CHOICE BASED CREDIT SYSTEM

Flexibility with Global Competence

(Aligned with NEP 2020)

REGULATIONS 2023 (R-23)

(Students admitted from academic year 2023-24 and onwards)

JUNE 2023

ACADEMY OF MARITIME EDUCATION AND TRAINING (DEEMED TO BE UNIVERSITY)
 # 135, ECR | Kanathur | Chennai-603112 | TN | India.

PRELUDE

Academy of Maritime Education and Training (AMET) Deemed to be University offers Maritime and General programmes in the Faculty of Maritime Studies, Faculty of Engineering and Technology, Faculty of Advanced Computing Science, Faculty of Management Studies, Faculty of Commerce, Faculty of Life Sciences, Faculty of Liberal Arts, and Faculty of Science and Humanities.

AMET is approved by the University Grants Commission (UGC) and All India Council for Technical Education (AICTE) and is equipped with an excellent infrastructure for research and development, co-curricular and extracurricular activities. AMET is accredited by the National Assessment and Accreditation Council (NAAC) with "A" grade. AMET is accredited by the National Board of Accreditation (NBA) for 3 programmes - BE-EEE, BE-Mechanical Engineering and MBA-Shipping & Logistics Management. The Maritime Programmes of AMET are accredited by the Directorate General of Shipping, Government of India. AMET has been accredited with Grade A1 Outstanding in the CIP for the past FIVE consecutive years. The International Association of Maritime Universities (IAMU) has been conducting PIMET rankings and has listed AMET as one of the top FIVE Maritime Institutions in the World for the past FOUR consecutive years.

AMET is recognized as a Scientific and Industrial Research Organization (SIRO) by the Department of Scientific and Industrial Research (DSIR), Government of India. Moreover, AMET is categorized as 'PERFORMER' institution in the ATAL Ranking of Institutions on Innovation Achievement (ARIIA).

AMET Deemed to be University is moving towards a Multidisciplinary University in order to enhance academic flexibility and ensure global competence. The curriculum and syllabus of AMET Deemed to be University are aligned with NEP 2020 regulations. With reference to the AICTE model curriculum for Engineering, Technology and Management programmes, AMET has totally upgraded its CBCS regulations, curricula, and syllabi for all programmes and other mandatory courses. The AMET CBCS Regulations 2023 (R-23) are applicable for students registering from 2023-24 academic year onwards. These regulations provide an insight into the essence of the CBCS system with more flexibility towards global competence, with special reference to its unique programmes.

1. PRELIMINARY DEFINITIONS AND NOMENCLATURE

In this Regulation, unless the context otherwise specifies:

1.1 **"University"** means Academy of Maritime Education and Training (AMET) Deemed to be University, Chennai.

1.2 "**Head of the Institution**" means the Vice Chancellor.

1.3 **"Dean Academics**" means the authority of the University who is responsible for all academic activities for the implementation of Curriculum, relevant Rules and Regulations.

1.4 "**Controller of Examinations**" means the Authority of the University who is responsible for all activities of the Examinations of the University Departments.

1.5 "**Head of the Department**" means Head of the University Department concerned.

1.6 **"Maritime Programmes"** mean the programmes that are regulated by the Directorate General of Shipping (DGS), Government of India.

1.7 **"General Programmes"** mean the programmes that are regulated by authorities like University Grants Commission (UGC) and All India Council for Technical Education (AICTE).

1.8 **"Regulation"** refers to the set of guidelines that govern the academic functioning and activities of a University. These regulations are put in place to ensure the smooth operation of the University, maintain academic standards, and uphold fairness and integrity in the academic process. The regulations cover a wide range of aspects, including admissions, curriculum, assessment, grading, progression, and graduation requirements, which are approved by the Academic Council.

1.9 **Choice Based Credit System (CBCS):** The choice-based credit system is a flexible teaching-learning system that offers students the freedom to opt for different courses during their study period. Students can choose courses from a list of elective, core, and soft skill courses every semester.

1.10 **Credit:** A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours of practical work/field work per week.

1.11 **Grade Point:** It is a numerical weight allotted to each letter grade on a 10-point scale.

1.12 **Grade Point Average (GPA):** It is a measure of performance of work done in a semester. It is ratio of total credit points secured by a student in various courses registered in a semester and the total course credits taken during that semester

1.13 **Cumulative Grade Point Average (CGPA):** It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit pointssecured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters.

1.14 **Letter Grade:** It is an index of the performance of students in a said course. Grades are noted by letters O, A+, A, B+, B, C, P and RA

1.15 **"Degree"** means academic award conferred upon a student on successful completion of a programme designed to achieve the defined attributes.

1.16 **"Faculty"** means a group of Departments in the University that specialize in a particular discipline or group of related disciplines.

1.17 **"Discipline**" means a branch or Specialization in UG and PG programmes, like Marine Engineering, Nautical Science, Shipping and Logistics Management, Computer Science and Engineering, Marine Biotechnology, etc.

1.18 "**Programme**" means Certificate / Diploma / Under Graduate / Post Graduate programmes offered in a Department.

1.19 **"Collaborative Programme"** refers to an educational initiative where two Universities or Institutions or Departments come together to offer a specialized programme of study. Collaborative programmes are designed to provide students with a unique and comprehensive educational experience that combines the strengths and resources of multiple institutions or disciplines.

1.20 **"Curriculum"** refers to the overall plan or framework for organizing and delivering educational content and experiences to students. The curriculum outlines the objectives, content, instructional methods, that guide the teaching and learning process.

1.21 **"Syllabus"** is a document that outlines the content, goals, objectives, structure, and assessment methods for a particular course. It serves as a guide and reference for both instructors and students, providing essential information about the course expectations and requirements.

1.22 "**Course**" refers to a specific unit of study within a curriculum or programme. A course is designed to cover a particular subject or topic and is typically offered over a fixed duration, such as a semester or academic year. Courses are an essential component of academic programmes and provide structured learning experiences to students.

1.23 **"Objective"** refers to the learning objectives or goals that students are expected to achieve upon completing a particular course. These objectives provide a clear direction for the course and guide both instructors and students in their teaching and learning activities.

1.24 **"Graduate Attributes"** are the high level qualities, skills and understandings that a student should gain as a result of the learning and experiences they engage with, while at University.

1.25 **"Program Educational Objectives (PEO)"** means broad statements that describe the career and professional accomplishments that the programme is preparing the graduates to achieve.

1.26 **"Program Outcome (PO)"** means narrower statements that describe what students are expected to know and be able to do by the time of graduation.

1.27 **"Program Specific Outcomes (PSO)"** are statements that describe what the graduates of a specific subject or program should be able to do.

1.28 **"Course Outcomes (CO)"** are specific and measurable statements that define the knowledge, skills, and attitudes that the learners will demonstrate by the completion of a course. Course Outcomes are written with a verb phrase and declare a demonstrable action within a given time frame, such as by the end of the course.

1.29 **"Academic Year"** refers to the period of time during which the University typically conduct their academic activities, including classes, examinations, and assessments. Academic year consists of one odd semester and one even semester.

1.30 **"Semester:"** Each semester will consist of 15-18 weeks of academic work equivalent to 90 working days. The odd semester may be scheduled from July to December and even semester from January to June.

1.31 **"Mark Sheet (Grade Sheet):"** It is an official document that provides a summary of a student's academic performance and achievements in a specific course, semester, or academic programme. Based on the grades earned, a grade certificate shall be issued to all the registered students after every semester. The grade certificate will display the course details such as Course Code, Course, Mark Secured, Grade point along with CGPA provided they pass without any arrears.

1.32 **"Transcript"** is an official document that provides a comprehensive record of a student's academic performance in the University. It includes a detailed listing of the courses taken, grades received, credits earned, and other relevant academic information**.**

1.33 **"Credit Transfer:'** It is a procedure of granting credits to a student for educational experiences or courses undertaken through online platforms or regular mode from the University / external Institutions (India and abroad).

1.34 **"Internal Credit Transfer:"** The credits that are earned by doing Online Certificate Courses (SWAYAM-NPTEL / MOOCs) can be transferred to an equivalent course.

1.35 **"External Credit Transfer:"** The credits that are earned at this University or the credits that are earned from external institutions can be transferred vice versa during or after completing the programme.

1.36 **"Semester Abroad Program"** is an academic flexibility that enables students to study in Universities/Institutions in abroad either a full semester or part of the semester.

1.37 **"University Away Programme"** is an academic flexibility that enables the students to undergo a minimum of one full semester to the maximum of one full year at an industry in India or abroad where the assessment and evaluation will be done by the industry and the University.

1.38 **"Value Added Courses"** are additional courses offered by the University to supplement the core academic curriculum and provide students with practical skills and knowledge beyond their primary area of study.

1.39 **"Additional Degree:"** Students registered in regular degree programmes (physical mode at University) are entitled to undergo one additional degree programme through hybrid mode offered by University or other Institutions.

1.40 **"Online Certification Courses"** can be done by the students in place of Assignment / Seminar for a specific course(s) using online platforms such as Massive Open

Online Courses (MOOCs). Open elective courses can also be done through the SWAYAM-NPTEL online platform and other private MOOCs platforms.

1.41 **"Academic Flexibility"** is the process of flexible learning through a student-centred approach, encouraging greater independence and autonomy on the part of the student-learners. Its ethos is to enable and empower student-learners, and give them greater control of their learning, and become more self-directed.

