will not be possible.

6.2.8 Requirements for Chief Mate COC

Marine Notice No. 14 of 2001, Point No 2, states: "The required academic subjects are covered in the S3 and S4 syllabi for the courses offered at the Durban University of Technology and Cape Peninsula University of Technology. This means that a student for the Chief Mate Certificate of Competency must complete S3 and S4 before being eligible to sit the final (Level 3 Assessment) examination. From January 2002 only students holding a pass from an accredited training institution in S3 and S4 will be eligible to be examined for the Chief Mate Certificate."

6.3. PROGRAMME RULES

6.3.1 Minimum Admission Requirements

6.3.1.1 **Academic Achievement**

No new students will be registered on the programme commencing January 2016.

6.3.1.2 **Admission Requirements based on Work Experience, Age and Maturity; and Recognition of Prior Learning**

The DUT Rules G7(3), and G7(8) respectively, will apply. (Approved by Senate Rules Comm wef 2014/10)

6.3.1.3 **Admission of International Students**

- The DUT's Admissions Policy for International Students and DUT Rules G4 and G7(5) will apply.
- International students must meet the equivalent of programme minimum entrance requirements as stated above.
- An International applicant will be accepted onto the ND: Maritime Studies (Navigation) only if sponsored by a company.
- An applicant with South African Refugee Status will not be accepted into the ND: Maritime Studies (Navigation) due to the inability to acquire international travel visas.

  (Approved by Senate Rules Comm wef 2014/10)

6.3.1.4 **Admission of Students from other Institutions**

In addition to the relevant DUT Rules a transferring student will only be accepted if there are places available and the student has met the applicable entrance requirements of the university.
(Approved by Senate Rules Comm wef 2014/10)

6.3.2 Selection Criteria

No new students will be registered onto the programme commencing January 2016.

6.3.3. Pass Requirements

In addition to the DUT Rules G12, G14 and G15, the following programme rules apply: 4.3.3.1 As per SAMSA safety specifications, a final mark of not lower than 60% is required for a pass in the following subjects:
Navigation I (both modules), II and III
Naval Architecture I, II and III

6.3.4. Reregistration Rules

In addition to the DUT Rule G16, and all prerequisite subjects as identified in the Learning Table Structure (4.1), the following programme rules apply:-

6.3.4.1. Promotion from Semester 1 to Semester 2:
Students must pass a minimum of 3 subjects.

6.3.4.2. Promotion from Semester 2 to Semester 3:
Students must pass all prerequisite subjects.

6.3.4.3. Promotion from Semester 3 to Semester 4:
Students must pass a minimum of 3 full subjects.

6.3.5. Exclusion Rules

In addition to DUT Rule G17, a first semester student who fails three or more subjects with a final result of less than 40% in each subject is not permitted to reregister in this programme. Deregistration from any subjects is subject to the provision of DUT Rule G6. (Approved by Senate Rules Comm wef 2014/10)

6.3.6. Interruption of Studies

In accordance with Rule G21A(b), the minimum duration for this programme will be 3 years of registered study and the maximum duration will be 5 years of registered study, including any periods of WIL. Should a student interrupt their studies by more than three (3) years, the student will need to apply to the department for permission to reregister and will need to prove currency of appropriate knowledge prior to being given permission to continue with registration.

6.3.7. Work Integrated Learning Rules

In addition to the DUT Rule G28:

A student is required to attend and complete the Work Preparedness Programme offered by the department prior to undertaking WIL placement.

The department undertakes to assist the student in obtaining suitable WIL placement; however the student is expected to attempt to find an employer as part of the preparation for a placement.

The employer must be approved by the Department of Maritime Studies and accredited by the South African Maritime Safety Authority (SAMSA) where appropriate.

As soon as the student has been accepted for a WIL placement he/she must register for the subject Maritime Practice (Sea-Going) (MPSG201).

The SAMSA approved On Board Training Record Book, all WIL projects and the performance evaluations shall be submitted to the department a minimum of two weeks prior to the student booking a SAMSA Level III Oral Assessment.

The student must comply with the rules and regulations as set out in the Industrial Environment where placed. The maritime industry operates 24 hours a day 365 days a year and a student on a WIL placement may be required to work on weekends and religious holidays

6.3.8. Code of Conduct

In addition to the Student Code of Conduct in the DUT General Handbook for Students, and the relevant requirements as stated in the appropriate Study Guides, the following rules apply:

6.3.8.1 Conduct of Students in Practical Facilities

Strict adherence to instructions issued by technical, supervisory or academic staff is required due to the need to ensure effective and safe practice in these facilities. Misconduct or disregard for instructions will be referred to the relevant disciplinary procedure. *(Approved by Senate Rules Comm wef 2014/10)*

6.3.8.2 **Uniforms**

Students must adhere to instructions issued by technical, supervisory or academic staff regarding the specific dress code required during practicals. Non-compliance will result in the student being denied access to the venue. *(Approved by Senate Rules Comm wef 2014/10)*

6.3.9. Attendance and Assessment

6.3.9.1. A student who, for any valid reason(Refer to Programme Rule 4.3.9.2 below), is absent from a particular practical or test, must provide written proof of the reason for the absence to the lecturer concerned, within five (5) working days of returning to the institution in order to be considered for a special assessment.
(Approved by Senate Rules Comm wef 2014/10)

6.3.9.2. The DUT Rule G13(3)(a) which refers to special examinations also refers to special assessments set within departments for students who have missed coursework assessments. In these cases the department will determine the validity of the student's reason for not taking the assessment, and the nature of the special assessment. *(Approved by Senate Rules Comm wef 2014/10)*

6.3.9.3. **Health and Safety**

Students must adhere to all Health and Safety regulations both while at DUT and in WIL placements. Failure to do so will be treated as a breach of discipline. Refer to the appropriate Health and Safety policies. *(Approved by Senate Rules Comm wef 2014/10)*

7. NATIONAL DIPLOMA: MARITIME STUDIES (NAVIGATION) (EXTENDED CURRICULUM) (NDMSF1)

Purpose of Qualification

Graduates of this qualification will have the requisite theoretical knowledge, understanding and practical proficiency to establish a successful career in the shipping industry.

This qualification is offered through a three-year programme (refer to item 4 above), or through an augmented curriculum - offered over a minimum of four years of study – which is devised to enhance student development and to improve the student's chances of successful completion.

7.1 PROGRAMME STRUCTURE (4YEAR)

Code	Modules	Common / Specialised	Assess-ment	Semester Of Study	HEMIS Credits	Pre-requisite Modules
ASMT101	Applied Science (Mathematics)	C	Ex	Year 1	0.175	
ASPY101	Applied Science (Physics)	C	Ex	Year 1	0.175	
CSIL101	Computer Skills and Information Literacy	C	CA	Year 1	0.175	
CSIS101	Communication Skills and Introduction to Shipping	C	CA	Year 1	0.175	
PRNV101	Principles of Navigation I	S	Ex	2a	0.100	
IMLA101	Introduction to Marine Law I (Augmented)	S	Ex	2a	0.166	
STRN101	Sea Transport I	C	CA	2a	0.100	
NISY102	Navigation Information Systems I	C	CA	2a	0.100	
STRN201	Sea Transport II	C	Ex	S2 / 2b	0.166	STRN101
MALW101	Marine Law I	C	CA	S2 / 2b	0.100	IMLA101
MEST202	Marine Environmental Studies II	S	Ex	S2 / 2b	0.100	ASPY101
NARA101	Naval Architecture I (Augmented)	S	Ex	S2 / 2b	0.100	ASPY101 + ASMT101
NVGN111	Navigation I (Theory) Module 1 (Augmented)	S	Ex	S2 / 2b	0.166	PRNV101 + ASMT101
NVGN121	Navigation I (Chartwork) Module 2 (Augmented)	S	Ex	S2 / 2b	0.100	PRNV101 + ASMT101
NISY202	Navigation Information Systems II	S	CA	S2 / 2b	0.100	NISY102
MALW201	Marine Law II	C	Ex	S3 / 3a	0.0091	MALW101
STRN302#	Sea Transport II	C	Ex	S3 / 3a	0.0091	STRN201
NARC203	Naval Architecture II	S	Ex	S3 / 3a	0.0091	NARA101
NAVG202	Navigation II	S	Ex	S3 / 3a	0.0091	NVGN101
NISY312	Navigation Information Systems III (Mod 1)	S	Ex	S3 / 3a	0.0091	NISY202
MEST302#	Marine Environmental Studies III	S	Ex	S3 / 3a	0.0091	MEST202
MALW301#	Marine Law III	C	Ex	S4 / 3b	0.0091	MALW201
NARC303#	Naval Architecture III	S	Ex	S4 / 3b	0.0091	NARC203
NAVG302#	Navigation III	S	Ex	S4 / 3b	0.0091	NAVG202
NISY322#	Navigation Information Systems III (Mod 2)	S	Ex	S4 / 3b	0.0091	NISY312
STEC202	Ship Technology II	S	Ex	S4 / 3b	0.0091	ASPY101
MPSG201	Marine Practice (Sea-going)	S	CA	Yr4		

KEY: All subjects are compulsory

C=Common to both Navigation & Shore Based. S=Specialised (Shore Based only) Assessment Method: Ex=Examination; CA=Continuous Assessment

Year of Study: S1 to S4 refers to the grouping of subjects usually registered for in subsequent semesters. Numbers 1-4 refer to the year of study, "a" = Semester 1 and "b" = Semester 2. (eg: 2a = second year, first semester).

