Myanmar Engineering Council

Engineering Education Accreditation Committee (EEAC)

Washington Accord Level

Engineering Programme Accreditation Manual, Policy, Procedure, Guidelines

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Myanmar Engineering Council

Engineering Education Accreditation Committee (EEAC)

Introduction

Article 1 The purpose of this document is to articulate the accreditation procedures of Myanmar Engineering Council (MEngC) pertaining to the accreditation of engineering programmes that prepare student engineers for entry to professional practice, at the levels of Professional Engineer.

The Procedures Manual is prepared primarily for, but not limited to, public and private Education Providers in the higher education (HE) sector that seek accreditation of engineering education programmes. All stakeholders in accreditation are likely to have an interest in this document.

Article 2 This Procedures Manual addresses curriculum-based programmes for Professional Engineer. However, the accreditation standards for programmes delivered I a competency-based framework typical of competency-based programmes (at the level of Engineering Associate only) provided in the Vocational Education and Training (VET) sector are not within the scope of this document.

Article 3 Definition and Acronyms

Definitions

Accreditation – A process of self-study by the programme and external peer review by appropriately trained and independent teams from both academia and engineering practice for quality assurance, accountability, and quality improvement of an academic programme designed to determine whether or not it has met or exceeded the published standards of the accredit or and is achieving its missions and objectives. Success results in an accredited programme. Accreditation of an engineering educational programme is the primary process used to ensure the suitability of graduates of that programme meeting the entry level of the engineering profession.

Accreditation Outcome – the approved status of accreditation of a specific programme

Education Provider (Provider) – the institution responsible for the design and delivery of an education programme, whether in the HE or VET sector

Entry to Practice Education Programme – a programme that is designed to deliver the initial (Stage 1) professional competencies expected of a graduate when first entering professional practice; entry to practice programmes provide the formal education basis for later determining an individual's Registration and Chartered status

Evaluation Panel (Panel) – a small group of experienced professionals appointed to undertake the evaluation of a programme against the accreditation criteria (sometimes also known as an Accreditation Panel)

Field of Engineering Practice – a scope of professional competence relating to a defined field of application in the practice of engineering

Interim Report – a response submitted by the Education Provider on the actions taken to address mandatory requirements set for Conditional Accreditation

General Review – an accreditation evaluation of all of the accredited programmes of an established Education Provider, normally conducted on site and scheduled on a five-year cycle

Graduate Capabilities – the learning outcomes demonstrated by graduates and incorporating the Competencies for the specified programme

Outcomes-based Accreditation – uses an outcomes-oriented graduate capabilities standard against which the programme is considered for accreditation; it does not specify the means by which these standards are met, giving the Education Provider freedom in the design and implementation of the programme

Programme – a defined course of study leading to the award of a specific qualification (some providers may use the term “Course”)

Provisional Accreditation – may be accorded to a programme before it has been completed by any students or learners; at the request of the provider, the programme will be further evaluated after completion by one or more cohorts

Quality Management – defines how an organisation meets and maintains its objectives

Recognised Programme - a programme accredited by a signatory of an International Educational Accord, and in consequence, is deemed to be substantially equivalent to Australian programmes accredited for entry to the same occupational category

Registration - the outcome of an independent evaluation of an individual’s achievement and maintenance of professional standards prescribed for membership of a community of professionals

Risk Management - considers the effect of uncertainty on the likely attainment of an organisation’s objectives (compare with Quality Management)

Self-Assessment Report - a quantitative and qualitative account submitted by an Education Provider in advance of the evaluation of a programme that addresses how the programme meets the applicable accreditation standards and criteria, and covering all applicable methods of programme delivery and all possible pathways leading to the award of the qualification (also referred to as the 'Accreditation Submission')

Special Review - an accreditation evaluation that occurs outside the scheduled of the five-year cycle of General Review for a specific purpose, such as consideration of new programmes, or consideration of programmes for transition from Provisional to Full Accreditation. Special Reviews may be conducted without an on-campus visit.

Specified Learning Outcomes - the educational outcomes specified for a programme, incorporating the Stage 1 Competencies (equivalent to 'Target Learning Outcomes')

Competency Standard - the current MEngC outcomes-oriented graduate attributes standard for commencing professional practice in each occupational category

Threshold Standards - a minimum set of standards that must be met to achieve certification of some sort (accreditation in this case); they are not used to determine levels of excellence

Undifferentiated Programme - an education programme that is delivered at several different locations under a common award title, achieved using the same methodologies and processes at all locations

Unit Outcomes - the learning outcomes specified at the level of a unit/course/subject within the programme

Department - The entity which is responsible for designing and conducting the programme to the accredited.

Degree - Bachelor of engineering programme leading to engineering qualification in Myanmar.

Course - Subject offered in the programme.

Stakeholders - Parties having an interest (direct and indirect) in the programme output, for example, employers, Industry Advisory Panel (IAP), External Examiners, sponsors, lecturers and students, etc.

Academic staff - Staff responsible for teaching and learning activities in the programme leading to the award of an engineering degree

Student - Anyone undertaking an undergraduate programme

Graduate - Anyone who has been conferred a degree

Support staff - Staff responsible for supporting teaching, learning and administrative activities in programme implementation

External Examiner - A person with high academic standing in relevant field appointed by the IHL to assess overall academic programme and quality

Industry Advisory Panel - A body consisting of relevant professionals from industries, government sector, professional organisations, regulatory bodies, alumni etc., appointed by the IHL to ensure programme relevancy to stakeholders' needs

Approval - Permission from the relevant authorities to conduct a new programme

Accredited Programme - An engineering programme whose graduates are acceptable for graduate registration with the MEngC. This is accorded to a programme that satisfies the minimum standard for accreditation set by EEAC.

Accreditation with Interim condition - A programme given some conditions to be fulfilled with certain period of time which is shorter than the accorded accreditation period

Deferred Accreditation - This is the status given to a programme observed to have weakness. This programme is given the opportunity to provide for corrective actions within a year from the date of deferment or as determined by EEAC.

Declined Accreditation - This is the status of a programme that fails to meet the minimum standard for accreditation. In such a case, a further application is not normally considered within the next one year.

Cessation/ Termination of Accreditation - EEAC reserves the right to cease/terminate the accreditation if there is non-compliance or branch of accreditation requirements after accreditation has been given.

Provisional Accreditation - This is given to a programme that has been recommended for approval to be conducted by EEAC.

Acronyms

MEngC	-	Myanmar Engineering Council
CQI	-	Continual Quality Improvement
EEAC	-	Engineering Education Accreditation Committee
EAD	-	Engineering Accreditation Department
MES	-	Myanmar Engineering Society
IHL	-	Institutions of Higher Learning (Universities and Institutions authorized by legislation to award Engineering Degrees)
OBE	-	Outcome-Based Education
Matriculation	-	Matriculation Examination (final examination held at high schools)
IEA	-	International Engineering Alliance
PE	-	Professional Engineer
SAR	-	Self Assessment Report

Myanmar Engineering Council

Myanmar Engineering Council Laws and Rules

Article 1 The Myanmar Engineering Council Law, Chapter 4, Section 10, the duties of council are as follows:

The powers of the Council are as follows.

(a) forming the following working committees and determining functions and duties there of:
   (i) Register Certificate Assessment Working Committee;
   (ii) Engineering Discipline Accreditation Working Committee;
   (iii) Working Committee for retaining ethics;
   (iv) Working Committee for Disciplinary;
   (v) Working Committee for Preparing Standardizations, Basic Norms of Work and Engineering Procedures;
   (vi) Working Committee for Engineering Sustainable, Study Programme;
   (vii) Working Committee for Accreditation of Engineering Companies and Organizations;
   (viii) Other working committees which are appropriate to form according to necessity.

(b) Forming working groups for each specialized engineering discipline;

(c) Issuing, refusing to issue, revoking and cancelling within the limited period of the register certificate;

(d) Determining specific exemptions and determining necessary regulations and bylaws relating to issuing of register certificate;

(e) Determining the term, extending the term and refusing to extend the term relating to the register certificate;

(f) Determining registration fee, fee for extension of the term of registration and overdue fee for the failure to extend the term of registration;

(g) Communicating, and cooperating carrying out the which shall be beneficial for the State, with the international, regional and engineers from local and abroad and technologists,

Article 2: In MEngC Rules, Chapter IV, Section 18, the Council may assign the Executive Committee to form the following committee to perform its duties.

(i) Working Committee for Assessment;

(ii) Engineering Education Accreditation Committee;

(iii) Working Committee for Ethics;

(iv) Working Committee for Disciplinary;

(v) Standard Committee;

(vi) Working Committee for Continuing Professional Development;

(vii) Working Committee for Assessment of Engineering Companies and Organizations;

(viii) National and International Relations Committee;

Article 3: In MEngC Rules, Chapter IV, Section 20, The Executive Committee shall form this working committee with an executive member as a chairman and the Council Members not more than 15 as member and shall assign the duties to the committee.

(a) Duties of the Working Committee

(i) Occasional declaration of the engineering degree, technology degree and technology diploma, recognized by the council;

(ii) Stipulation of qualifications necessary to be applied by holders of the degree and diploma which are recognized by the council.