2. ADMISSION PROCEDURE

2.1. Students for admission to the first semester of the

i. Undergraduate (UG) programme shall have a PASS in Higher Secondary Examination (10 + 2) or its equivalent examinations as approved by the University

ii. Post Graduate (PG) programme shall have a PASS in relevant UG programme with required eligibility

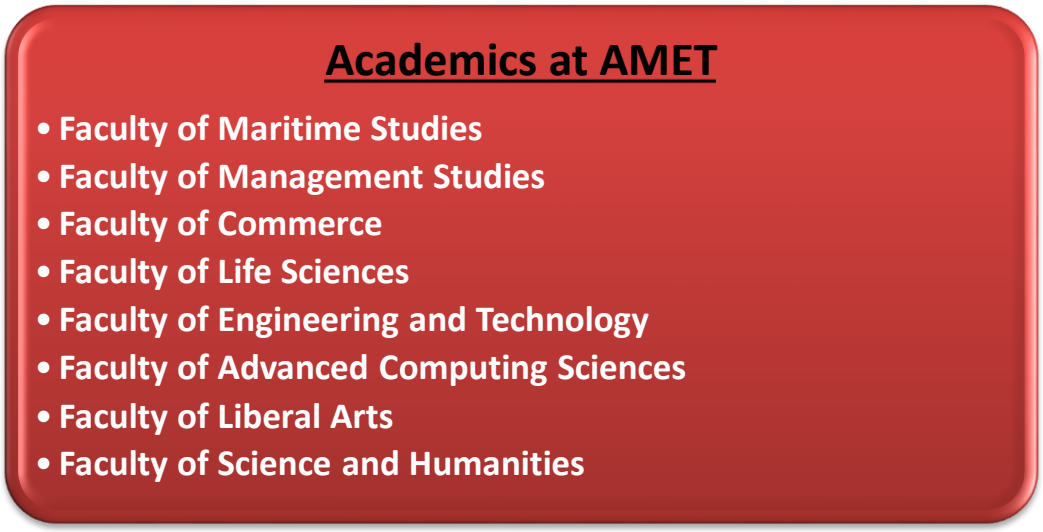
2.2. The eligibility criteria shall be as prescribed by the Academic Council of the University from time to time.

i. All Maritime Programmes shall follow the eligibility requirements of Directorate General of Shipping and the General Programmes shall follow the eligibility requirements of UGC/AICTE

2.3 Lateral entry for B.E./B.Tech., programmes is permitted for admission to the third semester. Transfer of programme is permitted for the students within the University Departments and to the students from other educational Institutions, where the eligibility for the transfer shall be reviewed and recommended by the equivalence committee.

3. FACULTY

"Faculty" is a group of Departments in the University that specialize in a particular discipline or group of related disciplines. The details of the Faculty of AMET are given below:



1. FACULTY OF MARITIME STUDIES

a) Department of Marine Engineering

i. B.E. Marine Engineering
ii. M.E. Marine Engineering
iii. Electro Technical Officers (ETO)
iv. Graduate Marine Engineering (GME)
v. Ph.D.

b) Department of Nautical Science

i. B.Sc. Nautical Science
ii. General Operator's Certificate for GMDSS
iii. Basic Safety Training (Pre Sea Modular Programmes)
iv. Advanced Diploma in Nautical Science (Formerly HND-NS) (In collaboration with City of Glasgow College, U.K)
v. Training for General Purpose Ratings (GP Rating - 6 months Course)

2. FACULTY OF MANAGEMENT STUDIES

a) AMET Business School

i. M.B.A. Shipping & Logistics Management
ii. Ph.D.

b) Department of Management Studies

i. B.B.A. Shipping

3. FACULTY OF COMMERCE

a) Department of Commerce

i. B.Com. Logistics & Computer Applications
ii. Ph.D.

4. FACULTY OF LIFE SCIENCES

a) Department of Food Processing Technology

i. B.Tech. Food Processing Technology
ii. B.Sc. Food Processing Technology and Management System
iii. Ph.D.

b) Department of Marine Biotechnology

i. M.Sc. Biotechnology
ii. M.Sc. Marine Biotechnology
iii. Ph.D.

5. FACULTY OF ENGINEERING AND TECHNOLOGY

a) Department of Computer Science and Engineering

i. B.E. Computer Science and Engineering (Cyber Security)
ii. B.E. Computer Science and Engineering (Artificial Intelligence and Machine Learning)
iii. B.E. Computer Science and Engineering
iv. B.E. Artificial Intelligence and Data Science
v. Ph.D

b) Department of Naval Architecture and Offshore Engineering

i. B.E. Naval Architecture & Offshore Engineering
ii. M.E. Naval Architecture & Offshore Engineering
iii. Ph.D.

c) Department of Petroleum Engineering

i. B.E. Petroleum Engineering
ii. M.E. Petroleum Engineering
iii. Ph.D.

d) Department of Mechanical Engineering

i. B.E. Mechanical Engineering
ii. Ph.D.

e) Department of Electrical and Electronics Engineering

i. B.E. Electrical and Computer Engineering
ii. M.E. Power Systems
iii. Ph.D.

f) Department of Mining Engineering

i. B.E. Mining Engineering
ii. Ph.D.

6. FACULTY OF ADVANCED COMPUTING SCIENCES

a) Department of Information Technology

i. B.Sc. Data Science
ii. B.Sc. (Hons) Robotics and Artificial Intelligence
iii. B.Sc. Cyber Security
iv. Ph.D.

7. FACULTY OF LIBERAL ARTS

a) B.A. Public Policy

8. FACULTY OF SCIENCE AND HUMANITIES

a) Department of Mathematics

i. M.Sc., Mathematics
ii. Ph.D.

b) Department of Physics

i. M.Sc., Physics
ii. Ph.D.

c) Department of Chemistry

i. M.Sc., Chemistry
ii. Ph.D.

d) Department of English

i. Ph.D.

e) Department of Physical Education

i. Ph.D.

9. INTERNATIONAL COLLABORATIVE PROGRAMS

a) Advanced Diploma in Nautical Science (Formerly HND-NS)
(In collaboration with City of Glasgow College, United Kingdom)

b) B.Sc. Robotics and Artificial Intelligence
(1st two years at AMET, India, 3rd year at Edge Hill University, United Kingdom)

c) B.Sc. Data Science
(1st two years at AMET, India, 3rd year at James Cook University, Singapore)

d) B.E. Naval Architecture and Offshore Engineering

(1st three years at AMET, India, 4th year at University of Strathclyde Glasgow, United Kingdom)

e) B.B.A. Shipping
(1st two years at AMET, India, 3rd year at University of Plymouth, United Kingdom)

f) B.E. Computer Science and Engineering (Cyber Security)
(1st three years at AMET, India, 4th year at University of Portsmouth, United Kingdom)

g) B.E. Computer Science and Engineering
(Artificial Intelligence and Machine Learning)
(1st three years at AMET, India, 4th year at University of Portsmouth, United Kingdom)

4. CHOICE BASED CREDIT SYSTEM

Choice Based Credit System (CBCS) is an academically flexible system where a choice is available to students to select from among a large number of listed courses. It may be supportive to the discipline of study, provides an expanded scope, and enables an exposure to some other discipline/domain, nurture student's proficiency/skill. In CBCS, a course (subject) refers to component of a programme. A course may be designed to involve lectures / tutorials / laboratory work / seminar / internship / project work/ practical training / report writing / Viva- voce, etc., or a combination of these, to meet effectively the teaching learning needs.

a) Core Course: A course, which should compulsorily be studied by a candidate as a core requirement.

b) Inter Disciplinary Course (IDC): A course chosen generally from a related discipline/program/domain with an intention to seek exposure in the discipline relating to the core domain of the student. IDC is considered to be the Open Elective Course.

c) Discipline Specific Elective (DSE) Course: Elective courses offered under main discipline/ subject of study. DSE is considered to be the Professional Elective Course.

d) Skill Enhancement Courses (SEC): Value-addition and/or skill-based courses which are aimed at providing hands-on-training, competencies, skills, etc.

e) **Ability Enhancement Compulsory Courses (AECC):** Mandatory courses that lead to Knowledge enhancement. Environmental Science, Human Rights and Women's Rights, IPR, Innovation and Entrepreneurship.

f) **Internship:** It is designed to provide practical experience and exposure to a particular field or industry which leads to experiential learning. Internships can be paid or unpaid, and they can vary in duration, ranging from 15 days to 3 months.

g) **Project Work:** Course involving application of knowledge in problem solving / analyzing /exploring a real life situation / difficult problem usually supported with a dissertation as report.

h) **Extra Credits:** Extra credits shall be awarded for achievements in identified co-curricular and extracurricular activities executed outside the regular class hours. Extra credits are not mandatory for completing the programme.

UG Degree Programme: Engineering and Technology (B.E./ B.Tech.)

S.No.	Category	Suggested Distribution of Credits
1.	Humanities and Social Sciences (HS)	12 to 15
2.	Basic Science (BS)	20 to 24
3.	Engineering Sciences (ES)	20 to 24
4.	Professional Core Courses (PCC)	50 to 60
5.	Discipline Specific Elective (DSE)	15 to 18
6.	Inter Disciplinary Course (IDC)	12 to 15
7.	Internship / Project	12 to 20
8.	Ability Enhancement Compulsory Courses (AECC)	(Non- Credit Courses)
Total minimum credits to be earned for completion of UG Engineering and Technology Degree Programme		**160**

UG Degree Programme: BE - Marine Engineering

S.No.	Category	Distribution of Credits
1.	Humanities and Social Sciences (HS)	9
2.	Basic Science (BS)	33
3.	Engineering Sciences (ES)	41
4.	Professional Core Courses (PCC)	66
5.	Discipline Specific Elective (DSE)	6
6.	Inter Disciplinary Course (IDC)	6
7.	Internship	-
8.	Project	29
9.	Ability Enhancement Compulsory Courses (AECC)	(Non- Credit Courses)
Total minimum credits to be earned for completion of BE - Marine Engineering Programme		**190**

UG Degree Programme: B.B.A. / B.Com.