These subjects are final level subjects.

A pre-requisite subject means this subject must be passed prior to registration for the subsequent subject.

7.2 PROGRAMME INFORMATION

Refer to 6.2 Programme Information under the ND: Maritime Studies (Navigation).

The ND: Maritime Studies (Navigation) (ECP) is to be completed in a minimum of six semesters of theoretical study (3 years) and a minimum of 12 months experiential training. In order to be accepted as a Cadet Navigating Officer, students should complete the tuition part of the qualification ND: Maritime Studies (Navigation) by the recommended maximum age of 21 years.

7.3 PROGRAMME RULES

Refer to 6.3 Programme Rules under the ND: Maritime Studies (Navigation) and the following rules which apply specifically to ND: Maritime Studies (Navigation) (ECP).

7.3.1 Minimum Admission Requirements

Refer to Rule 6.3.1 which is applicable to both the ND and ND(ECP).

7.3.2 Selection Criteria

Refer to Rule 6.3.2 which is applicable to both the ND and ND(ECP).

7.3.3 Pass Requirements

Refer to Rule 6.3.3 which is applicable to both the ND and ND(ECP).

7.3.4 Reregistration Rules in the Extended Curriculum Programme

In addition to the DUT Rule G16, and all prerequisite subjects as identified in the Learning Table Structure (5.1), the following programme rules apply:-

7.3.4.1 Promotion from Year 1 to 2a
Students must pass a minimum of 3 subjects.

7.3.4.2 Promotion from Semester 2a to Semester 2b:
Students must pass a minimum of 3 subjects

7.3.4.3 Promotion from Semester 2b to Semester 3a:
Students must pass a minimum of 3 subjects

7.3.4.4 Promotion from Semester 3a to Semester 3b:
Students must pass a minimum of 3 subjects

7.3.5 Exclusion Rules

Refer to Rule 6.3.5 which is applicable to both the ND and ND(ECP).

7.3.6 Interruption of Studies

In accordance with Rule G21A(b), the minimum duration for this programme will be 4 years of registered study and the maximum duration will be 5 years of registered study, including any periods of WIL. Should a student interrupt their studies by more than three (3) years, the student will need to apply to the department for permission to reregister and will need to prove currency of appropriate knowledge prior to being given permission to continue with registration.

(Approved by Senate Rules Comm wef 2014/10)

7.3.7 Work Integrated Learning Rules

Refer to Rule 6.3.7 which is applicable to both the ND and ND(ECP).

7.3.8 Code of Conduct

Refer to Rule 6.3.8 which is applicable to both the ND and ND(ECP).

7.3.9 Attendance and Assessment

Refer to Rule 6.3.9 which is applicable to both the ND and ND(ECP).

7.3.10 Health and Safety

Refer to Rule 6.3.10 which is applicable to both the ND and ND(ECP)

8. NATIONAL DIPLOMA: MARITIME STUDIES (SHORE-BASED) (NDMTS1)

Purpose of Qualification

Graduates of this qualification will have the requisite theoretical knowledge, understanding and practical proficiency to establish a successful career in the shipping industry.

8.1 PROGRAMME STRUCTURE (3 YEAR)

Code	Modules	Common / Specialised	Assess-ment		Semester Of Study	HEMIS Credits	Pre-requisite Modules
MSCI102	Marine Science I	C	Ex		S1	0.083	
INML101	Introduction to Marine Law I	C	Ex		S1	0.042	
CSKI103	Communication Skills I	C	CA		S1	0.042	
CSER101	Computer Skills I	C	CA		S1	0.041	
MRMT101	Marine Mathematics I	C	CA		S1	0.083	
STRN101	Sea Transport I	C	CA		S1	0.083	
PECN101	Principles of Economics	S	Ex		S1	0.083	
CMRL111	Commercial Law (Mod 1)	S	Ex		S1	0.083	
STRN201	Sea Transport II	C	Ex		S2	0.083	STRN101
MALW101	Marine Law I	C	CA		S2	0.083	INML101
CMRL121	Commercial Law (Mod 2)	S	Ex		S2	0.125	CMRL111
ECST101	Economics of Sea Transport I	S	CA		S2	0.083	STRN101 + PECN101
SHAD101	Shipping Administration I	S	CA		S2	0.125	STRN101
BAFI102	Business Admin: Financial	S	Ex		S2	0.125	
MALW201	Marine Law II	C	Ex		S3	0.125	MALW201
STRN302#	Sea Transport III	C	Ex		S3	0.125	STRN201
AMNM111	Administration Management (Mod 1)	S	Ex		S3	0.167	
ECST201	Economics of Sea Transport II	S	CA		S3	0.167	ECST101
BAMN202	Business Admin: Management II	S	Ex		S3	0.125	CSKI101
SADM202	Shipping Administration II	S	Ex		S3	0.167	SHAD101
MALW301#	Marine Law III	C	Ex		S4	0.250	MALW201
AMNM121	Administration Management (Mod 2)	S	Ex		S4	0.210	AMNM111
SADM302	Shipping Administration III	S	Ex		S4	0.250	SADM202
ECST301	Economics of Sea Transport III	S	Ex		S4	0.250	ECST201
MPSB201	Marine Practice (Shore-based)	S	CA		Yr3		

KEY: All subjects are compulsory.

C=Common to both Navigation & Shore Based. S=Specialised (Shore Based only) Assessment Method: Ex=Examination; CA=Continuous Assessment

Year of Study: S1 to S4 refers to the grouping of subjects usually registered for in subsequent semesters. Usually S1= First year First semester and S2 = First year, second semester etc.

These subjects are final level subjects.

A pre-requisite subject means this subject must be passed prior to registration for the subsequent subject.

8.2 PROGRAMME INFORMATION

This information must be read in conjunction with the programme rules that follow.

8.2.1 Academic Integrity

Refer to the DUT General Rules pertaining to academic integrity G13(1)(o) – covering falsification of academic records, plagiarism and cheating. These will be enforced wherever necessary to safeguard the worthiness of our qualifications, and the integrity of the Faculty of Applied Sciences at DUT.

8.2.2 Code of Conduct for Students

A professional code of conduct pertaining to behavior, appearance, personal hygiene and dress shall apply to all students registered with the Faculty of Applied Sciences, at all times. Refer to Programme Rule 8.3.8 below.

8.2.3 Attendance

Students are expected to achieve 100% attendance for all planned academic activities as these are designed to provide optimal support for the required competency. Students are expected to be punctual for all academic activities. Penalties may be invoked for late attendance. Refer to Programme Rule 8.3.9 below.

8.2.4 Work Integrated Learning (WIL)

This programme requires the student/student to undergo a 12 month period of Work Integrated Learning (WIL) on completion of all subjects in order to be awarded the qualification. All prescribed compulsory and elective subjects (instructional offerings) and the prescribed WIL component must be completed in order to be awarded the qualification. Although the Institution undertakes to assist the student/student in obtaining suitable experiential learning placement, the onus is on the student/student to find an "employer". As soon as the student has been accepted for work integrated learning (WIL) he/she must register with the Department Secretary.

During the shore-based period the student is to complete a log book under the supervision of a training manager/supervisor who is obliged to submit quarterly reports to the Department, as well as a final report. These reports will form the evidence required to show completion of the experiential learning component.