(b) Procedures The following policies and procedures shall be drafted to ensure to perform the functions of the Engineering Discipline Accreditation Working Committee of the Council:

(i) To submit to the council to approve after drafting policy and procedure in respect of engineering discipline accreditation of Myanmar Engineering Council;

(ii) To prepare and draw the manual of the technical quality scrutiny and recognition and engagement for scrutiny in detail; to stipulate and issue the quality scrutiny fees for all the expenditures to be raised for the confirmation and engagement of the quality scrutiny recognition to be claimed to the relevant technological university, college and organization, and to form and assign duty to the assessment boards for the recognition of the engineering work;

(iii) to stipulate the recognition period and to notify, if any requirement, for carrying on and to decide the recognition of the arrangements and engineering service on the basis of reviews and findings alter receiving the reports and assessment records of the board;

(iv) to settle the submission relating to dissatisfaction with the performance and un-clearance in respect of recognition of the engineering service programmes;

(v) to involve in the agreement of the engineering with other nations on behalf of the Myanmar Engineering Council;

(vi) to study and submit to the council the necessary performance for the promotion of quality with regard to engineering, which should be done;

(vii) to scrutinize and notify the quality and standard of the university and college attended by the foreign engineers to be sent by the Registration Certificate Assessment Working Committee;

(viii) to occasionally submit activities of the committee to the Myanmar Engineering Council;

(ix) The Working Committee may occasionally submit necessary rules and regulations, directives and procedures to the council.

Myanmar Engineering Council

Engineering Education Accreditation Committee (EEAC)

Accreditation Principles for Accreditation of Programmes

Chapter 1 Purpose of this Document

Article 1 The purpose of this document is to articulate the principles adopted by Myanmar Engineering Council (MEngC) for the accreditation of engineering education programmes that prepare graduates for entry to professional practice in Professional Engineer. It encompasses Engineering Education programmes in Higher Education (HE) programmes.

The document is prepared for all stakeholders in programme accreditation, including, but not limited to, education providers, professionals, students, employers and members of the public. For the purpose of stakeholders external to MEngC, the principles express the accreditation policies of MEngC.

Chapter 2 Accreditation Context

Article 2 Professional and Educational Context

Myanmar Engineering Council (MEngC) accredits engineering education programmes as part of its role, on behalf of the profession and the community, to earn the trust of all stakeholders in the capability of graduates with respect to the educational foundations of the profession of engineering.

Together with Membership, Registration and Chartered evaluations, accreditation provides a fundamental means by which the profession is governed in Myanmar. It also promotes continuous improvement, innovation and diversity in engineering education.

Programme accreditation is an evidence-based evaluation and review process to determine if educational programmes meet defined standards of outcomes and quality. Accreditation provides assurance that a programme is suitably designed and delivered to prepare graduates for entry to professional practice in Professional Engineer, in a specified field of engineering practice.

Programme accreditation by MEngC is voluntary: education providers request consideration of their programmes for accreditation. An Accreditation Outcome is conferred for a specified period. Full Accreditation status applies only after one or more cohorts of students have graduated from the programme. Education providers are strongly

encouraged to renew the accreditation of their programmes to verify that the quality of their programmes is maintained.

Registration of engineering professionals through attainment of a specified degree is not mandated by MEngC. Consequently, significant responsibility is placed on the accreditation function to provide assurance to the community that graduates have met the formal education requirements for graduate employment and subsequent independent practice.

An important feature and outcome of programme accreditation is the maintenance of internationally benchmarked standards in engineering education and the promotion of best practice. International recognition of MEngC accredited engineering education programmes intend to enhance international mobility of graduates and it is achieved through international accords and agreements to which MEngC will be a full signatory under the International Engineering Alliance (IEA). MEngC also maintains working relationships with other international and regional bodies that are stakeholders in the accreditation of professional engineering programmes.

MEngC is the sole professional body in Myanmar that takes responsibility for the accreditation of higher education programmes that are designed to prepare students for entry to practice in the profession of engineering. MEngC implements this function through its organisational unit, the Engineering Education Accreditation Committee (EEAC) of MEngC, and independent accreditation Evaluation Panels and an independent Accreditation Board.

Article 3 Outcomes-based Accreditation

Programme accreditation is an evaluation and review process to determine if a higher education programme meets defined standards of quality, namely, the accreditation criteria.

The terms quality management and risk management are often used in association with accreditation. Quality management defines how an organisation (or education programme in this context) meets its objectives, while risk management considers the effect of uncertainty on the likely attainment of those objectives. Accreditation encompasses both.

In outcomes-based accreditation the accreditation criteria are defined in a way that gives the education provider freedom to design and execute programmes to meet an outcomes-oriented graduate attributes standard. In the accreditation process, the Education Provider must account for all aspects of the curriculum and its execution, to enable graduates to

attain the specified programme outcomes, and for continuous improvement of the programme.

Outcomes-based accreditation, developed for the modern education environment, inherently assumes a reasonable level of maturity throughout the entire community of education providers. In Myanmar, this community is dominated by publicly funded providers that operate largely in accordance with accepted norms and practices. Significant variations from accepted norms and practices, typical of innovation, can also be indicators of risk. Outcomes-based accreditation is inherently a risk-based approach, and therefore does not ignore variations from accepted norms and practices that may be indicators of risk. Where such variations are identified, rather than simply denying to the provider the opportunity for innovation, the underlying rationale for risk taking should be explored to determine whether the risk can be acceptably mitigated.

Article 4 Purpose and Benefits of Accreditation

The purpose of accreditation is derived from the objects and purposes of MEngC, "To increase the confidence of the community in the employment of engineers by admitting to The Institution only those persons as shall have satisfied the Board of The Institution that they have an adequate knowledge of both the theory and the practice of engineering".

In accordance with this purpose, MEngC's accreditation process evaluates complete courses or programmes of study (hereafter referred to as programmes) leading to the award of engineering qualifications offered by ~~Australian~~ educational institutions. The key objective of this evaluation task is to accredit those programmes which are adjudged as preparing their graduates adequately for entry to the practice of the profession and admission to membership of MEngC in the grade of Professional Engineer.

The accreditation system is concerned with the criteria and processes for evaluating engineering education programmes leading to the award of professional qualifications.

Accreditation by MEngC provides the following benefits:

- the identification of engineering HE programmes that produce graduates who are deemed to have attained the competencies defined for Programme Educational Objective (PEO)
- the educational prerequisite for chartered status and/or registration, and consequently is a critical component of individuals' certification by governments and licensing bodies, of competence and safety

- public identification of engineering programmes that have been evaluated by the relevant professional body against stated criteria, independently of the education provider
- a guarantee that Myanmar engineering education providers can offer to prospective students and graduates, employers and governments, that programmes have Myanmar and international standing
- a basis for international comparability of education standards, reciprocal recognition, and graduate mobility
- a statement to governments and education providers of the basic requirements of a professional education in engineering, and the level of resources reasonably required to meet these requirements
- informed feedback on the design or professional elements of new programmes, modes of delivery, and engineering schools, and assistance in the promotion of innovation and good educational practice

Article 5 Objectives of Accreditation Reviews

To meet the above purpose, accreditation reviews have the following objectives:

a) To determine, with reasonable confidence, the extent to which the HE programme is capable of producing graduates with capabilities specified by the Programme Educational Objectives (PEOs) of HE

b) To determine, with reasonable confidence, the extent to which graduate cohorts indeed possess the capabilities specified in the PEOs

c) To determine, with reasonable confidence, that a HE programme satisfying a) and b) will continue to produce the graduate capabilities throughout the accreditation period The outcomes-based accreditation process does not prescribe detailed programme content or educational method, but invites innovation and diversity. It requires engineering education providers to have in place their own mechanisms for researching and systematically reviewing programme specified learning outcomes, educational design, student assessment and overall programme performance, and for continuous quality improvement.

Article 6 Graduate Outcome Standards

Education programmes are assessed against criteria and standards set by MEngC. The graduate outcome standards are expressed in the form of the professional competencies required of graduates to enter the profession from an engineering education programme. They are known as the Programme Learning Outcomes or Graduate Attributes (GAs):

(i) **Engineering Knowledge** - Apply knowledge of mathematics, natural science, engineering fundamentals and an engineering specialisation as specified in WK1 to WK4 respectively to the solution of complex engineering problems;

(ii) **Problem Analysis** - Identify, formulate, conduct research literature and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences (WK1 to WK4);

(iii) **Design/Development of Solutions** - Design solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations (WK5);

(iv) **Investigation** – Conduct investigation of complex engineering problems using research-based knowledge (WK8) and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions;

(v) **Modern Tool Usage** - Create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex engineering problems, with an understanding of the limitations (WK6);

(vi) **The Engineer and Society** - Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice and solutions to complex engineering problems (WK7);

(vii) **Environment and Sustainability** - Understand and evaluate the sustainability and impact of professional engineering work in the solutions of complex engineering problems in societal and environmental contexts. (WK7);

(viii) **Ethics** - Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice (WK7);

(ix) **Individual and Team Work** - Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings;

(x) **Communication** - Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions;

(xi) **Project Management and Finance** - Demonstrate knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, to manage projects in multidisciplinary environments;

(xii) **Life Long Learning** - Recognise the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Each standard is compliant with that of the corresponding educational accord under the International Engineering Alliance.