S.No.	Category	Suggested Distribution of Credits
1.	Professional Core Courses (PCC)	66 to 76
2.	Discipline Specific Elective (DSE)	30 to 40
3.	Inter Disciplinary Course (IDC)	6 to 12
4.	Internship	2 to 4
5.	Project	5 to 10
6.	Ability Enhancement Compulsory Courses (AECC)	(Non- Credit Courses)
Total minimum credits to be earned for completion of UG BBA / B.Com Degree Programme		**120**

B.Sc. Nautical Science

S.No.	Category	Distribution of Credits
1.	Basic Science Course	14
2.	Humanities and Social Science including Management Courses	4
3.	Engineering Science Course	15
4.	Professional Core Course	85
5.	Professional Elective Course	4
6.	Employment Enhancement Course	5
Total minimum credits to be earned for completion of UG BBA /B.Com Degree Programme		**129**

PG Degree Programme: M.B.A.

S.No.	Category	Suggested Distribution of Credits
1	General Management Courses (GMC)	18 to 25
2	Professional Core Courses (PCC)	30 to 40
3	Discipline Specific Elective (DSE)	21 to 33
4	Inter Disciplinary Course (IDC)	3 to 6
5	Internship	2 to 4
6	Project	5 to 10
Total minimum credits to be earned for completion of PG MBA Programme		**96**

PG Degree Programme: Engineering and Technology (M.E. / M.Tech.)

S.No.	Category	Suggested Distribution of Credits
1.	Basic Science (BS)	3
2.	Professional Core Courses (PCC)	20 to 23
3.	Discipline Specific Elective (DSE)	12 to 15
4.	Inter Disciplinary Course (IDC)	3
5.	Internship/Project	21 to 27
Total minimum credits to be earned for completion of PGEngineering D e g r e e Programme		**70**

PG Degree Programme: Science

S.No.	Category	Suggested Distribution of Credits
1	Professional Core Courses (PCC)	70 to 80
2	Discipline Specific Elective (DSE) / Professional Elective Courses (PEC)	6 to 12
3	Inter Disciplinary Course (IDC) / Open Elective Courses (OEC)	3 to 6
4	Project (EEC)	5 to 8
Total minimum credits to be earned for completion of PG Science D e g r e e Programme		**80**

Note: B.Sc. (Nautical Science) & B.E. (Marine Engineering) Degree Programmes follow the guidelines of Director General of Shipping (DGS)

4.1 Extra Credits (10 Credits)

Earning extra credit(s) is not mandatory and it is not essential for the completion of the programme. However the student is entitled to earn extra credit for achievement in Co-Curricular/ Extracurricular activities carried out other than the regular class

hours. A student is permitted to earn a maximum of Twenty Extra Credits during the programme period as per the table below.

Category	Credit
Proficiency in Foreign Language	1
Proficiency in other Indian Languages	1
Self-study Course	1
Typewriting/Short hand	1
CA/ICSI/CMA (Foundations)	2
Sports and Games	1
Publications / Conference Presentations (Oral/Poster)/Awards	1
Innovation / Incubation / Patent / Sponsored Projects / Consultancy	1
Representation in State / National level Events	1
UGC-Swayam/NPTEL/MOOCs/Spring Board/other online platforms	10

Credit shall be awarded for achievements of the student during the period of study only.

4.1.1 Guidelines for Earning Extra Credits

(i) Proficiency in foreign language

A pass in any foreign language in the examination conducted by an authorized agency.

(ii) Proficiency in other Indian Languages

A pass in any Indian Languages other than the Mother Tongue.

Examination passed during the programme period only will be considered for extra credit.

(iii) Self-study Course

A pass in the self-study courses offered by the Department.

The candidate should register the self-study course offered by the Department only.

(iv) Typewriting / Short hand

A Pass in short hand /typewriting examination conducted by Tamil Nadu Department of Technical Education (TNDTE) and the credit will be awarded.

(v) CA/ICSI/CMA(Foundations)

Qualifying foundation in CA/ICSI/CMA / etc.

(vi) Sports and Games

The Student can earn extra credit based on their Achievement in sports in the State / National/ International Levels.

(vii) Publications / Conference Presentations (Oral/Poster)/Awards

Research Publications in Journals and oral/poster presentation in the National / International Conference and winning Awards

(Viii) Innovation / Incubation / Patent / Sponsored Projects / Consultancy

Development of model/ Products /Prototype /Process/App/Registration of Patents/ Copyrights/Trademarks/Sponsored Projects /Consultancy

(ix) Representation in State/ National Level Celebrations

Participation and representing University in the State / National level events such as Independence day, Republic day Parade, National Integration Camp etc.

4.2 ENROLLMENT IN THE COURSES

- Students of any programme appearing for a semester shall register themselves to the courses pertaining to that semester in the prescribed form through HoD and shall be submitted to ERP section.
- Students can themselves choose their Professional Core Courses (PCC), Discipline Specific Elective (DSE) / Professional Elective Courses (PEC), Inter Disciplinary Course (IDC) / Open Elective Courses (OEC), offered in the semesters. In case of Inter Disciplinary Courses (IDC), students shall choose Online Certification Courses through MOOC platforms.
- The student shall enroll for the courses with the guidance of the Mentor.
- The number of credits registered in a semester shall be between 20-26 credits.

- The Heads of the Department concerned shall confirm the enrollment of students before the commencement of the respective semester.
- After registering for a course, a student shall attend the classes, satisfy the attendance requirements, earn Continuous Internal Assessment marks and appear for the End Semester Examinations.
- A student has to earn the minimum number of credits specified in the curriculum of the respective programme of study in order to be eligible to obtain the degree.
- However, if the student wishes, he/she is permitted to earn extra credits to the maximum of 10 credits.
- The student shall do a mini project at the end of Semester-4, Semester-6 and Semester-7 of the programme. The student shall do a major project / design project in the pre-final/final semester.
- If a student fails in a course, the student shall take it as an arrear exam. The student can retain the already earned Continuous Assessment marks for two subsequent appearances only and there after he/she will solely be assessed by End Semester Examination.
- If the student has failed or having a lack of attendance in an elective course, the student may register for the same in the subsequent semesters.
- The student who fails in any Laboratory Course shall also take it as an arrear exam.
- The medium of instruction and usage is English for all core & elective Courses, Examinations, Seminar presentations, Viva Voce Examinations, Project, Thesis and Dissertation reports.

5. DURATION OF THE DEGREE PROGRAMME

5.1 A student is normally expected to complete the

- 4 years Under Graduate (UG) Degree Programme in 8 semesters but not more than 8 years (16 semesters),
- 3 years UG Degree Programme in 6 semester but not more than 6 years (12 semester)
- 2 years Post Graduate (PG) Degree Programme in 4 semesters but not more than 4 years (8 semesters).

5.2 Each semester shall normally consist of 90 working days including Continuous Internal Assessment (CIA). The Head of the Department (HoD) shall ensure that every teacher imparts teaching as per the number of hours specified in the syllabus covering the full contents of the syllabus.

5.3 The extension of period of completion of a Degree Programme over and above the stipulated time period mentioned in the clause 5.1 shall be made on the special approval by the Vice-Chancellor of the University besides a penal fee prescribed by the University applicable at the time of student's request.

6. REQUIREMENTS FOR APPEARING THE END SEMESTER EXAMINATION

6.1 Ideally, every student is expected to attend all the periods as per the prescribed curriculum and earn 100% attendance in a semester.

6.2 Students have to fulfil the following minimum permissible percentage of attendance to become eligible to appear for the End Semester Examination (ESE) conducted by the University.

- Maritime Degree Programmes

Expected attendance	Minimum permissible attendance	Condonation fee Rs.5,000 for attendance range	Condonation fee Rs.10,000 for attendance range	Not Eligible for ESE
100%	**90%**	**85.01% to 89.99%**	**80.01% to 85%**	**Less than 80%**

- General Degree Programmes

Expected attendance	Minimum permissible attendance	Condonation fee Rs.5,000 for attendance range	Condonation fee Rs.10,000 for attendance range	Not Eligible for ESE
100%	**75%**	**70.01% to 74.99%**	**65.01% to 70%**	**Less than 65%**

6.3 Students who have the required minimum percentage of attendance and have also registered for the ESE by paying the prescribed exam fee are directly permitted to appear for the ESE.

6.4 With regard to Maritime Degree Programmes; BE-Marine Engineering and B.Sc-Nautical Science, 100% attendance of cadets is expected. The minimum attendance of 90% will entitle the cadets to write the end-semester examinations, and the 10% of leave may be availed of by the cadets on medical grounds and other permitted leave. If an additional 10% of leave is availed of by the cadets, then they have to pay a condonation fee as specified above. The cadets will not be allowed to write the end-semester examinations if the attendance percentage is below 80%. In cases of attendance below 80%, the cadets have to redo the semester. They may be permitted to rejoin the subsequent semester upon special approval by the Vice Chancellor of the University besides a penal fee prescribed by the University applicable at the time of the student's request. The missed exams have to be appeared as arrears in the rejoined semester.