The following subject comprises the experiential learning component of the programme for shore-based students:

Register Code	Subject
MPSB201	Maritime Practice (Shore-based)

Refer to Programme Rule 8.3.7 below.

8.2.5 Assessment and Moderation

Students are expected to work steadily through the period of registration in order to achieve the highest results possible.

Assessment details are listed under each subject at the back of this handbook.

Assessments could include a variety of testing methods including, but not limited to, written tests, oral tests, theoretical or practical examinations, group work and assignments.

Assignments must be handed personally to the lecturer who will record their receipt. Late submission will be penalized.

In the case of a continuous assessment subject (a subject which has no final examinations or supplementary examinations) opportunities for reassessment are provided for students who fail assessments. These are stipulated in the relevant study guide.

Moderation follows the DUT Assessment Policy stipulations.

Refer to Programme Rule 6.3.9 below.

8.2.6 Employment Opportunities: Shore-based

A number of employment opportunities exist within the shore-based sector of the maritime industry. These include port agency, stevedoring, clearing and forwarding, surveying, warehousing, project management and terminal management.

8.3 PROGRAMME RULES

8.3.1 Minimum Admission Requirements

8.3.1.1 **Admission Requirements based on Work Experience, Age and Maturity; and Recognition of Prior Learning**

The DUT Rules G7 (3), and G7 (8) respectively, will apply. (Approved by Senate Rules Comm wef 2014/10)

8.3.1.2 **Admission of International Students**

The DUT's Admissions Policy for International Students and DUT Rules G4 and G7 (5) will apply.

International students must meet the equivalent of programme minimum entrance requirements as stated above. *(Approved by Senate Rules Comm wef 2014/10)*

8.3.1.3 **Admission of Students from other Institutions**

In addition to the relevant DUT Rules a transferring student will only be accepted if there are places available and the student has met the applicable entrance requirements of the university. *(Approved by Senate Rules Comm wef 2014/10)*

8.3.2 Selection Criteria

No new students will be registered onto the programme commencing January 2016.

8.3.3 Pass Requirements

The DUT Rules G12, G14 and G15 apply. *(Approved by Senate Rules Comm wef 2014/10)*

8.3.3.1 Promotion from Semester 1 to Semester 2:
Students must pass a minimum of 3 subjects.

8.3.2.2 Promotion from Semester 2 to Semester 3:
Students must pass all prerequisite subjects.

8.3.2.3 Promotion from Semester 3 to Semester 4:
Students must pass a minimum of 3 full subjects.

8.3.4 Reregistration Rules

In addition to the DUT Rule G16, and all prerequisite and co-requisite subjects as identified in the Learning Table Structure (4.1), the following programme rules apply:-

8.3.5 Exclusion Rules

In addition to DUT Rule G17, a first year student who fails three or more subjects with a final result of less than 40% in each subject is not permitted to reregister in this programme. Deregistration from any subjects is subject to the provision of DUT Rule G6. *(Approved by Senate Rules Comm wef 2014/10)*

8.3.6 Interruption of Studies

In accordance with Rule G21A(b), the minimum duration for this programme will be 3 years of registered study and the maximum duration will be 5 years of registered study, including any periods of WIL. Should a student interrupt their studies by more than three (3) years, the student will need to apply to the department for permission to reregister and will need to prove currency of appropriate knowledge prior to being given permission to continue with registration.
(Approved by Senate Rules Comm wef 2014/10)

8.3.7 Work Integrated Learning Rules

In addition to the DUT Rule G28:
A student is required to attend and complete the Work Preparedness Programme offered by the department prior to undertaking WIL placement.
The department undertakes to assist the student in obtaining suitable WIL placement; however the student is expected to attempt to find an employer as part of the preparation for a placement.
As soon as the student has been accepted for a WIL placement he/she must register for the subject Maritime Practice (Shore-based) (MPSB201).
The student must comply with the rules and regulations as set out in the Industrial Environment where placed. The maritime industry operates 24 hours a day 365 days a year and a student on a WIL placement may be required to work on weekends and religious holidays.
(Approved by Senate Rules Comm wef 2014/10)

8.3.8 Code of Conduct

In addition to the Student Code of Conduct in the DUT General Handbook for Students, and the relevant requirements as stated in the appropriate Study Guides, the following rules apply:

8.3.8.1 **Conduct of Students in Practical Facilities**

Strict adherence to instructions issued by technical, supervisory or academic staff is required due to the need to ensure effective and safe practice in these facilities. Misconduct or disregard for instructions will be referred to the relevant disciplinary procedure. *(Approved by Senate Rules Comm wef 2014/10)*

8.3.8.2 **Uniforms**

Students must adhere to instructions issued by technical, supervisory or academic staff regarding the specific dress code required during practicals. Non-compliance will result in the student being denied access to the venue. *(Approved by Senate Rules Comm wef 2014/10)*

8.3.9 Attendance and Assessment

8.3.9.1 A student who, for any valid reason(Refer to Programme Rule 4.3.9.2 below), is absent from a particular practical or test, must provide written proof of the reason for the absence to the lecturer concerned, within five (5) working days of returning to the institution in order to be considered for a special assessment.
(Approved by Senate Rules Comm wef 2014/10)

8.3.9.2 The DUT Rule G13(3)(a) which refers to special examinations also refers to special assessments set within departments for students who have missed coursework assessments. In these cases the department will determine the validity of the student's reason for not taking the assessment, and the nature of the special assessment. *(Approved by Senate Rules Comm wef 2014/10)*

8.3.10 Health and Safety

Students must adhere to all Health and Safety regulations both while at DUT and in WIL placements. Failure to do so will be treated as a breach of discipline. Refer to the appropriate Health and Safety policies.
(Approved by Senate Rules Comm wef 2014/10)

9 SERVICING

9.1.1. SERVICED MODULES

The servicing department's rules apply to all serviced modules. The following modules for the Diploma in Nautical Studies and Diploma in Shipping and Logistics programmes are serviced externally to this department.

Serviced Programme	Servicing Department	Serviced Modules	Module Code
Dip: Nautical Studies	Department of Physics	Marine Science I, II	MRSN101 MRSN201
	Department of Mathematics	Marine Mathematics 1, II	MRNM101 MRNM201
	Department of English and Communications	Communication Skills 1	CMSS101
	Department of Information Technology	Computer Skills and Information Literacy	CSIL101
	General Education Modules - TBA	DUT Cornerstone 101	CSTN101
		IGE: Leadership	LDSH101
		IGE: The Global Environment	GENV101
		IGE: The Entrepreneurial Edge	TENE101
		IGE: Values in the Workplace	VWKP101
		IGE: Violence and Non-Violence	VNVL101
		FGE: Applied Sciences and Society	APSS101
		FGE: Applied Science and Wellness	ASWL101
Dip: Shipping and Logistics	Department of English and Communications	Communication Skills 1	CMSS101
	Department of Applied Law	Shipping and Legal Practice 1 Shipping and Legal Practice 2	SHLP101 SHLP201
	Department of Information Technology	Computer Skills and Information Literacy	CSIL101
	Department of Economics and Governance	Economics (Micro) Economics (Macro)	ECNC101 ECNC201
	Department of Management and Entrepreneurial Studies	Business and Management 1 Business and Management 2	BSMT101 BSMT201
	Department of Statistics	Introduction to Statistics	ISTS101
		Statistics 1	STSC101
	General Education Modules - TBA	IGE: DUT Cornerstone 101	CSTN101
		IGE: Constitutional Law and Human Rights	CLHR101
		IGE: Cultural Diversity	CLDV101
		IGE: Entrepreneurial Edge, The	TENE101
		IGE: Equality and Diversity	EQDV101
		IGE: Global Environment, the	GENV101
		IGE: HIV and Communicable Diseases in KZN	HCDK101
		IGE: Leadership	LDSH101
		IGE: Violence and Non-Violence	VNVL101
		FGE: Introduction to Applied Sciences	IASC101
		FGE: Applied Science and Society	APSS101
		FGE: Applied Science and Wellness	ASWL101
		FGE: Applied Science for Environmental Sustainability	ASES101
		FGE: Community Engagement and Development	ASCE101

9.2. SERVICED QUALIFICATIONS

The following qualifications and subjects are serviced from this department:

Serviced Programme	Subject	Subject Code
ND: Mechanical Engineering (Marine)	Naval Architecture I	NAME101
ND: Mechanical Engineering (Marine)	Marine Engineering Knowledge I	MEKN101
ND: Mechanical Engineering (Marine)	Marine Law I	MALW101
ND: Mechanical Engineering (Marine)	Naval Architecture II	NAME202
ND: Mechanical Engineering (Marine)	Marine Engineering Knowledge II	MEKN201
ND: Mechanical Engineering (Marine)	Marine Law II	MALW201
ND: Mechanical Engineering (Marine)	Naval Architecture III	NAME301
ND: Mechanical Engineering (Marine)	Marine Engineering Knowledge III	MEKN301

9.2.1. NATIONAL DIPLOMA: MECHANICAL ENGINEERING (MARINE)

The Department of Maritime Studies services the Department of Mechanical Engineering for this qualification.