Article 7 Accreditation Criteria

Higher Education Programmes

Accreditation criteria have been developed to apply the applicable accreditation standards to meet the objectives of accreditation reviews of higher education programmes. The mentioned criteria are as follows:

Criterion 1	-	Programme Educational Objectives (PEOs)
Criterion 2	-	Graduate Attributes (GAs) and Assessment
Criterion 3	-	Academic Curriculum
Criterion 4	-	Students
Criterion 5	-	Academic and Support Staff
Criterion 6	-	Facilities
Criterion 7	-	Quality Management Systems
Criterion 8	-	Discipline-based Criteria

The graduate outcomes specified by the MEngC are incorporated within the Knowledge Profile of Washington Accord.

The Academic Programme criteria are primarily employed to determine whether the programme is capable of delivering the specified learning outcomes, supported by the Operating Environment.

Verification that the education programme is producing cohorts of graduates who possess the graduate capabilities is explored by evaluation of samples of assessed work and from group interviews of recent graduates, supported by discussion with students currently engaged in the programme. Satisfaction of the Quality Systems criteria and Operating Environment criteria together provide assurance that delivery of the specified learning outcomes will be maintained through the accreditation period.

For successful accreditation of a programme, all criteria must be satisfied, and all standard must be delivered to at least a threshold level.

Article 8 Enabling Innovation

The MEngC accreditation system encourages innovation by minimising the degree of prescription of how the specified programme outcomes are to be attained. Programme evaluation will always focus on how the Education Provider meets the intent of the criteria and on the demonstrated capabilities of graduates as they are prepared to enter engineering practice in the relevant occupational category.

A programme that departs radically from the educational methods or resources normally found necessary – for example, by employing only a fraction of the normal complement of staff – may expect a searching examination of its approach, as well as the programme outcomes. The Accreditation Board and its evaluation panels are required to be both receptive to new approaches, and to use the best judgment available to evaluate their substance and merit.

Continuing innovation and development can be expected to lead to revision of the Accreditation Criteria, Competency Standards and Accreditation Policy from time to time.

Article 9 Promoting Best Practice

Accreditation acts in a general way to promote best practice, through the exposure and experiences of Board and Panel members with developments nationally and internationally both in industry and academia.

MEngC strongly encourages Technological Universities and Colleges to share innovations and developments in good practice by all available means, including dissemination via Academic Board of HEs, and by publication through the EEAC of MEngC publications, conferences and other opportunities.

Accreditation reports are confidential between MEngC and the education provider, so it is not appropriate for MEngC to publish these, nor even to publish an excerpt with the permission of the provider, as this might imply a form of ranking.

Chapter 3 Authorities, Responsibilities and Provisions

Article 10 Accreditation Board

The Accreditation Board is established by the EEAC to administer the accreditation principles, standards and procedures of EEAC governing accreditation, on behalf of the profession of engineering.

The authorities and specific responsibilities of the EEAC are defined in a Terms of Reference document. This is determined by the EEAC, and may be amended from time to

time. The Accreditation Board is empowered to establish advisory committees and processes on relevant matters, including risk assessment of an Education Provider.

The Accreditation Board comprises senior independent experts from industry and from the education sector. The accreditation board is independent in its decision-making in relation to the accreditation of programmes, but operates in accordance with the policies, procedures and criteria established by EEAC.

Article 11 Evaluation Panels

Evaluation Panels (sometimes also called Accreditation Panels) are established by the MEngC, and approved by the EEAC, to evaluate the higher education or VET programmes offered for accreditation by an Education Provider. They comprise independent Discipline Experts selected from industry and the HE and/or VET sectors; these panel members are trained and briefed by the MEngC.

Evaluation Panels are independent in respect to the formulation of their recommendations for each programme. These include recommendations on accreditation, including any applicable conditions, and recommendations for programme improvement. The Panel prepares a report on its findings for consideration and decision by Accreditation Board. This report is then released to the Education Provider.

The Evaluation Panel identifies any criteria for which the Education Provider is at higher risk than is typical.

Evaluation Panels operate in strict accordance with the policies, procedures and criteria established by EEAC.

Article 12 Engineering Education Accreditation Committee

The EEAC is the organisational unit within MEngC that provides operational support to the whole function of programme accreditation. This includes formation and briefing of Evaluation Panels, accreditation visit scheduling and planning, accreditation visit logistics, reporting and Secretariat to the Accreditation Board, and communication of accreditation decisions to Education Providers.

The EEAC maintains a five-year schedule for General Reviews of established providers.

The EEAC also manages MEngC’s interfaces with the international education accords pertaining to programme accreditation.

Article 13 Education Provider

Education Providers may request accreditation of their engineering education programmes that prepare students for entry to the engineering profession. These programmes must have met the relevant HE or VET requirements for offering to prospective students. The EEAC works with established Education Providers to schedule the General Reviews of their currently accredited programmes.

Education Providers should inform the EEAC when programmes in Provisional Accreditation status have produced graduates.

In requesting and accepting the benefits of accreditation, the Education Provider undertakes to comply with the accreditation policies and procedures of EEAC. The Education Provider must supply verifiable information against which the applicable accreditation criteria can be evaluated, and provide access to staff, students, graduates and other stakeholders. The Education Provider also commits to maintaining the accreditation baseline throughout the accreditation period (usually five years). Accordingly, they must inform the EEAC of any changes to an accredited programme or its environment that may risk its compliance during the published period of accreditation.

An Education Provider must not attempt to influence the decisions of an Evaluation Panel or the Accreditation Board, other than through the proper means of provision of information in support of a request for accreditation.

Each Education Provider will pay a fee for accreditation services, and for other costs as may be incurred by the EEAC.

Article 14 Publication of Accreditation Status

MEngC maintains a list of accredited programmes, regularly updated on its website. This list includes and identifies programmes for which Full or Provisional Accreditation has been granted, pending evaluation after the programme has graduated one or more cohorts of students or learners. Each listed programme is assigned an accreditation start date, being the earliest year of commencement for which students will be deemed to have graduated from an accredited programme. This will often, but not always correspond to the first year of intake to a new programme.

The term of accreditation of current programmes is not published, but normally runs to the first intake of students for the year following the scheduled year of the next General Review. This extension is provided as a safeguard against possible processing delays in concluding the General Review cycle.

For discontinued programmes, EEAC will publish a terminating year for accreditation of the programme.

Education Providers are encouraged to publicise statements to the effect that their programmes are accredited by EEAC. The Education Provider must represent the accreditation status of each accredited programme accurately and without ambiguity. The Education Provider may not imply that a programme has been accredited by EEAC under any criteria except those against which it has been specifically evaluated. The Education Provider must avoid statements that allow a reader to infer that certain programmes are accredited by EEAC where it is not the case.

Authorisation to use the MEngC logo is limited to certain conditions, is not granted simply on achievement of an accredited programme and must be requested in writing. Unauthorised use of the MEngC logo is prohibited.

Article 15 Conflict of Interest

Membership of the Accreditation Board, Accreditation Panels, advisory and appeal committees inherently creates situations that may result in conflicts of interest or raise questions about the objectivity of the accreditation policy and processes. All members are expected to be constantly alert to this possibility, to disclose any real or perceived conflict of interest, to withdraw from any situation or activity that may constitute such a conflict, and generally to conduct themselves in accordance with the MEngC Code of Ethics.

Potential conflicts of interest can arise from the following:

a) A close family member being currently employed or enrolled at the education provider
b) Current enrolment or recent graduation from the education provider
c) Current or recent employment, or negotiations for employment, at the education provider
d) Award of an honorary degree by the education provider
e) An unpaid official relationship with the education provider, for example, membership of an industry advisory board, or an honorary or adjunct appointment
f) Any other reason that may result in perceptions of partiality in decision-making

Article 16 Confidentiality of Information

Panel members, members of the Accreditation Board and EEAC Officers are required to steadfastly honour the confidentiality of information gleaned from submitted documentation and through discussions with staff from educational providers.

Accreditation visit reports are confidential between EEAC and the Education Provider concerned, and should not be published without prior permission of both parties. Publication of excerpts are specifically not authorised. Where an Accreditation visit report is required to be disclosed to a third party for any reason, it should be reproduced in full, and both EEAC and the Education Provider concerned should be notified.

Article 17 Appeals

An Education Provider may appeal against a decision not to accord accreditation. The appeal must be made in writing to the Chairman of EEAC, within two weeks of receiving the decision, and must state the grounds on which it is based. Grounds for appeal are normally limited to errors of fact or breach of the Policy, Criteria and/or Procedures as defined in the applicable documents of the Accreditation Management System. The Management Board of EEAC will appoint a sub-committee to consider the matter and, if appropriate, conduct a further evaluation visit. Following the report of the sub-committee, the decision of the Management Board is final.