6.5 With regard to General Degree Programmes, 100% attendance of students is expected. The minimum attendance of 75% will entitle the students to write the end-semester examinations, and the 25% of leave may be availed of by the students on medical grounds and other permitted leave. If an additional 10% of leave is availed by the students, then they have to pay a condonation fee as specified above. The students will not be allowed to write the end-semester examinations if the attendance percentage is below 65%. In cases of attendance below 65%, the students have to redo the semester. They may be permitted to rejoin the subsequent semester upon special approval by the Vice Chancellor of the University besides a penal fee prescribed by the University applicable at the time of the student's request. The missed exams have to be appeared as arrears in the rejoined semester.

7. For Maritime Degree Programmes and General Degree Programmes, On-Duty (OD) is treated as "Present", and attendance will be given to the students. Medical and all other leaves will not be counted as "Present".
8. In the case of Internship, the students will be provided with an OD and they have to get the attendance sheet signed by the company authorities (as per the attached format) and a certificate of completion of the internship must also be submitted to the Department.
9. It is also made clear that for maritime cadets and other students, medical leave and other special leaves will not be counted as attendance "Present", except for the case of approved "On-Duty" permissions.

9.1 Students who have already cleared the course are not permitted to reappear for the same course for the purpose of improvement of grades.

9.2 Students who have involved in malpractice/misbehaviour in an exam have to undergo the 'Malpractice Enquiry Committee' constituted by the Controller of Examination (CoE) and the recommendations of the committee shall be followed.

9.3 The conduct of 'Instant exam' for the final semester students are to be decided by the CoE with the special permission from the Vice Chancellor of the University.

9.4 In case of untoward incidences, a student having attendance not less than 50% may be permitted to appear for the examinations with the special permission from the Vice-Chancellor of the University.

10. ASSESSMENT PROCEDURES FOR AWARDING MARKS

10.1 All the Degree Programmes consists of courses such as Theory, Lab and Project work as per the curriculum. These courses shall be assessed for the award of credits based on 'Continuous Internal Assessment' (CIA) conducted throughout the semester and ESE conducted at the end of the semester.

10.2 Appearing in all the CIA for all the prescribed courses and obtaining minimum pass mark in a semester is mandatory, failing which the student shall not be permitted to appear for the ESE, even if the student possess the required attendance percentage.

10.3 Similarly, appearing in all the courses in ESE is mandatory, even if the student has attained the minimum pass marks through CIA.

10.4 ESE shall be conducted for all the courses for 3 hours duration and shall normally be conducted between November and December for the odd semester and between April and May for the even semester in an academic year.

10.5 Each course shall be evaluated for the aggregate of 100 marks with the contributions of CIA and ESE as given below:

S.No.	Category of courses	Maximum marks in CIA	Maximum marks in ESE
1	Theory	40	60
2	Lab	50	50
3	Project work	50	50

4	Internship, Mandatory & skill enhancement and Value added courses	--	100

The end semester examinations shall normally be conducted after completing 90 working days for each semester. The maximum marks for each theory and practical course (including the project work and Viva-Voce examination in the final Semester) shall be 100 with the following breakup:

a) Mark distribution for Theory Courses

S.No.	Particulars	Distribution of Marks
1	Continuous Internal Assessment (CIA)	40
2	End Semester Exams (ESE)	60
	TOTAL (CIA)	**100**

(i) Distribution of Internal Marks (CIA)

S.No.	Particulars	Distribution of Marks
1	CAT I (2 Units) (On completion of 30th working day)	10
2	CAT II (2 Units) (On completion of 60th working day)	10
3	Model Examination (All 5 Units) (On completion of 80th working day)	10
4	Assignment-1 and Assignment - 2 (Written Assignment / MCQ)	05
5	Assignment-3 (Online / MOOCs / Seminar / Presentation)	
6.	Attendance	05
	TOTAL (CIA)	**40**

(a) Assignment Rubrics

Criteria	4 marks	3 Marks	2 Marks	1 Mark
Language	Excellent spelling and Grammar	Good spelling and Grammar	Reasonable spelling and Grammar	Below average spelling and Grammar

Criteria	4 marks	3 Marks	2 Marks	1 Mark
Style	Outstanding style beyond usual college level	Attains College level style	Approaches College level style	Elementary form with little or no variety in sentence structure
Referencing	Good use of wide range of reference sources	Moderate use of suitable reference materials	Shows signs of plagiarism & using sources without referencing	No reference material used
Development	Main points well developed with high quality and quantity support	Main points developed with quality and quantity supporting details	Main points are present with limited details and development	Main points lack detailed development
Critical thinking / Problem solving	Advanced attempt to interpret the process, content/ analyse and solve the problem	Proficient attempt to interpret the process, content/ analyse and solve the problem	Adequate attempt to interpret the process, content/ analyse and solve the problem	Limited attempt to interpret the process, content/ analyse and solve the problem

(b) Components of Skill Enhancement Course

Any one of the following should be selected by the course coordinator

S.No.	Skill Enhancement	Description
1	Class Participation	• Engagement in class • Listening Skills • Behaviour
2	Case Study Presentation/ Term Paper	• Identification of the problem • Case Analysis • Effective Solution using creativity/imagination
3	Field Study	• Selection of Topic • Demonstration of Topic • Analysis & Conclusion
4	Field Survey	• Chosen Problem • Design and quality of survey • Analysis of survey

S.No.	Skill Enhancement	Description
5	Group Discussion	• Communication skills • Subject knowledge • Attitude and way of presentation • Confidence • Listening Skill
6	Presentation of Papers in Conferences	• Presentation • Paper Publication
7	Industry Visit	• Chosen Domain • Quality of the work • Analysis of the Report • Presentation
8	Book Review	• Content • Interpretation and Inferences of the text • Supporting Details • Presentation
9	Journal Review	• Analytical Thinking • Interpretation and Inferences • Exploring the perception if chosen genre • Presentation
10	e-content Creation	• Logo/ Tagline • Content (Writing, designing and posting in Social Media) • Presentation
11	Model Preparation	• Theme/ Topic • Depth of background Knowledge • Creativity • Presentation
12	Seminar	• Knowledge and Content • Organization • Understanding • Presentation

(ii) Distribution of External Marks

S.No.	Particulars	Distribution of Marks
1	End-Semester Examination (All 5 Units)	60
	TOTAL	**60**

(iii) Mark Distribution for UG & PG Project

S.No.	Particulars	Distribution of Marks
1	Internal Examination	50
2	ESE	50
	TOTAL	**100**

a) Distribution of Internal Marks

S.No.	Particulars	Internal Marks
1	Review I – At the end of 35 days	20
2	Review II – At the end of 70 days	20
3	Attendance – Minimum 60%	10
	Total	**50**

b) Distribution of ESE Marks

S.No	Particulars	Marks
1	Project Work Dissertation & Presentation –PPT (Hardware / Software)	40
2	Viva – Voce	10
	Total	**50**

Rubrics for Project Evaluation

Zeroth Review				
Assessment Method	**Excellent (10 marks)**	**Good (8 to 9 marks)**	**Acceptable (5 to 7 marks)**	**Needs improvement (< 5 marks)**
Understanding background and topic	High level of understanding about the background and topic	The level of understanding about the topic is good	Somewhat the students is able to explain the background and topic	Not able to explain the background and topic clearly
Specify Project goals	Able to specify the project goals clearly and exceeds the expectations	Able to specify the project goals clearly and meet the expectations	Able to specify the project goals	Unable to specify the projects goals clearly
Literature Survey	Able to demonstrate sophisticated	Able to understand Justification of	Justifies choices made with references	Lacks justification of choices with little or no references

	justification of choices	choices made with references		
Problem statement	Provides a detailed intended outcome of the project which includes information about the problem to be solved and clearly articulates the method of framing the problem	Provides a description of the intended outcome of the project which includes information about the problem to be solved.	Provides information about the problem to be solved only.	Does not clearly explain the problem statement and its method of framing
Selection of testing platforms and reference systems	Able to identify suitable testing platform and reference systems	Randomly selected the testing platform and reference systems.	Randomly selected the testing platform and improper reference systems.	Not able to identify the proper testing platform and reference systems.
Project Planning, Expected difficulties in this project	Able to plan the project with scientific methods and able to predict difficulties in the different stages of the Project	Able to plan the project with scientific methods and able to identify the difficulties in the project only	Able to plan the project without clarity in the difficulties	Not able to identify the proper planning methods and difficulties in the project.
Technical Design- layout (skeleton structure)	Able to generate the solution for the problem in terms of design layout with properly identified components and equipment.	Able to generate the solution for the problem in terms of design layout with identified components and equipment.	Able to generate design layout without proper justification.	Not able to generate clear design layout with proper components and equipment
Summarize the expected findings from the project	Able to summarize the outcome of the project with proper interpretation of data's observed in the execution of the project	Able to summarize the outcome of the project with interpretation of data's observed in the execution of the project	Difficulty in summarize the project outcome with proper interpretation methods	Not able to process the interpretation with observed data's during execution of the project
Question and Answer	Able to answer all questions with clear explanations	Able to answer all questions but explanations are not relevant	Able to answers few questions	Not able to answer all questions
Presentation skills	Content of the presentations are appropriate, neatly arranged and well demonstrated	Content of the presentations are appropriate, neatly arranged but average demonstration.	All the content of the presentations are mostly appropriate but without proper demonstration.	Content of the presentations are not appropriate and poor demonstration