Students for this programme must apply for the ND: Mechanical Engineering. To enter this programme a student will require a minimum NSC rating 4 in English, Mathematics, Physical Science plus three 20 credit subjects.

Furthermore, the following electives for Marine Engineering must be selected:

- Naval Architecture (I, II and III),
- Marine Engineering Knowledge (I, II and III), and
- Marine Law (I and II)

Alternatively, students who already have a ND: Mechanical Engineering may apply for the above subjects for Non-Diploma purposes through the Department of Maritime Studies. By completing these subjects a student will meet the requirements for the theoretical component for a Certificate of Competency as a Marine Engineer Watchkeeper. (See 7.2 Marine Engineering - Non-Diploma Programme).

Instructional Programme for ND: Mechanical Engineering (Marine)

Code	Subjects	Assessment	Semester Of Study	NATED Credits	Pre-requisite Subjects
CSKI103	Communication Skills I	Ref ME	S1	Ref ME	Ref ME
CSER101	Computer Skills I	Ref ME	S1	Ref ME	Ref ME
MSTH101	Mathematics I	Ref ME	S1	Ref ME	Ref ME
MECH101	Mechanics I	Ref ME	S1	Ref ME	Ref ME
MEDR101	Mechanical Engineering Drawing I	Ref ME	S1	Ref ME	Ref ME
FMEC202	Fluid Mechanics II	Ref ME	S2	Ref ME	Ref ME
THRM201	Thermodynamics II	Ref ME	S2	Ref ME	Ref ME
MMAC202	Mechanics of Machines II	Ref ME	S2	Ref ME	Ref ME
ETEC101	Electrotechnology I	Ref ME	S2	Ref ME	Ref ME
NAME101	Naval Architecture I	Ex	S2	0.083	MATH101 + MECH101
MEKN101	Marine Engineering Knowledge I	Ex	S2	0.083	MECH101
MALW101	Marine Law I	CA	S2	0.083	CSKI103
SMAT202	Strength of Materials II	Ref ME	S3	Ref ME	Ref ME
FMEC302	Fluid Mechanics III	Ref ME	S3	Ref ME	Ref ME
THRM301	Thermodynamics III	Ref ME	S3	Ref ME	Ref ME
ETEC202	Electrotechnology II	Ref ME	S3	Ref ME	Ref ME
NAME201	Naval Architecture II	Ex	S3	0.167	NAME101
MEKN201	Marine Engineering Knowledge II	Ex	S3	0.083	MEKN101
MALW201	Marine Law II	CA	S3	0.125	MALW101
MMASC302	Mechanics of Machines III	Ref ME	S4	Ref ME	Ref ME
HMAC301	Hydraulic Machines III	Ref ME	S4	Ref ME	Ref ME
SMAT302	Strength of Materials III	Ref ME	S4	Ref ME	Ref ME
SPLT302	Steam Plant III	Ref ME	S4	Ref ME	Ref ME
ETEC302	Electrotechnology III	Ref ME	S4	Ref ME	Ref ME
NAME301	Naval Architecture III	Ex	S4	0.250	NAME202
MEKN301	Marine Engineering Knowledge III	Ex	S4	0.083	MEKN201

Ref ME = Refer to the Department of Mechanical Engineering
Ex = Final Examination; CA = Continuous assessment No Final Examination

9.2.2. MARINE ENGINEERING - NON DIPLOMA (NODIPM)

This non diploma programme of studies supplements previous studies. To enter this programme a student must comply with the requirements of the SAMSA Code for the relevant Certificate of Competency. This code can be found on www.samsa.org.za.Applications can be made to the nearest SAMSA office.

Code	Subjects	Assessment	Semester of Study	Pre-requisite Subjects
NVAR101	Naval Architecture I	Ex	S2	MATH101 + MECH101
MEKM101	Marine Engineering Knowledge I	Ex	S2	MECH101
MALW101	Marine Law I	CA	S2	CSKI103
NVAR202	Naval Architecture II	Ex	S3	NAME101
MEKM201	Marine Engineering Knowledge II	Ex	S3	MEKN101
MALW201	Marine Law II	CA	S3	MALW101
NVAR301	Naval Architecture III	Ex	S4	NAME202
MEKM3091	Marine Engineering Knowledge III	Ex	S4	MEKN201

Note: Marine Engineering Knowledge subject codes MEKM101, MEKM201 and MEKM301; and Naval Architecture subject codes NVAR201, NVAR202 AND NVAR301 are the codes for the Non-Diploma programme NODIPM.

10. SHORT COURSES

The following non-subsidised short courses are provided. The scheduled dates and costs per student are available from the Centre for Continuing Education (CCPE)

Name of Short Course	Approved for offering	Duration
Electronic Chart, Display and Information System (ECDIS)	SENEX 2013/05	Duration 5 days
Electronic Navigation Systems (Management)	SENEX 2013/05	Duration 5 days
Electronic Navigation Systems (Operational Level)	SENEX 2013/05	Duration 10 days
Human Elements in Leadership & Management (HELM) (Maritime)	FB 2014/10	Duration 5 days
Maritime Communications	2008/02	Duration 5 days

11. MODULE CONTENT

Note that all subjects are offered on a semester basis full time only. Please refer to the study guides for the respective subjects for more detail

11.1 DIPLOMA IN NAUTICAL STUDIES

COMMUNICATION SKILLS

Assessment: Continuous assessment based on 2 tests and 2 assignments.
Hours of tuition: Theory: 4 periods per week
Syllabus: Communication theory, oral presentations, technical writing skills, group communication skills

COMPUTER SKILLS AND INFORMATION LITERACY

Assessment: Continuous assessment based on 2 tests and 2 assignments.
Hours of tuition: Theory: 2 periods per week
Practical: 1 period per week
Syllabus: Word processing, spreadsheets, power-point, e-mail, internet, search engines, academic data-bases

INTRODUCTION TO SHIPBOARD OPERATIONS

Assessment: Continuous assessment based on 2 class tests and an assignment
Hours of tuition: Theory: 4 x periods per week
Syllabus: South African legal system; criminal and civil law; international law, codes and conventions; company and shipboard management structures

MARINE ENGINEERING SYSTEMS I

Assessment: Semester mark is calculated from the average of two test
Examination consists of one three hour paper
Hours of tuition: Theory: 4 x periods per week
Syllabus: Diesel plant, Steam turbine plant, Gas turbine plant, Transmission of power to propulsion systems, Fuel consumption, Auxiliary boilers, Pumps, Freshwater systems, Ventilation, Stabilisers, Steering and manoeuvring systems, Data loggers, Mimic boards, Analogue and digital displays, Bridge control, Fuel consumption, Resistance

MARINE MATHEMATCIS I

Assessment: Continuous assessment based on 4 class tests
Hours of tuition: Theory: 4 x periods per week.
Syllabus: Algebra, graphs, proportion, variation and interpolation, geometry, trigonometry

MARINE MATHEMATICS II

Assessment: Continuous assessment based on 4 class tests
Hours of tuition: Theory: 4 x periods per week.
Syllabus: Mensuration, spherical triangles, vectors, ellipse

MARINE SCIENCE I

Assessment: Semester mark is calculated from the average of two test
Examination consists of one three hour paper

Hours of tuition: Theory: 4 x periods per week
Practicals: 2 x periods per week

Syllabus: Mass, weight and force; distance, velocity and acceleration; circular motion and rotation; statics; work, energy and power; machines; density; fluids and flotation.

MARINE SCIENCE II

Assessment: Semester mark is calculated from the average of two test
Examination consists of one three hour paper

Hours of tuition: Theory: 4 x periods per week
Practicals: 2 x periods per week

Syllabus: Temperature; expansion of solids and fluids; gas laws; waves; electromagnetic radiation; light and sound.