Article 18 Complaints

Complaints from any source pertaining to the granting or continuation of accreditation of a programme, including from students, can be lodged with the Accreditation Board. Anonymous complaints will not be accepted, although the identity of the complainant will be maintained as confidential to the Board.

Article 19 Investigation of Concerns

If the Accreditation Board has good reason to believe that a programme previously accredited no longer meets the criteria, it may notify the Education Provider of the reason/s for its concern and request a formal response. If the response is not considered adequate, the Accreditation Board may appoint an evaluation panel to visit the Education Provider and investigate the situation. If the panel is not satisfied, it will prepare a report recommending that accreditation be discontinued, with reasons. The Accreditation Board will forward the report to the Education Provider and invite further response, normally within 6 weeks. If the response is not satisfactory, accreditation will be discontinued.

In such case the Education Provider may appeal to the EEAC of MEngC as outlined in the Appeals section of this document. In considering such an appeal the EEAC would not normally schedule a further visit, and would confine its consideration to issues of fact and process.

Chapter 4 Risk Management in Accreditation

Article 20 Background

Outcomes-based accreditation has developed in synergy with modern risk based regulatory frameworks for education and training. Risk based frameworks are intended to enable innovation in education and learning, while minimising the non-productive aspects of regulation.

The accreditation environment is evolving due to, amongst other factors, programme innovations encouraged by outcomes-based accreditation, new entrants to both the higher education and VET sectors, as well as the internationalization of education. The national and global education environment is increasingly open, and the rate of change is anticipated to increase in the foreseeable future as increasingly competitive education markets intersect with a greater appetite to employ technology in the delivery of educational products. Change is occurring across the engineering education and training sectors in Australia, in both public and private provider groups; it is also occurring globally, at a somewhat uneven pace. Inevitably, change is accompanied by an expansion of the risk profiles associated with these developments. It will be important for accreditation agencies to be prepared for these changes.

A proportionate risk management policy is required to address the changing risk environment, encouraging innovation in education and learning while continuing to meet its continuing obligations to all stakeholders.

Article 21 The Nature of Accreditation Risk

Accreditation risk associated with educational innovation is the likelihood of the accreditation process:

- failing to accredit an innovative but otherwise sound educational programme with good outcomes, or
- accrediting an innovative programme that does not actually meet the required standards

The latter case represents a serious professional risk for the accrediting organisation and society at large. The former case questions the validity and currency of the accreditation processes.

The evolution of accreditation criteria will often lag innovation in programme design and delivery, and if so, will lag change in the risk environment. Also, in an open environment it is not possible to foresee all possible risk scenarios.

The possibly disruptive nature of educational change (including educational technology and information resourcing), and the inevitable lag in the development of the tools of accreditation, requires a sophisticated approach to risk identification and management in the accreditation process.

The expanded risk profiles inherent in innovation and change may not continue to be adequately managed by a simple application of the outcomes-based approach. Risk management in accreditation policy and practice should allow educational innovation while limiting the extremities of risky practices.

The level and impact of the second type of risk referred to above is likely to be higher for programmes leading to the occupation of Professional Engineer, as compared with those for entry to practice as Engineering Associate and Engineering Technologist. For future practice as a Professional Engineer, the wide scope of accountability requires greater scrutiny of educational risk in the accreditation process. Complex socio-technical systems, characteristic of the modern engineering task, assume an education that provides theoretical and conceptual underpinnings in conjunction with a sound appreciation of the social context. Accreditation experience suggests that this breadth may be omitted by education programmes with the higher risk profiles.

MEngC has been a leading participant in the adoption of outcomes-based accreditation, encouraging innovations that improve education and vocational outcomes. MEngC is also conscious that the consequences of failure of a programme can be catastrophic for some stakeholders, including students and the community if the programme fails to meet the necessary occupational capability outcomes. The policy on risk management remains reliant on outcomes-based assessments, but with a tightened focus on risk items that are assessed as being critically important to the success of education programmes.

Article 22 Policy on Risk Management

With these factors in mind, EEAC will:

a) Apply outcomes-based accreditation in the accepted and expected manner

b) Apply enhanced evidentiary requirements to criteria identified as higher risk during review by the Evaluation Panel

c) Determine, in consultation with the Evaluation Panel, whether the risks require further analysis by a Risk Panel

d) Convene a Risk Panel to conduct a risk assessment of major risk items identified by the Evaluation Panel

e) Apply a prescriptive risk management approach to risk items that are determined by the Risk Panel to warrant such measures

f) Determine an appropriate risk mitigation strategy such as:

i. Place limiting mandatory reporting requirements when according accreditation, if warranted by the risk assessment

ii. Accord accreditation for limited durations (less than five years) if warranted by the risk assessment

The Accreditation Board reserves the right to determine an appropriate response to any significant risks or weaknesses identified by the Risk Panel following the outcomes-based accreditation review process.

Myanmar Engineering Council

Engineering Education Accreditation Committee (EEAC)

Policies for Accreditation of Programmes

Article 1: In accordance with Article 20 of the Myanmar Engineering Council Regulations, the Accreditation Committee has prescribed the Policies for Accreditation of Programme for the purpose of planning and execution of accreditation.

Article 2: Accreditation Committee stipulates this document and the corresponding accreditation criteria to govern all procedures of accreditation.

Article 3: Accreditation is intended to evaluate bachelor degree-granting programmes at universities and colleges recognized by the Ministry of Education.

Article 4: Accreditation Committee establishes a five-year cycle of scheduled reviews for each programme, and the review types are general reviews, interim reviews, subsequent review for action pending programmes, and subsequent review for provisionally accredited programmes. General reviews must be conducted for each accredited programme at intervals no longer than five years for continuous accreditation, whereas the interim reviews, subsequent review for action pending programmes, and subsequent review for provisionally accredited programmes are follow-up reviews on the improvement made of the shortcomings observed from the last general review.

Article 5: The accreditation Committee shall be responsible for planning and implementing annual accreditation timetables and for prescribing the Procedures for Accreditation of Programmes. Such procedures shall reflect all requirements for accreditation criteria and shall specify the details of the following major phases:

a. Registration: Describe procedures for publishing of accreditation policies, procedures and criteria, processing registrations, forming evaluation teams, etc.
b. Review and on-site visit: Describe procedures for reviewing self-assessment report, preparing for on-site visits, conducting on-site visits, etc.
c. Accreditation decision-making: Describe procedures for drafting accreditation reports, voting and disseminating accreditation decisions, and appealing over the accreditation decisions, etc.
d. Annual Continuous Improvement Report: Describe requirements with respect to the continuous improvement actions taken by accredited programmes.
e. Interim review of conditionally accredited Programmes: Describe procedures of interim review of conditionally accredited programmes.

f. Subsequent review for action pending programmes: Describe review procedures for programmes that receive Action Pending in the last general review.

g. Subsequent review for provisionally accredited programmes: Describe review procedures required for provisionally accredited programmes after the first class of graduates are produced.

h. Name change: Describe procedures required for an accredited programme that undergoes name change.

Article 6: Accreditation may result in one of the following actions:

a. Accredited:

1. Next General Review: The accreditation is effective for five years cycle.
2. Interim Review (3 years): The accreditation is effective for three years. The accredited programme must submit interim review report and undergo on-site review as basis for consideration of effective period extension.
3. Interim Review (1 year): For programme undergoing second cycle and beyond, if its self-assessment report and the supporting evidences are inadequate but does prove to have achieved the educational objectives and continuous improvement during the on–site visit, it is to be accredited for one year with a new self-assessment report and revisit due the following year with a possibility of extending the accreditation action period of two years maximum.
4. Provisionally Accredited: This action applies to newly established programmes that have yet to produce the first class of graduates if all deemed appropriate.

The programme must notify the Accreditation Committee within three months when the first class of graduates will be produced. The accreditation action will be issued after review of documents on student outcomes.

b. Action Pending: Programmes apply for accreditation for the first time and fail to be accredited due to insufficient supporting documents. Such programmes are able to request for subsequent review within two years. Programmes would only be given this decision once per accreditation cycle.

c. Not to Accredit: Accreditation Committee shall notify only the programme under review of this decision without public disclosure. A “not-to accredit” programme may submit a new request for evaluation a year later.

Article 7: All personnel of the Accreditation Committee shall strictly abide by the conflict of interest principles and shall assume the obligation of keeping all accreditation documents and their contents confidential. Where necessary, Committee of the

Accreditation Committee may stipulate regulations relating to issues of conflicts of interest and confidentiality.

Article 8: Accreditation fees shall be charged separately as the following three types:

a. Registration Fee: Covers the administration, preliminary reviews, and related matters.

b. Review and On-site Fees: Covers the execution of the review, including costs for administration, document reviews, on-site visits, and related matters.

c. Annual Accreditation Maintenance Fee: Covers the maintenance of records, including the annual fees with the international accords administration, record storage, quality control, and related matters.

Article 9: This document and any revisions thereto shall be approved by Accreditation Committee and promulgated for implementation upon approval of the Accreditation Committee Chairman.