First Review				
Assessment Method	**Excellent (10 marks)**	**Good (8 to 9 marks)**	**Acceptable (5 to 7 marks)**	**Needs improvement (< 5 marks)**
Explain the feasibility of Project and Level of difficulty in proposed project	Presented the complete feasibility study with all the levels of difficulties in the proposed project.	Presented the complete feasibility study with few levels of difficulties in the proposed project.	Presented the feasibility study without levels of difficulty in the proposed project.	Not able to clearly present the feasibility study
Objectives and Expected results/outcome	All objectives of the proposed work are well defined with the proper prediction of results/outcome	Good justification to the objectives with expected results and outcome	Objectives without justification and clear outcomes	Not able to identify all the objectives with proper expected results/outcome
Architecture /System Design, Block Diagram	Able to develop proper architecture /block diagram with proper subsystems.	Able to develop architecture /block diagram with subsystems.	Able to develop architecture /block diagram without subsystems.	Improper architecture/block diagram
Summarize algorithms and highlights the project features	Able to demonstrate all possible algorithms for solving the problem with the highlights of individual algorithm for the project	Able to demonstrate all possible algorithms for solving the problem with the highlights of few individual algorithm only	Able to demonstrate few possible algorithms only	Not able to demonstrate suitable algorithms
Specify the testing platforms and benchmarking systems	Able to clearly explain the identified testing method from all the available testing methods and suitable benchmarking system for the method	Able to clearly explain the identified testing method from the few available testing methods with suitable benchmarking system	Able to explain identified testing method without benchmarking system	Not able to explain the suitable testing method
Discuss the reasons of using Benchmark systems	Able to clearly explain the suitability of the benchmark selected for solving the	Able to explain the selected benchmark for solving the problem	Able to explain the benchmark system without justification	Not able to clearly explain the suitable benchmarking system.

	problem statement in the project work	statement in the project work		
Summarize the expected ultimate findings of the project	Summary of the project findings are more relevant and meet the expectations	Summary of the project findings are relevant and able to justify	Summary of the project findings are relevant but not able to justify	Not able to identify the expected project findings
Question and Answer	Able to answer all questions with clear explanations	Able to answer all questions but explanations are not relevant	Able to answers few questions	Not able to answer all questions
Presentation skills	Deliver effective presentation and able to answer all queries of the examiners.	Deliver effective presentations but able to answer partially to the examiners queries.	Able to deliver fair presentation but not able to answer to the examiners	Could not deliver presentation, but presentation was prepared and attempted.
Implementation (50% -Coding or Hardware)	50 Percentage of the Hardware/ Coding completed	40 Percentage of the Hardware/ Coding completed	30 Percentage of the Hardware/ Coding work completed	Below 30 Percentage of the Hardware/ Coding work completed

Second Review				
Assessment Method	**Excellent (10 marks)**	**Good (8 – 9 marks)**	**Average (6 – 7 marks)**	**Below Average (< 5 marks)**
Abstract	Highlights major points of proposed project work; Purpose and importance of the project are clearly stated	Highlights major points of proposed project work; Purpose and importance of the project are not clearly stated	Major Points are highlighted but purpose and importance are not stated	Major Points, purpose and importance are not stated properly.
Specified Project goals reached	All specified Project Goals are reached	Most of the specified project goals are reached	Few of the specified project goals only reached	Few of the specified project goals are partially reached
Architecture /System Design – individual Committed Modules	Design meets or exceeds desired objectives.	Design meets desired objectives.	Design does not meet the desired objectives	Not capable of achieving desired objectives.
Summarize algorithms and highlights the project features	Able to define the suitable algorithms for solving the problem	Able to define and justify the algorithms	Able to identify the algorithms but not clear	Able to identify the algorithms but not suitable
Experimental Results (of each module)	Experiments are well designed to verify or refute	Experiments are somewhat well designed and	Experiments do not align well	Very little effort put towards designing and

	claims made in problem statement	cover most of the important condition.	with problem statement.	conducting experiments
Compares the results with the existing systems	Able to compare alternative solution processes, contrast it and also able to select best process	Able to compare alternative solution processes and contrast clearly but not able to select best process	Able to compare alternative solution processes but could not contrast clearly	Not able to compare alternative solution processes
Summarize the development in ultimate findings of the project	Able to summarize the project findings clearly	Able to summarize the project findings but not clear	Summary of the findings are not relevant	Not able to summarize the project findings
Question and Answer	Able to answer all questions with clear explanations	Able to answer all questions but explanations are not relevant	Able to answers few questions	Not able to answer all questions
Presentation skills	Deliver effective presentation and able to answer all queries of the audience.	Deliver effective presentations but able to answer partially to the audience queries.	Able to deliver fair presentation but not able to answer to the audiences	Could not deliver presentation, but presentation was prepared and attempted.
Complete HW / Simulation Performance Analysis (100%)	100% completed	95% completed	90% Completed	85% Completed

Final Review				
Assessment Method	**Excellent (10 marks)**	**Good (8 – 9 marks)**	**Average (6 – 7 marks)**	**Below Average (< 5 marks)**
Design of HW/ SW (Input, power modulators, System design, feedback system, sensors, signal conditioning units, etc)	Appropriate design methodology and proper justification for selected the same	Design methodology not properly justified	Design methodology not defined and justified properly	Design methodology not appropriate to the problem statement
SW development / HW module fabrications	SW development / Hardware fabrication is excellent	SW development / Hardware fabrication is good	SW development / Hardware fabrication is not up to the mark	SW development / Hardware fabrication is poor

Algorithms or controller's implementation in Main /Subsystems	Algorithm/Controller implementation is suitable to the proposed project	Algorithm / Controller implementation is suitable but not providing the expected output	Algorithm / Controller implementation is not appropriate to the proposed project	Algorithm / Controller is not implemented properly
Performance Analysis of the proposed system	Expected performance is obtained	Moderate performance of the proposed system	Average performance is obtained	Poor performance of the system
Comparing the results of the proposed system with the State of Art	Results of the proposed system are expected level.	Results of the proposed system are satisfactory	Results of the proposed system are not satisfactory	Expected results are not obtained
Report	Project report is according to the specified format. Reference and Citations are appropriate and well mentioned	Project report is according to the specified format. Reference and Citations are appropriate and but not mentioned well.	Project report is according to the specified format but some mistakes and insufficient reference and citation	Project report is not prepared according to the specified format. Reference and Citations are not appropriate
Assessment Method	**Excellent (20 marks)**	**Good (16 – 19 marks)**	**Average (11 – 15 marks)**	**Below Average (< 10 marks)**
Presentation Skills	Content of the presentation are appropriate and well arranged. Proper eye contact and attention with audience.	Content of the presentations are appropriate but not well arranged. Eye contact not proper	Content of the presentations are appropriate but not well arranged.	Content of the presentations are not appropriate and poor presentation
Communication skills	Communication is excellent and delivery was clear.	Communication and delivery were generally good but could have been more effective	Weak in communication skill. Delivery relied too much on ppt/notes and lacked spontaneity	Language was unclear. Delivery relied exclusively on notes

Project Work shall be evaluated jointly by Internal and External Examiners (40 Marks) and viva voce to be conducted jointly by them. Evaluation of Project Work and conduct of Viva-voce shall be done jointly by Internal and External Examiners.

10.6 The criteria and the allocation of marks for CIA of theory courses are given below:

S.No.	CIA for theory courses	Coverage	Allocation of marks
1	Continuous Assessment Test I (CAT I)	CO1, CO2,CO6	10
2	Continuous Assessment Test II (CAT II)	CO3, CO4, CO6	10
3	Model Exam	CO1, CO2, CO3, CO4, CO5, CO6	10
3	Assignment-1 & 2 (Written / MCQ)	CO1, CO2, CO3, CO4	05
3	Assignment-3 (Seminar/ Technical Quiz/ Paper/ Poster presentation/ Application related project/ Simulation/ Case studies/ Prototype)	CO5, CO6	
4	Attendance		05
		Total Marks	**40**

10.7 If a student misses any of the CIA due to the participation in the University/ State/ National/ International level Sports events/ Academic events/ medical reasons permitted by the University, re-assessment shall be conducted at any time before the commencement of the ESE of that semester.

10.8 The criteria and the allocation of marks for CIA of lab courses are given below:

S.No.	CIA for Lab courses	Allocation of marks
1	Exercise Observation	15
2	Rubrics based Assessment	15
3	Record note book	10
	Total marks	40

10.9 The criteria and the allocation of marks for ESE of lab courses are given below:

S.No.	Criteria for ESE Lab courses	Allocation of marks
1	Materials/Procedure/ Tabulation/Program/ Content	20
2	Experimental readings, Calculations, Graph, etc	20
3	Results, Inference and Presentation	10
4	Viva Voce	10
	Total marks	60

10.10 Undergoing Industrial Internship / gaining Research Lab experience are one of the mandatory courses for all the UG and PG students. It must be undergone individually and subjected to individual evaluation in the ESE.

10.11 The criteria and the allocation of marks for Industrial Internship/ Research lab experience are given below. A report to be submitted with authorization from the Industry.

S.No.	Criteria for Industrial Internship/ Research lab experience	Allocation of marks
1	**ESE** • Presentation • Internship Report • Viva voce	 30 50 20
	Total marks	100

10.12 HoD shall constitute 'Internship Review Committee' comprising, the HoD as the chairperson, External expert from the industry (if possible) and one senior faculty member of the Department having industrial experience. The committee shall review the progress of the Internship and shall award the marks.

10.13 Students undergoing Internship should submit their Internship report on or before the due date prescribed by the HOD.

10.14 HoD shall constitute 'Project Review Committee' comprising, the HoD as the chairman, one senior and one junior faculty members of the Department. The committee shall review the progress of the Project work and shall award the marks.