NAVIGATION CALCULATIONS 1

Assessment: Semester mark is calculated from the average of two test
Examination consists of one three hour paper

Hours of tuition: Theory: 4 x periods per week

Syllabus: Latitude and longitude, Kepler's Laws, equation of time, marine sextant errors, marine chronometer and errors, Universal Time Coordinated, time systems, solar system, celestial sphere and PZX navigation triangle, phases of the moon, chart projections, parallel sailing, meridian sailing, plane sailing, Mercator sailing, great circle sailing, composite circle sailing, high tide, low tide, standard ports, secondary ports, tide tables

NAVIGATION CALCULATIONS 2

Assessment: Semester mark is calculated from the average of two test
Examination consists of one three hour paper

Hours of tuition: Theory: 4 x periods per week

Syllabus: Nautical Almanac, GHA, LHA, SHA and Declination, azimuth calculations (ABC method), amplitude calculations, Polaris correction of sextant altitude to true altitude, latitude by meridian altitude, latitude by Polaris, relationship between position circles and position lines, Marc St Hilaire method of sight reduction, alternative methods of sight reduction, position line plotting, plan celestial observations at twilight, Nautical Publication (NP 323 – selected stars), star identifiers

NAVIGATION - SIMULATION (ELECTRONIC CHART DISPLAY AND INFORMATION SYSTEMS)

Assessment: Semester mark is calculated from the average of two tests and weekly simulator assessments

Hours of tuition: Theory: 2 x periods per week
Practicals: 2 x periods per week

Syllabus: Legal aspects and requirements, Principle types of electronic charts, Navigational functions and settings, ECDIS data, Presentation of ECDIS data, ECDIS Sensors, Route planning, Route monitoring, Updating electronic charts, Documentation, Making ECDIS a safe tool for navigation

NAVIGATION – ELECTRONIC NAVIGATION SYSTEMS 1

Assessment: Continuous assessment based on 2 class tests and an assignment

Hours of tuition: Theory: 3 x periods per week

Syllabus: Wave theory, satellite navigation, echo-sounder, speed logs, ECDIS, and other bridge equipment.

NAVIGATION – ELECTRONIC NAVIGATION SYSTEMS 2

Assessment: Semester mark is calculated from the average of two assessments. Examination consists of one two hour paper.

Hours of tuition: Theory: 2 periods per week
Practical: 2 periods per week

Syllabus: Radar and ARPA, COLREGS and radar plotting

NAVIGATION – ELECTRONIC NAVIGATION SYSTEMS 3

Assessment: Semester mark is calculated from the average of two assessments. Examination consists of one three hour paper.

Hours of tuition: Theory: 4 periods per week

Syllabus: Ship's magnetic, gyro compass, evolution of shipboard navigation equipment, marine casualties

NAVIGATION: METEOROLOGY AND ENVIRONMENTAL MANAGEMENT 1

Assessment: Semester mark is calculated from the average of two assessments Examination consists of one three hour paper.

Hours of tuition: Theory: 4 periods per week

Syllabus: Meteorology instruments, world meteorological organisation codes, weather services, meteorological processes, synoptic chart and effects of world shipping on climate change

NAVIGATION: METEOROLOGY AND ENVIRONMENTAL MANAGEMENT 2

Assessment: Semester mark is calculated from the average of two assessments Examination consists of one three hour paper.

Hours of tuition: Theory: 4 periods per week

Syllabus: General circulation, main climatic zones, major global climate zones, surface oceanographic processes and data, passage planning, Tropical Revolving Storm

NAVIGATION – OCEAN AND COASTAL NAVIGATION 1

Assessment: Semester mark is calculated from the average of two test
Examination consists of one three hour paper

Hours of tuition: Theory: 4 x periods per week

Syllabus: Sailings on the earth's surface, types and properties of charts, carriage, storage, handling and maintenance of charts and nautical publications, weekly and cumulative lists of Notices to Mariners, plotting positions on a chart, chart symbols; true, compass and gyro courses, chartwork techniques to determine position

NAVIGATION – OCEAN AND COASTAL NAVIGATION 2

Assessment: Semester mark is calculated from the average of two test
Examination consists of one three hour paper

Hours of tuition: Theory: 4 x periods per week

Syllabus: Ocean weather routeing, presentation of meteorological and climatological data, publications and charts, principles of passage planning, ship reporting systems, documenting a passage plan, emergency / contingency procedures, ship handling, hydrodynamics, squat, bank effect, ship interaction

NAVIGATION - SIMULATION (RADAR AND ARPA AT OPERATIONAL LEVEL)

Assessment: Semester mark is calculated from the average of two tests and weekly simulator assessments

Hours of tuition: Theory: 2 x periods per week
Practicals: 2 x periods per week

Syllabus: Radar simulator controls, Internal communication, engine controls, signalling apparatus, telegraph systems, Bridge control system, Radar plotting, Collision avoidance, ARPA, Coastal Navigation, Passage planning and anchorage, Role of the Master, Advanced Radar plotting, Navigation and collision avoidance in all areas, Manoeuvring in all areas, Application and interpretation of the COLREGS, Application and interpretation of the IALA Buoyage system, Bridge watch keeping procedures, Communications between bridge and engine room, Factors which have effect on manoeuvres, turning circles and stopping distances including hydrodynamics, Manoeuvring a vessel in all conditions

SHIPBOARD MANAGEMENT 1

Assessment: Semester mark is calculated from the average of two assessments.
Examination consists of one three hour paper.

Hours of tuition: Theory: 4 periods per week

Syllabus: Loading, stowage, carriage and unloading of dry cargoes, bulk liquid and chemical cargoes, duties of the Officer of the Watch

SHIPBOARD MANAGEMENT 2

Assessment: Semester mark is calculated from the average of two assessments. Examination consists of one three hour paper.

Hours of tuition: Theory: 4 periods per week

Syllabus: Dry, liquid and dangerous cargoes, cargo calculations for break bulk, dry bulk and liquid bulk cargoes. Management theory

SHIPBOARD MANAGEMENT 3

Assessment: Semester mark is calculated from the average of two test Examination consists of one three hour paper

Hours of tuition: Theory: 4 x periods per week

Syllabus: Charter parties, Particular and general average, Maritime liens, Quality assurance, Codes and guidance, Requirements of MARPOL and SOLAS, STCW Convention, Load line convention, Health regulations, Taking command of a ship on unlimited voyage., Mandatory and voluntary ship reporting systems, Assisting vessels in distress, Classification societies, Maritime contracts of carriage, Maritime insurance, Commercial role and the legal responsibility of the master in vessel operations, including pilotage, Commercial role and the legal responsibilities and liabilities of the master in emergencies and incidents, Knowledge of organisations concerned with shipping, Legal procedures on arrival at and on departure from a port

SHIP STABILITY AND CONSTRUCTION 1

Assessment: Semester mark is calculated from the average of two assessments. Examination consists of one three hour paper.

Hours of tuition: Theory: 4 periods per week

Syllabus: Features of a ship's structure, ship stresses, hydrostatics, statical stability, GZ curves, transverse stability to list calculations, longitudinal stability

SHIP STABILITY AND CONSTRUCTION 2

Assessment: Semester mark is calculated from the average of two assessments. Examination consists of one three hour paper.