Myanmar Engineering Council

Engineering Education Accreditation Committee (EEAC)

Policies and Procedures for Appeal

Chapter 1 General Provisions

Article 1: To ensure the rights and welfare of universities and programmes seeking accreditation, the Accreditation Committee of the MEngC Appeal and Review Committee (hereafter referred to as the Committee) to formulate the Policies and Procedures for Appeal according to Article 20(b)-5 of the Myanmar Engineering Council Regulations.

Chapter 2 Request for Appeal

Article 2: Programme that receives a "Not to Accredit" action could appeal to the Committee within two weeks upon receiving the Accreditation Decision Statement.

Article 3: The Committee will only accept request for appeal for the following two reasons:

a. Errors in Procedure: This means that members of the accreditation team violate the policies and procedures for accreditation during the review process.

b. Errors in Fact: This means that data or other information cited by the accreditation team are incorrect and therefore result in a "Not to Accredit" action. Should the incorrect data and information were indeed provided by the programme, the programme could not request for appeal.

Article 4: Should programme intent to request for an appeal, it must fill out an appeal application form, pay the associated fees, and submit the application with an official stamp of approval by its university.

Chapter 3 Appeal Procedures and Decision

Article 5: The Committee will call for a committee meeting within one month of receiving an appeal application to review the case.

Article 6: After the committee review meeting, the Registrar shall assist to furnish an "Appeal Decision Statement" and send it to the university under review on behalf of the Accreditation Committee.

Article 7: Contents of the "Appeal Decision Statement" must address appeal causes, facts finding, appeal process, basis for appeal decision, and appeal decision, etc. There are two kinds of appeal decisions: "Appeal Established" and "Appeal Denied."

Article 8: The appeal process remains confidential. If necessary, the accreditation team convener, chair, programme evaluators, and representatives of the programme may be invited to be interviewed or to provide written statements.

Article 9: When the appeal is denied, the concerned programme may not appeal again during the same accreditation cycle.

Chapter 4 Execution of the Appeal Decision

Article 10: When an appeal is established, the accreditation committee must appoint an accreditation team to re-review the programme according to the "Appeal Decision Statement" and hold an accreditation action meeting to deliver the accreditation decision.

Article 11: Number of newly appointed accreditation team members is not limited by the Procedures for Accreditation of Programmes, but must not be all from the original accreditation team. Concerned programme may submit names of individuals from the original accreditation team to be avoided.

Article 12: Procedure of the re-review must abide by the Procedures for Accreditation of Programmes.

Article 13: After the accreditation committee delivers the accreditation decision, the Office of the Executive Director will assist to furnish an "Appeal Execution Decision Statement" and send it to the university on behalf of the Accreditation Committee.

Article 14: Contents of The Appeal Execution Decision Statement must include processes, findings and decisions of the re-review, etc.

Chapter 5 Supplementary Provisions

Article 15: Fee schedule for the appeal, including registration fee, re-visit fee, and other related fees, is stipulated separately from the standard accreditation fee schedule.

Article 16: Members of the Committee must abide by the policies on confidentiality and voluntary excuse themselves should there is potential conflict of interest.

Article 17: This document and any revision thereto shall be prepared by the Committee and promulgated for implementation upon approval of the Accreditation Committee.

Myanmar Engineering Council

Engineering Education Accreditation Committee (EEAC)

Procedures for Accreditation of Programmes

Article 1: Myanmar Engineering Council authorizes the accreditation committee to establish this document in accordance with Article 3 of Policies for Accreditation of Programmes to govern all matters concerning accreditation of programmes.

Chapter 1 Registration

Article 2: Accreditation Committee promulgates accreditation timetable and related documents annually on the MEngC website: www.myanmarengc.org

Article 3: Accreditation Registration

a. A programme seeking accreditation must submit completed Request for Evaluation Form approved by its university to Accreditation Committee before the deadline.

b. A programme seeking accreditation shall identify the kind of bachelor degree(s). An application for combined review of the bachelor's and beyond degrees programmes may include only one bachelor's and one beyond degree programme with the same chair and with no separate funding. Additional programmes must apply separately and will be charged for additional fees.

c. Once the request for accreditation is accepted, Accreditation Committee will issue official notice by mail stating the deadlines for submitting further documents and the date of the on-site visit. The programme must then submit a Self-Assessment Report and the on-site visit fee by deadline and prepare for the on-site visit.

d. Newly established programmes that have yet to produce the first class of graduates may also request for accreditation.

Article 4: Accreditation Team and Editors

a. Upon agreeing the request for accreditation, chair of the accreditation committee shall nominate the accreditation team which is composed of one team chair and additional one to four programme evaluators and who have expertise in the professional domain of the programme. Should there be two or more programmes from one university seeking accreditation during the same academic

year; the Accreditation Committee chair will nominate an accreditation team convener to coordinate the consistencies among the teams. In special cases, the number of programme evaluators in a team may be exempted from the restrictions above.

b. Registrar shall assign a liaison to each university with administrative matters.

c. To ensure consistency in accreditation actions, the accreditation committee members shall serve as editors to proofread drafts of the Accreditation Findings Statement and Accreditation Action Recommendation. Consensuses between the accreditation team and editor must be reached on the wording and/or actions in the documents.

Chapter 2 Document Review and On-site Visit

Article 5: Review of the Self-Assessment Report

a. Registrar will verify receive of the associated documents and forward the Self-Assessment Report to the accreditation team for review.

b. Members of the accreditation team shall submit preliminary review findings on the Self-Assessment Report to the team chair prior to the on-site visit.

c. Having reviewed the Self-Assessment Report, the accreditation team may request for additional information to be presented upon the on-site visit.

Article 6: Preparation for On-site Visit

a. Registrar shall notify the programme by mail with the listing of the accreditation team members two weeks before the on-site visit and assist in the process of finalizing the on-site visit itinerary and list of interviewees.

b. The programme must display supporting documents during the on-site visit to support its Self-Assessment Report and to demonstrate its compliance with the accreditation criteria.

c. Registrar is responsible for the arrangement and expense of the accreditation teams associated with the accreditation visit.

Article 7: Accreditation Visit

a. The accreditation team and the programme under review must discreetly follow the on-site visit Itinerary during the review process.

b. The accreditation team must convene for a pre-departure meeting the night before the on-site visit to review findings from the Self-Assessment Report and reach consensus on the key issues to be investigated.

c. The accreditation team members must compile collaboratively the Exit Interview Statement during the on-site visit and to announce it at the end of the visit. The programme under review, in return, must reply with the Response to Exit Interview Statement within two weeks from the end of the on-site visit.

d. The programme under review must ensure that all unrelated personnel not interfering the on-site visit. It must also ban all forms of activities that may disrupt the visit, including but not limited to sound recording, videotaping, photographing, and note-taking. Both the accreditation team and the programme under review must abide by the conflict of interest principles, avoiding all forms of improper reception, gifts, and lobbying.

More specifically, the key functions of the campus visit are to:

• Assess and discuss the effectiveness of the academic programme management system and quality assurance processes described in the Self-study Report

• Evaluate the tone and calibre of the staff, students and graduates, the educational culture and the scholarship of teaching and learning, the interaction between teaching and research and the linkages with professional engineering practice in industry

• Evaluate the approach to educational design and review, and in particular the engagement of industry and other stakeholder input to these processes

• Evaluate and discuss formative and summative assessment processes by examining support materials, assessment tasks, sample examination scripts and examples of assessed student work, moderation processes

• Evaluate the capacity of the programme to deliver appropriate enabling skills and knowledge, in-depth technical competence, personal and professional skills, engineering application skills, laboratory and practical learning and exposure to professional practice, as defined for each programme

• Assess and discuss aspects of the operating environment described in the Self-study Report – in particular, institutional support for the educational programmes,

the academic staff profile, physical facilities and resources, funding and student profile trends and strategic management

• Evaluate other factors that relate to the accreditation criteria, but are not clearly or adequately presented in the Self-Assessment Report

• Inform the senior officer/s representing the Education Provider of the Team's principal findings. At the conclusion of the visit, the Team Chair outlines the commendations, recommendations on accreditation, and recommendations for improvement that it intends to make to the Accreditation Board. The Team Chair explains that these points are not definitive at this stage, and that the Board will make the decisions on these recommendations and the final form of the report. The EEAC Liaison Officer outlines the likely timing for completion of the draft report.

Chapter 3 Delivery of Accreditation Action

Article 8: Generation of Accreditation Findings Statement and Accreditation Action:

a. The accreditation team chair, on reading the Response to Exit Interview Statement, shall produce a draft of the Accreditation Findings Statement and Accreditation Action Recommendation. These drafts are then proofread by the Editors.

b. The accreditation Committee shall call for an accreditation action meeting upon the finalization of the Accreditation Action Recommendation. After the accreditation action meeting, Registrar shall mail the accreditation action and the Accreditation Findings Statement to the university and copy the programme under review.