10.15 Students should submit their Project work Report on or before the due date prescribed by the HOD.

10.16 If a Project group could not submit the Project Report within the stipulated date, then an extension of 5 days may be given to a Project group upon valid reason submitted by the Project group subjected to the approval of the HoD.

10.17 If the Project Report is not submitted beyond the extended date, then the Project group students are deemed to be failed in the Project work examination and hence

have to re-register and appear for the ESE, when offered next by paying the applicable exam fee.

10.18 Project work may be allocated to single student / group of students of not more than 3 or 6. In special cases, the project group may be for subject to the approval of the HoD. However for PG Degree Programmes, the Project work is to be done by individual student only. For Maritime Degree Programmes, the Project group members may be allowed up to 8 students, subject to the approval of the HoD.

10.19 Rubrics to be followed for the assessment of Mini-Project, Project work and Internship.

11.0 ASSESSMENT FOR ONLINE COURSES /GUIDELINES FOR OPEN ELECTIVE COURSE

11.01 Open Elective courses (OEC) are inter-disciplinary courses from other technical and/or emerging areas in which students earn credit based on individual interest.

11.02 The concept of Open Elective Courses (OECs) under National Education Policy (NEP) 2020 is to provide wide opportunities for students to know, understand, and have an idea of any other discipline other than their respective discipline of study.

11.03 A student has to earn 12 to 15 credits as specified in the curriculum of the respective programme of study in order to be eligible to obtain the degree.

11.04 The student, in consultation with his mentor, shall choose a suitable course(s) from a MOOC platform such as SWAYAM, NPTEL, IGNOU, AICTE, NITTR, CEC, IIM, NIOS, UGC, Coursera, Edex, Udamey, Springboard, Courses offered by Harvard, Stanford and MIT ; courses recommended by AICTE, which has a credit and assessment

11.05 After choosing the course, the student shall submit the details of enrolment to his mentor, who shall verify the list of courses, prescribe or recommend them by the department, or based on the guidelines given by the department.

11.06 Students should choose a course in such a way that the results are declared by the course-offering institution within the semester.

11.07 The student can't choose a course that is similar to a core or professional course in his or her curriculum.

11.08 The credit is determined by the learning hours. 15 hour of online course is considered as 1 credit. 30 hours of online course is considered as 2 credits. 45 hours or greater, online course is considered as 3 credits.

11.09 The course coordinator from the department shall collect all the relevant details of the OEC course enrolled by the student and submit a consolidated report to the Head of the Department.

11.10 If the course is found to be not aligned with the guidelines, students can choose another course of interest before the specified date given by the Dean-Academics.

11.11 During enrollment for the examination, students must provide university details and accept credit transfer (if specified).

11.12 Student shall pay the examination fee to the course offering institution, if required. University shall not refund the course fee or examination fee to the student.

11.13 After registering for a course, a student shall attend the classes online, satisfy the attendance requirements, earn assignment marks, and appear for the proctored online examinations.

11.14 After publication of the result, students shall submit the soft copy and hard copy of their results / mark sheet to the course coordinator.

11.15 Students can opt for credit transfer and the omission of taking up courses in the next successive semester.

11.16 Students can't opt for OEC during his/her I semester of study. However student can pursue their VI and VII OEC in earlier semesters also.

11.17 A student can opt for up to three OEC courses in a semester.

Activities of the Department in Offering OEC Courses

11.18 The Programme Assessment Committee (PAC) shall prepare a list of certificate courses offered by various MOOC-offering platform institutions like SWAYAM, NPTEL, IGNOU, AICTE, NITTR, CEC, IIM, NIOS, UGC, Coursera, Edex, Udamey, Springboard, Courses offered by Harvard, Stanford, and MIT; courses recommended by AICTE, which has a credit and assessment system; or as per the guidelines prepared by the PAC for the students to choose courses of their interest.

11.19 The course coordinator from the department shall collect all the relevant details of the OEC course enrolled by the student and submit a consolidated report to the HoD.

11.20 The Heads of the Department concerned shall confirm the details of the enrollment of students in various MOOC courses before the commencement of the respective semester to the Dean-Academic and, on approval,

11.21 The Head of the department shall intimate the selected OEC courses for the students to pursue during the semester.

11.22 The course coordinator shall prepare the Schema for the courses and shall get approval from the Head of the department. Upon approval, the Schema of the OEC courses will be submitted to ERP, and the ERP-entered document shall be submitted to the Office of COE, after the approval of the Head of the Department and Dean Academics.

11.23 For the MOOC course offered by a premium institution (and the course has been recommended by the Head of the Department, considering the importance of the course), course assessment is not done by the course-offering institution or allied institutions, then Dean Academics shall advise to the head of the department to conduct assessment of the specified course by a competent external domain expert as per the rubrics approved by Dean Academics. The Examination shall be conducted along with the practical session, and the marks allocated by the External expert to the individual students shall be submitted to the office of the COE, as per the approved schema.

11.24 The Course Coordinator shall collect the results from the students (both soft copy and hard copy) and submit the results to the office of the COE after getting approval from the Head of the department.

11.25 The Office of COE shall accept the marks obtained by the student that are submitted by the department along with the proof on or before the specified due date and issue the mark sheet with the respective credits accordingly.

11.26 Any deviation from the general guidelines, the Dean-Academics will constitute a committee and based in its recommendations revised guidelines will be issued.

11.27 Students can take-up courses from online platforms like NPTEL, SWAYAM, Coursera, Springboard etc., for elective courses in curriculum with due approval from the 'Programme Assessment Committee' (PAC) constituted by the HoD and the same can also be used for credit transfer

11.28 Students are also encouraged to earn additional credits for the entire Degree Programme through 'Online Certificate' courses like NPTEL, SWAYAM, Coursera,

Springboard etc., with due approval from the 'Programme Assessment Committee' (PAC) constituted by the HoD.

11.29 Interested students may also learn additional Online certificate courses and earn credits more than 6. For such students, those courses with credits will be mentioned in their Consolidated Grade Sheet and shall not be taken in to account for the calculation of credits for the award of the degree and CGPA.

12.0 PASSING REQUIREMENTS

12.01 The minimum passing requirement is arrived based on marks obtained in ESE

12.02 The criteria for minimum passing for Under Graduate (UG) courses are given below:

S.No.	Passing criteria for UG	Minimum CIA marks out of 40	Minimum ESE marks out of 60	Minimum ESE marks out of 100	Minimum Aggregate (CIA+ESE) pass marks out of 100
1	Theory	-	27	45	50

Note: The minimum pass marks for certain Degree Programme like B.Sc. Nautical Science may vary and it is mentioned in their respective curriculum.

S.No.	Passing criteria for UG	Minimum CIA marks out of 50	Minimum ESE marks out of 50	Minimum ESE marks out of 100	Minimum Aggregate (CIA+ESE) pass marks out of 100
2	Laboratory	-	30	50	50
3	Project/ Mini Project	-	25	50	50

12.03 The criteria for minimum passing for Post Graduate (PG) courses are given below:

S.No.	Passing criteria for PG	Minimum CIA marks out of 40	Minimum ESE marks out of 60	Minimum ESE marks out of 100	Minimum Aggregate (CIA+ESE) pass marks out of 100
1	Theory	-	30	50	50
2	Laboratory	-	30	50	50

12.04 If a student has failed in a theory or lab course, then the student may be permitted to register for the course again, when offered next.

12.05 Similarly, if a student has failed in the Project work/Mini-project/Internship, then the student may be permitted to register for the course again, when offered next.

13.0 QUESTION PAPER PATTERN

13.01 The question paper pattern for UG/PG CAT is given below:

Duration : 90 minutes

Number of units covered : 2

Max. Marks : 50

Section	Description	Number of questions & marks	Total marks
Section-A	Descriptive/MCQ	6Q x 2 = 12 marks	50
Section-B	Detailed answer, Either Or type	2Q x 14 = 28 marks	
Section-C	Compulsory Question	1Q x 10 = 10 marks	

13.02 The question paper pattern for UG/PG Model/ESE is given below:

Duration : 3 hours

Number of units covered : 5

Max. Marks : 100

Section	Description	Number of questions & marks	Total marks
Section-A	Descriptive/MCQ	10Q x 2 = 20 marks	100
Section-B	Detailed answer, Either Or type	5Q x 14 = 70 marks	
Section-C	Compulsory Question	1Q x 10 = 10 marks	

14.0 PROVISIONS FOR REVALUATION

14.01 Regular students may get the photocopy of their first time valued answer scripts by paying the prescribed fee for a maximum of 3 courses in that ESE.

14.02 Regular students may apply for revaluation of their first time valued answer scripts by paying the prescribed fee for a maximum of 3 courses applied for photocopy.

14.03 If the difference in marks between first and revaluation is more than 15 marks with change in the result, then the answer script is subjected to third valuation. The marks favourable to the student at the end of three valuations shall be released as the result.

14.04 If the difference in marks between first and revaluation is more than 20 marks without change in the result, then the answer script is subjected to third valuation.

14.05 Revaluation / getting answer scripts are not permitted for laboratory/ mini-project/ Project work courses.

14.06 Students are permitted to appear for laboratory arrear ESE, provided the student should have completed the minimum number of exercises prescribed by the Head of the Department.