Hours of tuition: Theory: 4 periods per week

Syllabus: Structural requirements and features of a vessel, maintenance requirements, methods and procedures, dry-dock and surveys of hull, fittings and equipment, advanced stability calculations

SHIP STABILITY AND CONSTRUCTION 3

Assessment: Semester mark is calculated from the average of two test
Examination consists of one three hour paper

Hours of tuition: Theory: 4 x periods per week

Syllabus: Cross-sectional view of double hull tankers, Torsion boxes, Fuel carriage in double bottoms, Design criteria for LNG Tankers, Protection provided to ship's hull, Survey requirements for special survey, Inclining experiment, Wind heeling, Flooding of ship's compartments, Second moment of irregular area, Load on a tank, Heeling due to turning, Complex examples of loading, discharging and shifting, Angle of loll

11.2 DIPLOMA IN SHIPPING AND LOGISTICS

BUSINESS AND MANAGEMENT 1

Assessment: Semester mark is calculated from the average of two assessments
Examination consists of one three hour paper

Hours of tuition: Theory: 4 periods per week

Syllabus: Management theory, organisational environments, multidisciplinary approach to business and management, Function and role of management, functional areas of shipping business organisations

BUSINESS AND MANAGEMENT 2

Assessment : Semester mark is calculated from the average of two assessments
Examination consists of one three hour paper

Hours of tuition: Theory: 4 periods per week

Syllabus: Internal elements of a business organisation, key external elements of a business organisation, diverse and dynamic nature of a business organisation, contemporary issues on international shipping

BUSINESS AND MANAGEMENT 3

Assessment: Semester mark is calculated from the average of two assessments
Examination consists of one three hour paper

Hours of tuition: Theory: 4 periods per week

Syllabus: Globalisation, National differences in political economy, Differences in culture, Ethics in international business, International trade theory, Political economy of international trade. Foreign direct investment, Regional economic integration, Foreign exchange market, International monetary system, Strategy of international business, Organisation of international business, Entry strategy and strategic alliances, Importing, exporting and countertrade, Global production, outsourcing and logistics, Global marketing and R&D, Global human resource management, Accounting in international business, Financial management in international business, Macro-environment. Role of culture, Hofstede's cultural Cross cultural issues – communication, Cross cultural issues – negotiating and decision making, Global issues – human resources, Global issues – leadership and motivation, Review strategy formulation and implementation in global context, Global alliances and strategy implementation, Strategy vs. structure and changing organisational structures

COMMUNICATION SKILLS

Assessment: Continuous assessment based on 2 tests and 2 assignments.

Hours of tuition: Theory: 4 periods per week

Syllabus: Communication theory, oral presentations, technical writing skills, group communication skills

COMPUTER SKILLS AND INFORMATION LITERACY

Assessment: Continuous assessment based on 2 tests.
Hours of tuition: Theory: 3 periods per week
Practical: 1 period per week
Syllabus: Word processing, spreadsheets, power-point, e-mail, internet, search engines, academic data-bases

ECONOMICS (MICRO)

Assessment: Semester mark is calculated from the average of two test
Examination consists of one three hour paper
Hours of tuition: Theory: 4 x periods per week
Syllabus: Introductory concepts, circular flow of economic activity; goods market; elasticity; labour market; production and costs; market structures

ECONOMICS (MACRO)

Assessment: Semester mark is calculated from the average of two test
Examination consists of one three hour paper
Hours of tuition: Theory: 4 x periods per week
Syllabus: macro-economic objectives and measurement; public sector; monetary sector and foreign sector.

INTRODUCTION TO SHIPPING

Assessment: Continuous assessment based on 2 tests and 2 assignments.
Hours of tuition: Theory: 4 periods per week
Syllabus: Maritime terminology, types of ships, types of cargoes, major port and shipping routes, shipping documentation, national and international maritime agencies.

INTRODUCTION TO STATISTICS

Assessment: Continuous assessment based on 2 tests and 1 assignment.
Hours of tuition: Theory: 4 periods per week
Syllabus: Quantitative, ordinal and qualitative data; primary and secondary data; survey methods for collecting data; sampling methods; presentation of data; measures of central location and dispersion; interpretation and analysis of data.

LOGISTICS 1

Assessment: Semester mark is calculated from the average of two assessments
Examination consists of one three hour paper
Hours of tuition: Theory: 4 periods per week
Syllabus: Principles logistics, various parties involved in the logistics working environment, sustainability issues within the logistics environment, role of communication technology in context of logistics

LOGISTICS 2

Assessment: Semester mark is calculated from the average of two assessments
Examination consists of one three hour paper
Hours of tuition: Theory: 4 periods per week
Syllabus: International logistics market, customer service, communication, marketing

LOGISTICS 3

Assessment: Semester mark is calculated from the average of two assessments
Examination consists of one three hour paper
Hours of tuition: Theory: 4 periods per week
Syllabus: Freight movements, Role of freight transport in society, Components of the freight, transport system, Market segments, Types of freight, Reasons for movement, Supply and demand characteristics, Modes of freight transport, Collection and distribution centres, Structure of the freight industry for different modes, Geographically based structures, Sizes and types of organisations, Resources required for different modes, Types of costs, Profit consideration, Charges / tariffs / rates, Volume discounts, Differential pricing, Sources of demand for freight transport, Types of service solutions, Opportunities and threats, Solution identification, Regular and non-regular services, Routes' used, Route planning, Utilisation of resources, IT Systems, Collection, storage and distribution, Recording details , Tracking vehicles, Measuring and recording operation, Reasons for regulations, Methods of regulation, Regulatory bodies, Enforcement bodies

MARITIME SHORE-BASED PRACTICE

Assessment: Completion of logbook, Portfolio of Evidence and presentation
Hours of tuition: Not applicable – work integrated learning
Syllabus: Ship's Agency, Clearing and Forwarding, Logistics, Port Management, Terminal Management, Documentation, Communication, Warehousing, Stevedoring, Ship types

PORT AND TERMINAL MANAGEMENT 1

Assessment: Semester mark is calculated from the average of two assessments
Examination consists of one three hour paper
Hours of tuition: Theory: 4 periods per week
Syllabus: Key concepts of port and terminal management, role of the various terminals within a port complex, various parties involved in the port and terminal working environment, sustainability issues within the port and terminal environment

PORT AND TERMINAL MANAGEMENT 2

Assessment: Semester mark is calculated from the average of two assessments
Examination consists of one three hour paper

Hours of tuition: Theory: 4 periods per week

Syllabus: Role of ports in the 21st century, port equipment, types of port ownership, management of ports and terminals, legal aspects

PORT AND TERMINAL MANAGEMENT 3

Assessment: Semester mark is calculated from the average of two assessments
Examination consists of one three hour paper

Hours of tuition: Theory: 4 periods per week

Syllabus: Port competition, Market information, Geographic location, Parties involved in transport operations, Techniques of port promotion, Nature and types of port charges, Cost factors in pricing, Pricing policy, Pricing structures, Regulatory mechanisms, Port development policy, Planning principles, Capacity calculations, Port layout and physical constraints, Financial management, Financial and commercial objectives, Corporate analysis of financial data, Project evaluation and review techniques, Joint venture opportunities

SHIPPING AND LEGAL PRACTICE 1

Assessment: Semester mark is calculated from the average of two assessments
Examination consists of one three hour paper

Hours of tuition: Theory: 4 periods per week

Syllabus: Systems of law and guidance at national and international level, commercial law, legal principles governing the sales of goods, buyer and seller

SHIPPING AND LEGAL PRACTICE 2

Assessment: Semester mark is calculated from the average of two assessments
Examination consists of one three hour paper

Hours of tuition: Theory: 4 periods per week

Syllabus: Legal principles governing supply of goods and services, Consumer Protection Act, trade descriptions and unfair commercial practices, agency, partnership, insurance contracts

SHIPPING AND LEGAL PRACTICE 3

Assessment: Semester mark is calculated from the average of two assessments
Examination consists of one three hour paper

Hours of tuition: Theory: 4 periods per week

Syllabus: Introduction to the law of international trade, INCOTERMS, Methods of financing international trade, Letters of credit, Voyage Charter parties, Time Charter parties, Bill of Lading, Demurrage , Despatch, Lay time, Hague Visby Rules, Hamburg Rules, Rotterdam Rules

STATISTICS I

Assessment: Continuous assessment based on 2 tests and 1 assignment.
Hours of tuition: Theory: 4 periods per week
Syllabus: Purpose and methods of prediction and forecasting; scatter diagrams; linear regression; correlation; time series; software packages.

11.3 GENERAL EDUCATION MODULES

APPLIED SCIENCE AND SOCIETY

Assessment: Continuous assessment based written assignment; presentations; tests; portfolio of evidence and project

Hours of tuition: Theory: 4 periods per week

Syllabus: Biotechnology in society; horticulture in society; chemistry in society; sport in society; clothing and textile in society; and foods: facts and fads.