Article 9: Publishing of the Accreditation Action:

a. There are three types of accreditation actions: "Accredited," "Action Pending", and "Not to Accredit."

b. The accredited status takes effect from the academic year in which the programme under review is accredited. For example, if a programme requested for accreditation on January 1, 2016, had the on-site visit on November 1st of the same year and was accredited for the duration of five years, then graduates of the programme between the academic years 2016 and 2020 would be recognized by the Accreditation Committee.

c. For provisionally accredited programme, the accredited status will take effect from the academic year when the first class of graduates is produced. The five year period cycle, however, starts with the year when the programme first registered for accreditation.

d. Programme receives Action Pending decision; the accredited status will take effect from the academic year when the programme receives accreditation. The five year period cycle, however, starts with the year when the programme first registered for accreditation.

e. Each programme will be given its own individuals accreditation action. Actions of all programmes under the same department will be listed on the same accreditation certificate.

f. Should a programme receive "Not to Accredit" action and object, it may appeal to the Accreditation Committee according to the Policies and Procedures for Appeals within two weeks of receiving the action.

g. The Accreditation Committee will confer the accreditation certificate and publish the name of the accredited programme on MEngC website and the related media forms upon receiving of the Annual Accreditation Maintenance Fee.

Chapter 4 Annual Continuous Improvement Report

Article 10: Accredited and Provisionally Accredited programmes must submit an Annual Continuous Improvement Report on-line to the Accreditation Committee by July 31st each year. The reports will be taken into consideration in the programme's next review.

Chapter 5 Interim Review

Article 11: Accredited programmes must register with the Accreditation Committee before the specified deadline.

Article 12: The programme must submit the Interim Review Report, which demonstrates the improvement made on the weakness identified from the last review and other areas of continuous improvement.

Article 13: For a programme that must undertake on-site visit, the visit itinerary shall be decided based on the extent of the weakness identified from the last review.

Article 14: After the review, the accreditation Committee shall call for an accreditation action meeting and decide on the date of the next review.

Chapter 6 Action Pending Review

Article 15: Action pending programmes must register with the Accreditation Committee before the specified deadline. The council will decide if additional review fees are needed.

Article 16: The programme must submit the Self-Assessment Report, which demonstrates its compliance with the criteria with sufficient supporting documents and undertake a general review on-site visit.

Chapter 7 Subsequent Review of the Provisionally Accredited Programmes

Article 17: Article 6(a) of the Policies for Accreditation of Programmes stipulates that Provisionally Accredited programmes must issue an official notification through its university to the Accreditation Committee three months before its first class of graduates to be produced.

The Accreditation Committee shall inform the programmes about the structure and requirement of the subsequent review. The programme must submit a report with the following information within two months after the first class of graduates is produced:

Bachelor's degree programme:

1. Evidence of compliance with Accreditation Manual, Qualifying Requirements, Clause -7.0.
2. Evidence of compliance with Accreditation Manual, Programme Educational Objectives, Clause -8.0,
3. Evidence of compliance with Accreditation Manual, Learning Outcomes, Clause -8.1.
4. Evidence of compliance with Accreditation Manual, Accreditation Criteria No.1 to 7, Clause-7.0.
5. Continuous improvement made based on last review.

Chapter 8 Programme Name Change

Article 18: Accredited programmes that underwent name change or reorganization must inform the Accreditation Committee by mail upon obtaining approval from the Ministry of Education. Related documents must be submitted along with the Ministry's approval. Reviews will be conducted to certify that the programme continues to comply with the accreditation criteria.

Article 19: The concerned programme must provide detailed information on changes resulting from the name change or reorganization, e.g. amended educational objectives,

graduate attributes, curriculum design, faculty, and space and facilities, etc. The accreditation team that conducted the last review shall review the submitted documents to verify the programme's accredited status. Should an on-site visit is deemed necessary, the accreditation team shall revisit the programme and after which, reports its findings to the Accreditation Committee for final action. Additional fees may be charged if necessary.

Article 20: If a programme under review has name change during the same semester when the accreditation visit takes place, it must provide both old and new curriculum designs for the accreditation team's reference. If accredited, the certificate will be issued in the new name.

Article 21 Should the name change or reorganization render an accredited programme without graduates under the new programme name, it shall be reviewed as a programme seeking provisional accreditation. Otherwise, it will be considered just as other programme seeking accreditation. Accredited programme with name changing must submit evidence clarifying student curriculum match with the new programme name.

Chapter 9 Supplementary Provision

Article 22 Should an arranged on-site visit be prevented by earthquake, flood, typhoon, or other force majeure circumstances, the Accreditation Committee shall re-schedule the on-site visit. Registrar must notify the accreditation team and the programme under review in due time of the contingency measures.

Article 23 This document and any subsequent amendments thereto shall be approved by the accreditation Committee and promulgated for implementation by the Accreditation Committee Chair.

Myanmar Engineering Council

Engineering Education Accreditation Committee

Procedures for Nomination of Accreditation Team Members and

Role Description of Panel Discipline Evaluator

Article 1 The accreditation committee stipulates this document for the purpose of regulating the qualification and responsibility of the accreditation team convener, chair and programme evaluator. It is drawn up in compliance with Myanmar Engineering Council Regulations and Article 5 of Procedures for Accreditation of Programmes.

Article 2 Programme evaluator must attend at least one MEngC programme evaluator training workshop.

In addition, one of the following qualifications applies depending on the nature of their respective background:

a. Academia: Senior professor, either from Myanmar or abroad.

b. Industry:

1. At least ten years of practical experience in the industry.
2. With experience in administration and management.
3. Non-profit research and development institutes: senior engineer or has held position equivalent to or higher than a section chief.

Article 3 Accreditation team convener and chair must meet at least one of the following qualifications in addition to those stated in Article 2:

a. Having observed an on-site visit, or been a discipline coordinator for a domestic evaluation project.
b. Having held department chair or above position at a university either in Myanmar or abroad and participate the accreditation affairs actively.

Article 4 Accreditation team convener, chair, and programme evaluator are in charge of the actual execution of accreditation reviews; their responsibilities are:

a. Conduct each visit and interview according to the Accreditation Criteria.

b. Participate the on-site visit in its entirety and according to the on-site visit itinerary.

c. Evaluate all supporting document provided by the programme under review.

d. The Exit Interview Statement shall reflect the Programme's actual merits and areas
for improvement; it shall be provided in written form, using language that is fair, reasonable, clear, succinct, and non-emotional, while complying with the MEngC format.

e. Abide scrupulously by the requirements of the Code of Ethics for Accreditation of Programmes.

f. In addition to above, the accreditation team convener is also charged with the following:

1. Serve as representative of the accreditation teams;
2. Gain in-depth understanding of the effectiveness of the administration of the university and the college;
3. Coordinate among the accreditation teams to ensure consistency in the review process and accreditation actions;
4. Compile observation statement about the university and college in the concerned sections in the Accreditation Findings Statement.
5. Chair the pre-departure meeting for the on-site visit.

g. Accreditation team chair is also charged with the following:

1. Serve as the representative of the accreditation team for the programme;
2. Chair the on-site visit of the programme;
3. Compile the Accreditation Findings Statement and Accreditation Action Recommendation.

h. In addition, the accreditation team convener and chair must attend and participate the accreditation action meeting of the academic year they are appointed the position.

Article 5 Role and Responsibilities of Panels While on Site

The campus visit will normally extend over two days and involves all members of the evaluation panel. The key functions of the campus visit are as follows:

- To audit and discuss the effectiveness of the academic management system and quality assurance processes described in the initial documentation
- To evaluate the morale and calibre of the staff and students, the educational culture and the scholarship of teaching and learning, the interaction between teaching and research and the linkage with professional engineering practice in industry

- To evaluate the approach to educational design and review and in particular the engagement of industry and other stakeholder input to these processes
- To evaluate and discuss formative and summative assessment processes by examining support materials, assessment tasks, sample examination scripts, and examples of graded student work, and moderation processes
- To evaluate the capacity of the programme to deliver appropriate enabling skills and knowledge, in depth technical competence, personal and professional skill, engineering application skills, laboratory and practical learning and exposure to professional practice within the generic attribute framework
- To audit and discuss aspects of the operating environment described in the initial documentation – in particular the institutional support for undergraduate engineering education, the academic staff profile, physical facilities and resources, funding and student profile trends and strategic management
- To evaluate other factors, not readily defined in the initial documentation

Article 6 The panel members' actions will be to:

- Become familiar with accreditation criteria, performance indicator and guideline (included in the information folder)
- Carefully read all relevant parts of the submitted documentation in full
- Prior to the visit help identify any shortcoming in information and key issues that need investigation during the visit
- Contribute to formal visit planning, including identifying issues and proposed questioning strategies
- Carefully craft questions to be put to various stakeholders on site, using triangular and other strategies to holistically establish compliance with accreditation criteria
- Record notes of salient matters that can contribute to forming conclusions and reporting against accreditation criteria
- Respond promptly to the draft report with suggestions, addition and amendments
- Display appropriate body language and professionalism of conduct during all aspects of the visit

Article 7 Qualified candidates who agree to abide by the above may be nominated by the accreditation Committee chair after signing the Conflict of Interest and Confidentiality Agreement. They shall be appointed on approval by the chair of the Accreditation Committee.