15.0 AWARD OF LETTER GRADES

15.01 The letter grade allotted to the range of aggregate marks on a 10-Point scale for all the UG Degree Programme, except certain courses in B.Sc. Nautical Science is given below:

S.No.	Aggregate marks range	Grade Point	Letter Grade	Remarks
1	100	10	O	Outstanding
2	90 to 99	9.0 to 9.99	A+	Excellent
3	80 to 89	8.0 to 8.99	A	Very Good
4	70 to 79	7.0 to 7.99	B+	Good
5	60 to 69	6.0 to 6.99	B	Above Average
6	50 to 59	5.0 to 5.99	C	Average
7	< 50	0.0 to 4.99	RA	Re-Appear
8	Absent	0	AB	Absent

15.02 The letter grade allotted to the range of aggregate marks on a 10-Point scale for all the PG Degree Programme is given below:

S.No.	Aggregate marks range	Grade Point	Letter Grade	Remarks
1	100	10	O	Outstanding
2	90 to 99	9.0 to 9.99	A+	Excellent
3	80 to 89	8.0 to 8.99	A	Very Good
4	70 to 79	7.0 to 7.99	B+	Good
5	60 to 69	6.0 to 6.99	B	Above Average
6	50 to 59	5.0 to 5.99	C	Average
7	< 50	0.0 to 4.99	RA	Re-Appear
8	Absent	0	AB	Absent

16.0 CALCULATION GPA AND CGPA

16.01 The ratio for the calculation of GPA and CGPA are given below:

$$GPA = \frac{\sum \text{Grade points X Credits of the courses}}{\sum \text{Credits of the courses passed in a semester}}$$

$$CGPA = \frac{\sum \text{Total credits of a semester X GPA}}{\sum \text{Credits of the courses in all the semesters}}$$

16.02 The GPA and number of credits shall not be mentioned in the grade sheet for the students who have not cleared all the courses at that point of time.

17.0 ELIGIBILITY FOR THE AWARD OF DEGREE

17.01 A student shall be declared to be eligible for the award of the UG/ PG Degree provided the student has successfully gained the required number of credits specified in the curriculum of the student's Degree Programme within the stipulated time period.

18.0 CATEGORY OF THE DEGREEAWARDED

18.01 The various categories of the Degree awarded to the students are given below:

S.No.	Category	Requirements
1	First Class with Exemplary	CGPA > 9.0 in the first appearance
2	First Class with Distinction	7.5 < CGPA < 9.0 in the first appearance
3	First Class	CGPA > 6.0 within the stipulated time period
4	Second Class	CGPA < 6.0 within the stipulated time period

19.0 BREAK OF STUDY IN A DEGREE PROGRAMME

19.01 A student is permitted to go on a break of study for a maximum of one year either as single break of one year or as two breaks of one each per semester for health reasons alone.

19.02 Students may apply for the break of study before the last working day of the previous semester to the Registrar through the Head of the Department.

19.03 Students who are permitted to re-join the programme after the break of study or prevention due to lack of attendance shall take up the Curriculum and Regulation prevailing at the time of re-joining.

19.04 After re-joining, the students have to register for the courses in the prevailing curriculum in the beginning of the readmitted semester to enable the Department to prescribe any additional / equivalent courses, with due approval from equivalence committee.

19.05 If a student has not reported to the Department for a considerable period in a semester without any intimation, the name of the student shall be removed from the enrolment. The student may be permitted to rejoin the semester after submitting suitable documents for the uninformed break and shall apply to the Registrar through the Head of the Department.

20.0 REVISION OF REGULATIONS, CURRICULUM AND SYLLABI

20.01 The University has the right to revise, amend or change the Regulations, curriculum, syllabi and Scheme of Examination at any time with the approval or ratification of the Academic Council.

20.02 The University shall revise the Regulations based on the guidelines of the Apex Regulatory Bodies like DGS, UGC and AICTE.

20.03 The University has the right to implement any reforms in the present Regulations and may come into practice upon formal notification.

21. INTERNATIONAL AFFAIRS

The Office of International Relations at the Academy of Maritime Education and Training (AMET) is a dedicated directorate tasked with the goal of fostering global best practices and exchange opportunities for the benefit of all Students and Faculty. International engagement is highlighted by the emphasis on multidisciplinary and transdisciplinary research, positioning AMET as a leader in the Maritime, Engineering, Science, Management and Other domains.

OUTWARD MOBILITY

AMET believes that students and Faculty deserve to have an exceptional global exposure. With this goal in mind, we have dedicated significant resources and efforts to

provide them with unique national and global opportunities. The Office of the International Affairs offers various programs such as the semester abroad program, dual degree program, joint degree program and twinning program to allow our students to interact, collaborate, and work with their peers from around the world.

INWARD MOBILITY

AMET welcome students from overseas to participate in our study abroad program. This program provides an exceptional opportunity for international students to immerse themselves in our academic environment and to gain hands-on exposure in the relevant domains. The program is offered for one or two semesters, with options to enrol in either the Fall term (July to December) or the Spring term (January to May).

Students from overseas must have a minimum C average in their previous studies. During their stay at AMET, international students will have the chance to take a maximum of 25 credits per semester and will be evaluated based on the same standards applied to our full-time students. Upon completion, a transcript highlighting the credits obtained and grades earned will be issued to each student.

JOINT DEGREE

AMET's Joint Degree programs are designed to complement the existing curricula, providing students with the skills and knowledge necessary to succeed in the 21st century global marketplace. AMET associates closely with top universities across the globe to offer affordable, internationally recognized joint degree programs..

VISITING AMET FACULTY

AMET faculty visiting other institutions involves opportunities for professional development, knowledge exchange, and collaboration with other experts in the field. These visits can also provide valuable insights into new teaching methods, research and best practices across globe.

VISITING FOREIGN FACULTY

AMET recognizes the value of fostering international academic collaborations and encourages the exchange of knowledge and expertise between scholars from different countries and institutions by welcoming the foreign faculty to engage in our academic programs and initiatives like teaching courses, conducting research and others.

SEMESTER ABROAD

Semester Abroad Program offers students a once-in-a-lifetime opportunity to study at renowned international universities for one semester. By participating in this program, students can expand their education by taking courses, Internships and working on a major project abroad. The credits earned during this time will be converted into AMET credits and taken into consideration for the award of a degree. Upon completion of their studies abroad, students return to AMET to continue with their degree program, and with the fulfilment of all necessary requirements, they will become eligible to receive their degree from AMET.

DUAL DEGREE

Dual Degree programs at AMET allow students to have the chance to earn two degrees simultaneously, either at AMET or at different universities globally. This provides a comprehensive education and a broad skill set in the chosen fields, offering a competitive advantage in the job market. AMET's dual degree curriculum is designed to supplement the regular coursework with additional curriculum from partnering universities, providing a more rounded education. The program tuition is determined by the partnering universities and for those unable to study at the partner institutions, AMET offers the option to complete their studies and receive degrees from AMET.

TWINNING PROGRAMME

Twinning Programme at AMET allows undergraduate students to supplement the regular curriculum with additional coursework from partner universities in abroad. Students at AMET have the flexibility to earn credits towards their degree while studying at the institution or to transfer their credits to a partner university after completing two years at AMET. By opting for transfer, students can complete their degree program by finishing the remaining credits at the partner university. These programs offer a unique chance for students to broaden their education and expand their academic horizons.

WHO CAN APPLY?

- Undergraduate students enrolled in any program at AMET
- Students who have no disciplinary or academic violations during their time at AMET

- Students who have a valid passport and meet the visa requirements for studying abroad
- English Proficiency

APPLICATION PROCESS

- Research and select the international program that best fits your academic and career goals. Visit www.ametuniv.ac.in
- Make sure that you meet the eligibility requirements for the program you wish to apply
- Obtain the necessary application forms from the Office of International Affairs at AMET
- Submit the application along with the supporting documents-Copy of Passport, Transcripts, Test scores and Letters of recommendation
- Interview will be conducted after reviewing the application
- Enrolment process including paying tuition fee and obtaining visas after being selected

22. ADDITIONAL DEGREE

A student can study a regular under-graduate degree course and an Additional under-graduate degree course from Computer Related or Management Related Courses such as

1. B.Sc. Data Science
2. B.Sc. Artificial Intelligence and Machine Learning
3. B.Sc. Computer Science and Business System
4. B.B.A. Shipping

For example, a Marine Engineering student can do any one of the above-mentioned courses in addition to BE-Marine Engineering or a BBA student can do any one of the B.Sc courses mentioned above.

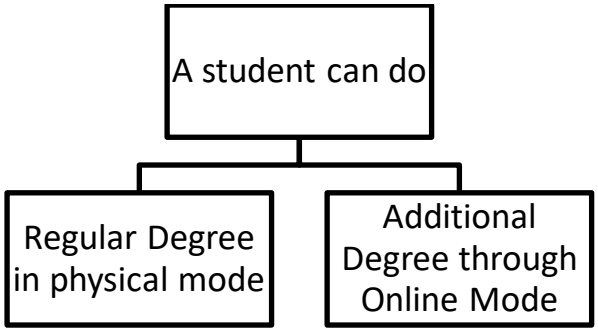
All under-graduate students of AMET University can do the Additional Degree. All the Additional Degree Programmes are for 3 years only. For example, 1st year student can comfortably complete the entire Additional Degree Programme in the First 3 years of their Regular Study in AMET University.

Who can do the Additional Degree?