APPLIED SCIENCE AND WELLNESS

Assessment: Continuous assessment based on 1 test, 1 poster and 1 assignment

Hours of tuition: Theory: 4 periods per week

Syllabus: Global diet trends, exercise trends, nutritional status, physical activity output, macro-and micronutrients in health, meal and menu planning, lifestyle diseases, training programme structure

APPLIED SCIENCE FOR SUSTAINABLE DEVELOPMENT

Assessment: Semester mark is calculated from a class test, assignment and group project

Hours of tuition: Theory: 4 periods per week

Syllabus: **Introduction to sustainable development:** Sustainable Development Goals (SDGs), Influence of Government Policy, business, communities and individual, Green living

Environmental Sustainability: Pollution: air, water and land; Climate change, global warming and CO_2 footprint, Conservation and biodiversity, Impact on health and wellness, Water resource management, Renewable energy

Food Security: Availability of food resources for production and distribution, Poverty alleviation through subsistence farming, Utilization of food through enhanced nutritional profile and food safety, Access to food including affordability and food preferences

COMMUNITY ENGAGEMENT AND DEVELOPMENT

Assessment: Semester mark is calculated from a reflective journal, creative presentation and practical project

Hours of tuition: Theory: 4 periods per week

Syllabus: **Introduction to the Applied Sciences, Community Engagement and Community Development:** multidisciplinary and multi-sectoral nature of community development and engagement; integration in line with the humanistic philosophy and ecosystems theory

Conceptual Framework: Conceptualization of CE in its various forms; DUT conceptualisation of CE; purposes of and rationale for CE in the South African context (including the NDP); active and participatory citizenry; service and social action; social justice, change and transformation; students as change agents.

Ethics, principles and values for CE: humanistic philosophy and Ubuntu; ethics and ethical conduct in relationship with communities;

values that guide CE practice in the South African context; principles that guide CE practice in the South African context.

The Approaches and Process of CE: dimensions of community (social, political, economic, cultural, physical) and community issues; reciprocity and partnerships; the integrated and holistic approach to education and life-relating discipline\faculty based knowledge to real issues; stages (phases) of the CE process.

Skills and Attributes for CE: critical thinking; problem solving**;** communication skills (written and verbal-interviewing, active listening)**;** interaction and human relationships; discipline specific skills**;** attributes (from character, love for self and humanity, creativity, curiosity for knowledge - discipline\faculty and self)

Challenges and Benefits of CE: Community, institution, faculty and students perspectives

CONSTITUTIONAL LAW AND HUMAN RIGHTS

Assessment: Continuous assessment based on 1 class test; group and individual assignments; and oral presentation

Hours of tuition: Theory: 2 periods per week

Syllabus: Basic features of the Constitution; constitutional history; organs of State; human rights, Bill of Rights;

CULTURAL DIVERSITY

Assessment: Continuous assessment based on 1 class test; group and individual assignments; and oral presentation

Hours of tuition: Theory: 2 periods per week

Syllabus: Basic features of the Constitution; constitutional history; organs of State; human rights, Bill of Rights;

DUT CORNERSTONE 101

Assessment: Continuous assessment based on reflective journal, tutorial attendance, project, oral presentation and peer assessment.

Hours of tuition: Theory: 2 periods per week
Tutorials: 2 periods per week

Syllabus: Personal, political, historical, environmental and social journeys; ethics, diversity and critical citizenry.

ENTRENEURIAL EDGE, THE

Assessment: Continuous assessment based on 2 tests and 1 assignment

Hours of tuition: Theory: 2 periods per week

Syllabus: Innovation, markets, risk, planning, fiancé, marketing, ethics and social responsibility

EQUALITY AND DIVERSITY

Assessment: Semester mark is calculated from a class test, reflective assignment, group presentation and diversity festival

Hours of tuition: Theory: 2 periods per week

Syllabus: Concepts and terminology – e.g. diversity, equality, inclusion, power, oppression; Parameters of diversity as listed in section 9 of the SA Constitution, Prejudice, discrimination and inequality, The diversity competence continuum, Steps to develop competence/sensitivity in relation to diverse others, Selected topics

GLOBAL ENVIRONMENT

Assessment: Continuous assessment based on a presentation and 2 assignments.

Hours of tuition: Theory: 2 periods per week

Syllabus: Environmental pollution, population growth vs. natural resources, climate change and global warming, sustainable development

HIV AND COMMUNICABLE DISEASES IN KZN

Assessment: Continuous assessment based on e-learning activities, critical reflective diary and community report

Hours of tuition: Theory: 2 periods per week

Syllabus: Epidemiology of HIV, TB and STI, HIV infection, transmission and prevention. psychological issues of HIV and TB, decision making and family autonomy, social isolation and stigma, disclosure

INTRODUCTION TO APPLIED SCIENCES

Assessment: Continuous assessment based on written assignment; presentation; project; and class tests.

Hours of tuition: Theory: 4 periods per week

Syllabus: Physics in everyday life; introduction the mathematics; introduction to chemistry and introduction to statistics.

LEADERSHIP

Assessment: Continuous assessment based on participation in classes, written report, oral presentation and weekly blog.

Hours of tuition: Theory: 2 periods per week

Syllabus: Negotiation of ground rules; experience of leadership; concepts and theories of leadership; preparing for community engagement.

VALUES IN THE WORKPLACE

Assessment: Continuous assessment based 2 assignments; oral presentation; reflection and peer assessment

Hours of tuition: Theory: 2 periods per week

Syllabus: Personal values; ethics; respect; interconnectedness; honesty; creativity and human diversity, ethics, leadership.

VIOLENCE AND NON-VIOLENCE

Assessment: Continuous assessment based research project, peer assessment and literature review.

Hours of tuition: Theory: 2 periods per week

Syllabus: Personal, institutional and societal violence; gender and violence; violence within institutions; roots of violence within South African history.

11.4 NATIONAL DIPLOMA: MARITIME STUDIES

(Navigation and Shore Based)

Note that all subjects are offered on a semester basis full time only. Please refer to the study guides for the respective subjects for more detail.

ADMINISTRATION MANAGEMENT (Module I)

1. Assessment:
   (a) The semester mark is calculated from the average of a minimum of 2 tests.
   (b) The examination consists of one 3-hour paper.
2. Hours of tuition:
   Theory: 4 periods per week
3. Syllabus: The role of administrative management in an organisation. Organisational structure. Structure in the enterprise and for administrative management. Management of an administrative office.

ADMINISTRATION MANAGEMENT (Module 2)

1. Assessment:
   (a) The semester mark is calculated from the average of a minimum of 2 tests.
   (b) The examination consists of one 3-hour paper.
2. Hours of tuition:
   Theory: 4 periods per week
3. Syllabus: Communication in the administrative office. Office systems, procedures and methods. The management of the office environment. BCE Act, Occupational Health and Safety Act.

BUSINESS ADMINISTRATION MANAGEMENT II

1. Assessment:
   (a) The semester mark is calculated from the average of 3 tests.
   (b) The examination consists of one 3-hour open-book paper.
2. Hours of tuition:
   Theory: 2 periods per week
3. Syllabus: Management functions, Project management

ECONOMICS OF SEA TRANSPORT II

1. Assessment: Continuous assessment on the basis of 3 written tests and 1 assignment.
2. Hours of tuition:
   Theory: 1 period per week
3. Syllabus: Market imperfections, Conferences and consortia, Bulk pools, Policy and instruments, SA seaborne commerce.

ECONOMICS OF SEA TRANSPORT III

1. Assessment
a) The semester mark is calculated from an average of 2 tests.
b) The examination consists of one 3-hour paper.
2. Hours of tuition:
   Theory: 1 period per week
3. Syllabus: Seaport management and operations. Ship/port relationships. Port policies.