Article 8 This document and any subsequent amendments thereto shall be approved by the accreditation committee and promulgated for implementation by the Accreditation Committee Chair.

Myanmar Engineering Council

Engineering Education Accreditation Committee (EEAC)

Accreditation Criteria

Article 1 Accreditation is an evidence-based evaluation process of education programmes against a set of defined accreditation standards, usually called accreditation criteria. The evaluation process adopted by Engineers Australia uses accreditation criteria to assess the suitability of an education programme to prepare graduates to enter professional practice in engineering.

The evaluation process leads to one of several possible outcomes depending on the status of the programme implementation: Full Accreditation or Conditional Full Accreditation; Provisional Accreditation or Conditional Provisional Accreditation. In addition, the Accreditation Board may defer making a decision on accreditation pending more information or action by the provider, or may decline to accredit the programme. Conditional Accreditation implies that one or more accreditation criterion is not adequately met, and that the provider must provide supplementary information on deficiencies. Provisional Accreditation may be accorded to a programme before it has been completed by any students; the programme will be further evaluated after completion by one or more cohorts. Criteria 1 to 8 apply to bachelor's degree programme.

Criterion 1: Programme Educational Objectives

Article 2 This criterion assesses the programme educational objectives (PEOs) and the validity of such objectives. The programme seeking accreditation must:

1.1 publish detailed PEOs that demonstrate the programme's characteristics and relevance to the contemporary trends and societal demands;

1.2 describe the relationship between the PEOs of the programme and those of the institution, as well as the process of establishing these objectives;

1.3 describe the manner in which the design of the curriculum are consistent with the PEOs;

1.4 institutionalize an effective assessment process to assure the achievement of the PEOs.

Criterion 2: Graduate Attributes and Assessment

Article 4 This criterion assesses the graduate attributes. The programme must demonstrate that students have attained the following outcomes by graduation:

3.1 ability to apply knowledge of mathematics, science, and engineering;

3.2 ability to design and conduct experiments, as well as to analyze and interpret data;

3.3 ability to apply techniques, skills, and modern tools necessary for engineering practice;

3.4 ability to manage project, including budgeting, communicate effectively, work in multi-disciplinary environment, and function on teams;

3.5 ability to identify, formulate, research literature and analyses complex engineering problems reaching substantial conclusions;

3.6 knowledge of contemporary issues; an understanding of the impact of engineering solutions in an environmental, societal, and global context; and the ability and habit to engage in life-long learning;

3.7 apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice, and a sense of respect for diversity.

Criterion 3: Academic Curriculum

Article 5 This criterion assesses the curriculum of the programme:

4.1 Design and content of the curriculum must be consistent with the PEOs and must include at least three major components: mathematics and basic sciences, technical and professional engineering component, and general education. Specifically:

4.1.1 mathematics and basic sciences must account for at least 34 SLT credit hours and total to at least one fourth of the credits required for graduation;

4.1.2 technical and professional component must account for at least 80 SLT credit hours required for graduation including capstone design course;

4.1.3 general education component must account for at least 20 SLT credit hours required for graduation and complement the technical contents of the discipline and be consistent with the PEOs.

4.2 Design and implementation of the curriculum must correlate the development of the industry and prepare students to culminate the learned knowledge and skills in engineering practice.

Criterion 4: Students

Article 3 This criterion assesses the quality of education for students and capacity of the graduates. The programme seeking accreditation must:

2.1 have appropriate regulations that are consistent with the PEOs;

2.2 have measures and policies encouraging students to engage in academic exchange and related learning activities;

2.3 institutionalize an effective advising and assessment system;

2.4 assure that all students fulfill the requirements for graduation.

Criterion 5: Academic and Support Staff

Article 6 This criterion assesses the faculty of the programme with regard to the following:

5.1 The full-time faculty must be of sufficient number;

5.2 The faculty must be involved in the formation and execution process of the PEOs;

5.3 The faculty must have the qualification and competencies to cover the professional knowledge of the subject areas in which they teach;

5.4 The programme must demonstrate the effectiveness of faculty-student interactions and students advising;

5.5 The programme must demonstrate the effectiveness of interactions of the faculty with industry;

5.6 The programme must provide the faculty with appropriate channels and incentives for professional growth and development;

5.7 The faculty must participate in relevant academic and professional organizations and activities.

Criterion 6: Facilities

Article 7 This criterion assesses instructional facilities, space, and hard and software:

6.1 The programme must provide an environment to foster effective faculty-student interaction;

6.2 The programme must provide an environment to support the development of professional knowledge and skills of students;

6.3 The programme must provide enough opportunities and guidance for students to learn the use of specialized equipments and tools;

6.4 Computing and information infrastructure must be in place to support the teaching activities of the programme;

6.5 The programme must provide a safe learning environment and have appropriate system in place to maintain upgrade, and manage these facilities.

Criterion 7: Quality Management System

Article 8 This criterion assesses the institutional support and financial resources of the programme:

7.1 The institution must provide adequate support and financial resources to assure the quality and continuity of the programme, along with constructive leadership and management;

7.2 Resources must be sufficient to support the ongoing professional development of the faculty;

7.3 Administrative personnel and technical staff must be adequate to meet the programme's needs;

7.4 Financial resources must be sufficient to acquire, maintain, and operate the facilities, infrastructure, and equipment appropriate for the programme to support educational needs;

7.5 Demonstrate in a consistent manner that students have attained the graduate attributes by graduation;

7.6 Demonstrate in a consistent manner that planning and implementation of the curriculum must correlate the development of the industry and prepared students for engineering practice;

7.7 Demonstrate in a consistent manner that continuous improvement are attained in other areas.

Criterion 8: Discipline-based Criteria

Article 9 This criterion assesses whether the programme satisfies the criteria stipulated specifically for each discipline, where: all courses and faculty qualifications must be consistent with the respective disciplines; and if a programme encompasses multiple disciplines, it must satisfy the criteria of all respective disciplines.

Myanmar Engineering Council

Engineering Education Accreditation Committee (EEAC)

Timeline for Accreditation

1. 2020 January, Accreditation policies and procedures Published
2. 2020 February, Accreditation Orientation for Institutional Representatives Rectors and Head of Department Forum
3. 2020 February 29, Deadline Request for Accreditation
4. 2020 February 29, Deadline Request for Interim
5. 2020 March, Programme Evaluators workshop
6. 2020 May, Cornerstone, Keystone, Capstone, IDP course workshop
7. 2020 July 31, Deadline for Self-Assessment Report, interim review report, and annual continuous improvement report
8. 2020 August, Accreditation Workshop for New Programme Chair
9. 2020 September Conveners, Team Chairs meetings
10. 2020 October, Accreditation Workshop for New Programme Chair
11. 2020 October, Interim On-site visit
12. 2020 October-December On-site visit
13. 2021 January Editors Meeting
14. 2021 March, Accreditation Decision Meeting
15. 2021 March, Accreditation Decision Published
16. 2021 May, EEAC General Assembly, Accreditation certificate conferment ceremony for 2020-21 accreditation cycle.
17. 2021 July Accreditation Period End

* Specific dates of varies workshops/conferences will be announced at later times.

Myanmar Engineering Council

Engineering Education Accreditation Committee(EEAC)

Accreditation Team Convener

On-Site Visit Schedule Template

For General Review Use

The convener is advised to interview the following institution officials: President (Vice President/Secretary-General), Provost, Dean for Research and Development, and Chair of programme under review

Day 0

Time	Event/Goal	Attendees	Location
18:00-21:00	**Dinner and Preliminary Meeting**	Accreditation Team	Local Hotel

Day 1

Time	Event/Goal	Attendees	Location
09:00-09:30	**Presentation by Institution Administrators**	List provided by the programme, including institution administrators, programme chairs, and faculty	Provided by the programme
09:30 – 09:50	Traveling time to the meeting spot		
09:50 – 10:20	**Interview with the Institution Administrator 1**	List provided by the programme	Provided by the programme
10:20 – 11:00	Break		
11:00 – 11:30	**Interview with the Institution Administrator 2**	List provided by the programme	Provided by the programme
11:30 – 13:00	Lunch		
13:00 – 14:00	**Tour Computing Center, Library, etc…**	List provided by the programme, including Facility managers	Provided by the programme
14:00 – 14:30	Break		

14:30 – 15:30	**Confirming the List of Questions for the Institution Administrators**	Convener and team liaison	Provided by the programme
15:30 – 16:00	Break		
16:00 – 16:40	**Interview with the Institution Administrator 3**	List provided by the programme	Provided by the programme

Day 2

Time	Event/Goal	Attendees	Location
09:00 – 10:00	**Meeting with the Institution Administrators** Discussion with institution on topic of administration and funding	List provided by the programme, including institution administrators, programme chairs, and faculty	Provided by the programme
10:00 – 10:20	Traveling time to the meeting spot		
10:20 – 11:50	**Interview with the Institution Administrator 4**	List provided by the programme	Provided by the programme
10:50 – 11:10	Break		
11:10 – 12:10	**Visit to Teaching Facilities and Campus Tour**	List provided by the programme, including Facility managers	Provided by the programme
12:10 – 13:30	Lunch		
13:30 – 15:00	**Lunch and Accreditation Team conference** Discussion on consistency of the Exit Statements	Accreditation Team	Provided by the programme
15:00~	**Announcement of the Exit Statement** Team chair announces the Exit statement	List provided by the programme, including institution administrators, programme chairs, and faculty	Provided by the programme