All under-graduate students of AMET University can do the Additional Degree. All the Additional Degree Programmes are for 3 years only. For example,

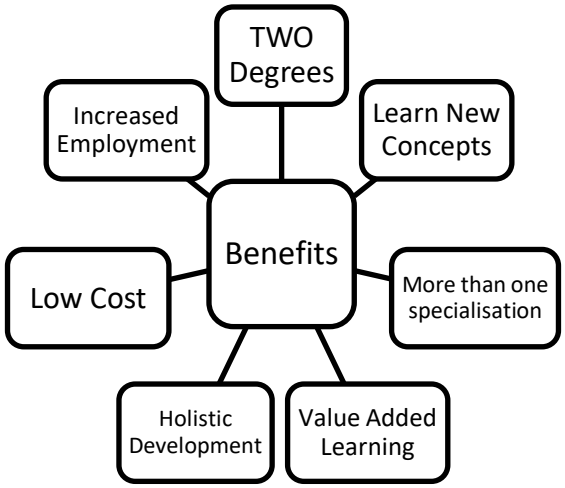
- 1st year student can comfortably complete the entire Additional Degree Programme in the First 3 years of their Regular Study in AMET University (for students undergoing 3 year programme).
- 2nd year engineering student can comfortably complete the entire Additional Degree Programme together with the Regular Engineering Programme before passing out of AMET University (for students undergoing 4 year programme).

A student can study TWO full time under-graduate degree courses, the regular under-graduate degree course in physical mode and the Additional Degree in Open and Distance Learning (ODL) / Online mode (OL).



What are the benefits of doing the Additional Degree?

- Opportunity to acquire TWO degree programmes
- Opportunity to learn new concepts in Artificial Intelligence, Machine Learning, Robotics, Data Science and Shipping Management
- Provides opportunity to study degree programmes in one or more specialized areas of interest
- Value addition to education and the Opportunity for the holistic development
- Increased Employment Opportunity
- Low Cost of doing the doing the Additional Degree



23. MENTOR-MENTEE PROGRAM

AMET has formulated a system of student support and mentoring in a structured manner. The student support and mentoring are offered to the student's right from the admission till their graduation. Here, an effective mentoring relationship is characterized by mutual respect, trust, understanding, and empathy. Our mentors are able to share life experiences and wisdom, as well as technical expertise with the students. They are good listeners, good observers, and good problem-solvers. They make an effort to know, accept and respect the goals and interests of a student. In the end, they establish an environment in which the student's accomplishment is limited only by the extent of his or her talent.

Objectives of Mentoring Program

- To interact with students about their need, problems, difficulties and address them effectively.
- To mentor students to participate in various technical and cultural events for their overall development.
- To regularly observes the overall growth of student by updating the green card and provide counselling whenever required.
- To guide the students to ease the transition from school to work.
- To gain access to the professional community.

Responsibilities of Mentor

- Mentoring.
- Professional and Personal Guidance.
- Internships, Industrial Trainings & Industry Readiness.
- Higher studies exposure.
- Guiding the mentee regarding choice of electives, add on courses (NPTEL, SWAYAM, MOOC & Value Added Courses), external certifications and project works.
- Participation in co-curricular and extra-curricular activities.

Issues to be discussed with the students by mentor

- Personal study timetable.
- Attendance in the classes and practical.
- Economic status.
- Area of Interest.
- Hostel / Food issues.
- Confidence level.
- Personal, familial, social and academic issues.

Frequency of meeting

In AMET, we follow the best possible mentoring system (i.e.) Total Development Mentoring System for the benefit of the students. The mentor mentee ratio is 1:20 which greatly helps the mentor to focus on all the issues raised by the students. The mentor meets the student once in a week and whenever required to discuss about the academics & other beneficiary topics.

Feedback System

- Student feedback is a mandatory procedure in AMET. Every student is expected to give the feedback once in a semester on various parameters. The feedback is

regarding course coverage and other parameters to improve the course delivery methodologies etc.

Feedback is collected in Online. Software with the parameters to be considered, the name of the faculty handling the subjects for each class is prepared. A schedule is prepared for feedback to be given by all classes. The students of each class go to the laboratories assigned for them, use their login ID and password and give confidential feedback for each faculty handling class for them based on a standard questionnaire.

Feedback about the Department and Institution is received from the students and the parents through suggestion box and Email. It focuses on the infrastructures, facilities and practices.

Vice Chancellor and HOD addresses student representatives from each year to obtain feedback and suggestions regarding academic and co-curricular activities directly. This feedback is then shared with concerned faculty members for remedial actions.

24. LATERAL ENTRY

B.E. Marine Engineering

Lateral Entry: Candidates can join 2nd year of 4-Years Marine Engineering Degree Course who have passed 1st year from the Engineering College in other streams like Mechanical or Electrical approved by AICTE with minimum 60% average marks. (b) The candidate must have secured minimum of 50% marks in English language at '10th or 12th Standard or in the Degree / Diploma course conducted by recognized Board or University.

Mechanical Engineering Stream: Three years Diploma in Automobile Engineering, Machine Tools and Maintenance / Plant Engineering, Production Technology, Production Engineering, Advanced Diploma in Tool & Die Making.

Electrical Engineering Stream: Three years Diploma in Electrical Power System. Electrical and Electronics Engineering Stream: Three years Diploma in Digital Electronics, Electronics & Communications Engineering, Electronics & Telecommunication Engineering, Industrial Electronics, Electronics Engineering, Electronics Production & Maintenance, Instrumentation, Instrumentation & Control

Passport is mandatory.

Course duration: 3yrs (residential course)

Age Limit: Below 25 years at the time of commencement of the course.

B.E. Naval Architecture and Offshore Engineering

Lateral Entry:

(i) Diploma Mechanical / Civil Engineering / Metallurgy / Production Engineering / Naval Architecture / Marine Engineering / Shipbuilding Students are eligible to be admitted in second year of the study.

(ii) B.Sc. Mathematics / Physics graduates are eligible to be admitted in second year of the study.

Eligibility: A pass in plus-two (12^{th} standard) or its equivalent, with minimum 50% Marks for OC and 45% for others aggregate in Maths, Physics and Chemistry Group from any recognized Board.

Mode of Selection Admission test / Personal interview. Lateral Entry Subject to availability

B.E. Mechanical Engineering

Lateral Entry: A Pass in DME/DAE/DPE/DNAOE/B.Sc. (Mathematics/Physics/Chemistry) with a minimum of 50% marks.

B.E. Electrical and Computer Engineering

Lateral Entry

- Diploma in Electrical & Electronics Engineering (EEE)
- Diploma in Electronics a& Communication Engineering (ECE)
- Diploma in Electronic & Instrumentation (EIE)
- Diploma in Instrumentation & Control (I.C.E)

The above stream candidates should have minimum 60% marks. Good Communication and Writing skills in English

Programme Transfer

Students are permitted to transfer from one programme of AMET to another programme of AMET in the first semester itself. There must be a valid reason for the transfer from one programme to another and also with the approval of the HODs and the higher authorities of AMET.

Equivalence Committee

Equivalence Committee is formed to validate the candidates who wish to join the 2nd year of the programme from an Institution outside AMET University. The committee will adjudge the credentials of the student and recommend the admission into 2nd year to the higher authorities of AMET.

25. Multiple Student Entry and Exit

For seamless student mobility, the NEP, 2020 envisages adjustments in the structure and lengths of degree programmes and an Academic Bank of Credits (ABC) to ensure seamless student mobility between or within degree-granting HEIs through a formal system of credit recognition, credit accumulation, credit transfers, and credit redemption to promote distributed and flexible teaching-learning. The ABC is an academic service mechanism as a digital/virtual/online entity established and managed by Ministry of Education (MoE)/UGC to facilitate students to become its academic account holders. The Academic Bank of Credits (ABC), a national-level facility will promote the flexibility of the curriculum framework and interdisciplinary/multidisciplinary academic mobility of

students across the HEIs in the country with appropriate "credit transfer" mechanism. It shall be a mechanism to facilitate the students to choose their own learning path to attain a Degree/ Diploma/Certificate, working on the principle of multiple entry and exit as well as anytime, anywhere, and any level of learning The undergraduate degree should be of either a three- or four-year duration, with multiple entry and exit options within this period, with appropriate certifications

A student will be allowed to enter/re-enter only at the odd semester and can only exit after the even semester. Re-entry at various levels as lateral entrants in academic programmes should be based on the earned credits and proficiency test records. The validity of credits earned will be to a maximum period of seven years or as specified by the ABC. The procedure for depositing credits earned, its shelf life, redemption of credits, would be as per UGC (Establishment and Operationalization of Academic Bank of Credits (ABC) scheme in Higher Education) Regulations, 2021. The credit requirements for multiple entry and exit for different levels of UG & PG Programmes is given in the following table below.

Qualification Type and Credit Requirements		
Levels	**Qualification title**	**Credit Requirements**
Level 5	Undergraduate Certificate (in the field of learning/discipline) for those who exit after the first year (two semesters) of the undergraduate programme. (Programme duration: first year or two semesters of the undergraduate programme)	36–40
Level 6	Undergraduate Diploma (in the field of learning/discipline) for those who exit after two years (four semesters) of the undergraduate programme (Programme duration: First two years or four semesters of the undergraduate programme)	72–80
Level 7	Bachelor' Degree (Programme duration: Three years or six semesters).	108–120
Level 8	Bachelor' Degree (Honours/Research) (Programme duration: Four years or eight semesters).	144–160
Level 9	Post-Graduate Diploma for those who exit after the successful completion of the first year or two semesters of the two-year Master's degree	36–40

	programme). (Programme duration: One year or two semesters)	
Level 10	Master's Degree (Programme duration: Two years or four semesters after obtaining a Bachelor's degree).	72–80
Level 11	Master's Degree (Programme duration: One year or two semesters after obtaining a four-year Bachelor's Degree (Honours/Research).	36–40
Level 12	Doctoral Degree	Minimum prescribed credits for course work and a thesis with published work