MARINE ENVIRONMENTAL STUDIES II

1. Assessment:
(a) The semester mark is calculated from the average of 2 tests.
(b) The examination consists of one 3-hour paper.
2. Hours of tuition:
   Theory: 1 period per week
3. Syllabus: Instruments and observations, Basic meteorology, Sources of weather information

MARINE ENVIRONMENTAL STUDIES III

1. Assessment:
(a) The semester mark is calculated from the average of 2 tests.
(b) The examination consists of one 3-hour paper.
2. Periods of tuition:
   Theory: 2 periods per week
3. Syllabus: Physical meteorology, Synoptic meteorology, Oceanography

MARINE LAW I

1. Assessment: Continuous assessment on the basis of 3 written tests.
2. Periods of tuition:
   Theory: 2 periods per week
3. Syllabus: International maritime law, Domestic maritime legislation, Administrative infrastructure, Industrial relations

MARINE LAW II

1. Assessment:
(a) The semester mark is calculated from the average of 2 tests.
(b) The examination consists of one 3-hour paper.
2. Periods of tuition:
   Theory: 3 periods per week
3. Syllabus: Carriage of goods, International conventions, Shipping practice

MARINE LAW III

1. Assessment:
(a) The semester mark is calculated from the average of 2 tests.
(b) The examination consists of one 3-hour paper.
2. Periods of tuition:
Theory: 3 periods per week
3. Syllabus: Marine insurance, Legislation related to shipping, The ship master, Wreck, salvage and towage, General average

NAVAL ARCHITECTURE I

1. Assessment:
(a) The semester mark is calculated from the average of 2 tests.
(b) The examination consists of one 3-hour paper.
(c) A final mark of 60% must be obtained.
2. Periods of tuition:
Theory: 3 periods per week
3. Syllabus: Ship construction, Flotation, Basic ship stability

NAVAL ARCHITECTURE II

1. Assessment:
(a) The semester mark is calculated from the average of 2 tests.
(b) The examination consists of one 3-hour paper.
(c) A final mark of 60% must be obtained.
2. Periods of tuition:
Theory: 2 periods per week
3. Syllabus: Construction details and methods, Structural strength, Transverse and longitudinal stability, Resistance and propulsion

NAVAL ARCHITECTURE III

1. Assessment:
(a) The semester mark is calculated from the average of 2 tests.
(b) The examination consists of one 3-hour paper.
(c) A final mark of 60% must be obtained.
2. Periods of tuition:
Theory: 2 periods per week
3. Syllabus: Specialized ship construction, Stability evaluation, Specialized stability assessment, Stress analysis of ships, Legal requirements

NAVIGATION I (Modules 1 and 2)

1. Assessment:
(a) The semester mark is calculated from the average of 2 tests in each module.
(b) The examinations consist of a 3-hour paper in each module.
(c) A final mark of 60% must be obtained in each module.
2. Periods of tuition:
Theory: 3 periods per week per module
3. Syllabus: Ocean navigation, Coastal navigation

NAVIGATION II

1. Assessment:
(a) The semester mark is calculated from the average of 2 tests.
(b) The examination consists of one 3-hour paper.
(c) A final mark of 60% must be obtained.
2. Periods of tuition:
Theory: 3 periods per week
3. Syllabus: Harbour navigation, Advanced coastal navigation, Advanced ocean navigation

NAVIGATION III

1. Assessment:
(a) The semester mark is calculated from the average of 2 tests and a passage planning assignment.
(b) The examination consists of one 3-hour paper.
(c) A final mark of 60% must be obtained.
2. Periods of tuition:
Theory: 5 periods per week
3. Syllabus: Voyage planning, Specialized navigation procedures, Search and rescue, Evaluation of navigational information

NAVIGATION INFORMATION SYSTEMS II

1. Assessment: Continuous assessment on the basis of 3 written tests and 1 practical test. Failure in the practical component will result in failure in the subject.
2. Periods of tuition:
(a) Theory: 2 periods per week
(b) Practical: 2 periods per week
3. Syllabus: Position fixing systems, Radar, Automatic radar plotting aids, Use of electronic navigation equipment

NAVIGATION INFORMATION SYSTEMS III (Module 1)

1. Assessment:
(a) Continuous assessment for practicals.
(b) The semester mark is calculated from the average of 2 tests.
(c) The examination consists of one 3-hour paper.
2. Periods of tuition:
(a) Theory: 3 periods per week
(b) Practical: 1 period per week
3. Syllabus:
(a) Theory: Radar systems, Electronic position fixing systems, Satellite systems, Automatic pilots, ECDIS, Bridge resource management
(b) Practical

NAVIGATION INFORMATION SYSTEMS III (Module 2)

1. Assessment:
(a) The semester mark is calculated from the average of 2 tests.
(b) The examination consists of one 3-hour paper.
2. Periods of tuition:
Theory: 3 periods per week
3. Syllabus: Marine compasses, Integrated bridge systems, New developments

SEA TRANSPORT II

1. Assessment:
(a) The semester mark is calculated from the average of 2 tests.
(b) The examination consists of one 3-hour theory paper.
2. Periods of tuition:
Theory: 2 periods per week
3. Syllabus: Cargo handling equipment, Cargo storage & carriage, Specialized cargoes, Safety, Commercial practice

SEA TRANSPORT III

1. Assessment:
(a) The semester mark is calculated from the average of 2 tests.
(b) The examination consists of one 3-hour theory paper.
2. Periods of tuition:
Theory: 3 periods per week
3. Syllabus: Safety management, Cargo operations, Certification and survey of ships, Maintenance

SHIPPING ADMINISTRATION II

1. Assessment:
(a) The semester mark is calculated from the average of 2 tests and 1 assignment.
(b) The examination consists of one 3-hour theory paper.
2. Periods of tuition:
Theory: 3 periods per week
3. Syllabus: Inco Terms, Import and Export Documentation, Importing Transactions/Procedure, Exporting Transactions / Procedure

SHIPPING ADMINISTRATION III

1. Assessment:
(a) The semester mark is calculated from the average of 1 test and 2 assignments.
(b) The examination consists of one 3-hour theory paper.
2. Periods of tuition:
Theory: 3 periods per week
3. Syllabus: Bills of Lading, Local & International Legislation dealing with Sea Transport Documents, Charter-parties

SHIP TECHNOLOGY II

1. Assessment:
(a) The semester mark is calculated from the average of 2 tests.
(b) The examination consists of one 3-hour paper.
2. Periods of tuition:
   Theory: 2 periods per week
3. Syllabus: Propulsion systems and machinery, Auxiliary machinery, Control system applications, Anti-pollution and safety systems

11.5 MARINE ENGINEERING (Electives and Non Diploma Subjects)

MARINE LAW I

1. Assessment: Continuous assessment on the basis of 3 written tests.
2. Periods of tuition:
   Theory: 2 periods per week
3. Syllabus: International maritime law, Domestic maritime legislation, Administrative infrastructure, Industrial relations

MARINE LAW II

1. Assessment:
(a) The semester mark is calculated from the average of 2 tests.
(b) The examination consists of one 3-hour paper.
2. Periods of tuition:
   Theory: 2 periods per week
3. Syllabus: International conventions; Shipping practice

MARINE ENGINEERING KNOWLEDGE I

1. Assessment:
(a) The semester mark is calculated from 2 tests.
(b) The examination consists of one 3-hour paper.
2. Periods of tuition:
   Theory: 3 periods per week
3. Syllabus: Watch keeping practice, Materials, Instrumentation, Internal combustion engines and auxiliary systems

MARINE ENGINEERING KNOWLEDGE II

1. Assessment:
(a) The semester mark is calculated from 2 tests.
(b) The examination consists of one 3-hour paper.
2. Periods of tuition:
   Theory: 3 periods per week
3. Syllabus: Steam plant and auxiliary systems, Power transmission systems, Pumps and pumping systems, Marine electrical equipment, Refrigeration, Ship handling and manoeuvring equipment, Pollution control, Safety, firefighting equipment, Ship maintenance, Management

MARINE ENGINEERING KNOWLEDGE III

1. Assessment:
(a) The semester mark is calculated from 2 tests.
(b) The examination consists of one 3-hour paper.
2. Periods of tuition:
   Theory: 3 periods per week
3. Syllabus: Materials, Instrumentation and control, Fluids and lubricants, Internal combustion engines and auxiliary systems, Steam plant and auxiliary systems, Power transmission, Pumps and pumping systems, Marine electrical equipment, Refrigeration, Ship handling and manoeuvring equipment, Pollution control, Safety, firefighting equipment, Ship maintenance, Management

NAVAL ARCHITECTURE I

1. Assessment:
(a) The semester mark is calculated from the average of 2 tests.
(b) The examination consists of one 3-hour paper.
2. Periods of tuition:
   Theory: 2 periods per week
3. Syllabus: Ship construction, Flotation, Basic ship stability

NAVAL ARCHITECTURE II

1. Assessment:
(a) The semester mark is calculated from the average of 2 tests.
(b) The examination consists of one 3-hour paper.
2. Periods of tuition:
   Theory: 3 periods per week
3. Syllabus: Construction details and methods, structural strength, Transverse and longitudinal stability, Resistance and propulsion

NAVAL ARCHITECTURE III

1. Assessment:
(a) The semester mark is calculated from the average of 2 tests.
(b) The examination consists of one 3-hour paper.
2. Periods of tuition:
   Theory: 3 periods per week
3. Syllabus: Specialized ship construction, Stability evaluation, Specialized stability assessment, Stress analysis of ships, Legal requirements

E&OE