Myanmar Engineering Council

Engineering Education Accreditation Committee(EEAC)

On-Site Visit Schedule Template

For General Review Use

Day 0

Time	Event/Goal	Attendees	Location
18:00 – 21:30	**Dinner and Preliminary Meeting** Topic: (1) Reviews on the self-assessment report (2) Workload distribution and triangulation questions (3) Discussion on grouping of alumni,industry representatives, and students interviews.	Accreditation Team	Local Hotel

Day 1

Time	Event/Goal	Attendees	Location
09:00 – 09:30	**Presentation by Institution Administrators** An overview of the institution	List provided by the programme, including institution administrators, programme chairs, and faculty	Provided by the programme
09:30 – 09:45	Traveling time to the meeting spot		
09:45 – 10:15	**Presentation by Chair of the Programme** An overview of the programme and additional comments on the Self-Assessment Report	List provided by the programme, Including programme chair and faculty	Provided by the programme
10:15 – 11:00	**Meeting with the Programme Faculty** Questions on the Self-Assessment Report from the accreditation team	List provided by the programme, Including programme chair and faculty	Provided by the programme

11:00 – 11:10	Break		
11:10 – 11:50	**Interview with Alumni on** Performance of the graduates	5 Alumni Attendee list provided by the programme	Provided by the programme
11:50 – 12:30	**Interview with Industry Representatives on** The partnership between the programme and industry	5 Alumni Attendee list provided by the programme	Provided by the programme
12:30 – 13:00	Lunch	Accreditation Team	Provided by the programme
13:00 – 13:20	**Drafting the Questions for the Institution Administrators**	Accreditation Team	
13:20 – 14:40	**Inspections and Reviews** **Documents on Display** Discussion of Self-Assessment Report supporting evidence	Accreditation Team	
14:40 – 15:40	**Facilities and Space Study** Assessment on teaching resource and environment. Labs, libraries, etc…	Programme chair, lab managers, and technicians. Attendees provided by the programme	Provided by the programme
15:40 – 15:50	Break		
15:50 – 17:00	**Interview with Students** Assessment on student outcomes	No more than 30 Students Attendees provided by the programme	Provided by the programme
17:00 – 18:00	Return to Hotel		
18:00 – 22:00	**Dinner and Winding-up Meeting -** (1) Exchanges of finding (2) Drafting Exit Statement (3) Discussion on consistency of the Exit Statements	Accreditation Team	Local Hotel

Notices: The attendees and purpose of the Interview or inspection period is and should be as follows:

1. Alumni (5 people) should be graduates from the department within the past 10 years. The majority of the interviewees should be graduates of the bachelor's programme. No more than one interviewee should be graduate of the post baccalaureate programme
2. Industry representatives (5 people) who are the employers, businessmen, education advisers, and of education-industry partnership background with employer relationship with graduate of the programme
3. For interview with students (20 undergraduate students) (must have 3 students from continuing education programme if such programme is reviewed) by years, genders, grades (high middle, low). For combined department, (30 students) (must have 3 students from continuing education programme if such programme is reviewed). For independent graduate programme, select 15 students (must have 3 students from continuing education programme if such programme reviewed). Five interviewee slots be with first year students.

Day 2

Time	Event/Goal	Attendees	Location
09:00 – 10:00	**Meeting with Institution Administrators** Discussion on the administration and funding	List provided by the institution Institution Administrators ONLY	Provided by the programme
10:00 – 10:15	Traveling time to the meeting spot		
10:15 – 11:15	**Interview on Faculty** Discuss in-depth on curriculum design and student outcomes	Attendee list provided by the programme Faculty ONLY	Provided by the programme
11:15 – 12:00	**Inspections and reviews of Documents** **Display of** Discussion of Self-Assessment Report supporting evidence	Accreditation Team	Provided by the programme
12:00 – 12:30	**Exist Interview with Chair of the Programme** Final clarification on issues	Programme Chair	Provided by the programme
12:30 – 13:00	Lunch		Provided by the programme
13:00 – 15:00	**Accreditation Team Meeting** Discussion on consistency of Exit Statements	Accreditation Team	Provided by the programme
15:00 ~	**Announcement of the Exit Statement** Team chair announces the Exit Statement	List provided by the programme, including institution administrators, programme chairs, and faculty	Provided by the programme

Myanmar Engineering Council

Engineering Education Accreditation Committee(EEAC)

On-Site Visit Schedule Template

For Interim Review Use

Interim review guidelines:

1. Please provide the following records and data: (1) Official presentation of the institution, (2) Records and results of alumni and industry representatives' feedback, (3) List of changes in equipment and facility.
2. Accreditation team will choose three events among the following to be carried out during the on-site visit: (1) Interview alumni, (2) Interview industry representatives, (3) Tour facilities and space, (4) Interview students, (5) Interview faculty, and (6) Inspection and review of documents on display.

Day 0

Time	Event/Goal	Attendees	Location
18:00 – 21:00	**Dinner and Pre-departure Meeting** Topic: (1) Reviews on the Self-study Report (2) Workload distribution and triangulation questions	Accreditation Team	Local Hotel

Day 1

Time	Event/Goal	Attendees	Location
09:00 – 09:30	**Presentation by Chair of the Programme** Responses to the previous accreditation action and steps taken in continuing improvement by the programme. Further information to support the Self-study Report	*List provided by the programme, including programme chair and faculty*	Provided by the programme
09:30 – 10:20	**Meeting with the Programme Faculty** (1)Questions on the Self-study Report from the accreditation team (2)Topics on the programme's planning and outcome	*List provided by the programme, including programme chair and faculty*	Provided by the programme

10:20 – 10:30	Break Time		
10:30 – 11:10	**Interview/Tour period 1**	*List provided by the programme*	Provided by the programme
11:10 – 11:50	**Interview/Tour period 2**	*List provided by the programme*	Provided by the programme
11:50 – 12:30	**Interview/Tour period 3**	*List provided by the programme*	
12:30 – 13:00	Lunch	Accreditation Team	
13:00 – 14:00	**Inspections and Reviews Documents on Display** Discussion of Self-study Report supporting evidence	Accreditation Team	
14:00 – 14:30	**Exist Interview with Chair of the Programme** Final clarification on issues	*Programme Chair*	Provided by the programme
14:30 – 16:00	**Accreditation Team Meeting** Drafting the Exit Statement	Accreditation Team	Provided by the programme
16:00~	**Announcement of the Exit Statement** Team chair announces the Exit Statement	*List provided by the programme, including programme chair and faculty*	Provided by the programme

Notices: The attendees and purpose of the interview or tour period is and should be as followed:

1. Alumni (5 people) should be graduates from the department within the past 10 years. The majority of the interviewees should be graduates of the bachelor's programme. No more than one interviewee should be graduate of the post baccalaureate programme
2. Industry representatives (5 people) cannot be alumni. They are to be employers, businessmen, education advisers, and of education-industry partnership background with employer relationship with graduate of the programme.
3. Tour facilities and space is to be carried out for the purpose of understanding their usage by and support to and from the programme.

4. For interview with students please have the department select 20 students (must have 3 students from continuing education programme if such programme is reviewed) by years, genders, grades (high, middle, low) for the undergraduates. For combined department please have the programme select 30 students (must have 3 students from continuing education programme if such programme is reviewed). For independent graduate programme, please have the programme select 15 students (must have 3 students from continuing education programme if such programme reviewed). Five interviewee slots be first year students is recommended.
5. Interview with faculty is to gain insight to the course design and graduate attributes. Please have the programme provide a list of attendees. The attendees should be those with no teaching commitment during the subject hour.

1. Attachment 1: Alumni attendees

#	Name	Employer	Title	Graduation Year
1				
2				
3				
4				
5				

2. Attachment 2: Industry representative attendees

#	Name	Employer	Title	Graduation Year
1				
2				
3				
4				
5				

3. Attachment 3: Tour labs, offices, library, etc…

＊List can be expanded if needed

Events	Facility name	Facility manager	Location

4. Attachment 4: Student attendees

*List can be expanded if needed

#	Name	Year	Class	Student ID#	Gender	Class Rank/Grade
1						
2						
3						
4						
5						

Note: For first year undergraduate and graduate students please provide methods of enrollment.

5. Attachment 5: Faculty attendees

*List can be expanded if needed

#	Faculty Name	Title	#	Faculty Name	Title

Myanmar Engineering Council

Engineering Education Accreditation Committee (EEAC)

Accreditation Fee Schedule

Article (1) This document is drawn up by the Accreditation Committee in compliance with Article 8 of Policies for Accreditation of Programmes.

Article (2) There are three types of accreditation fees: Registration Fee, Review fee, and Annual Accreditation Maintenance fee. For interim review, the Accreditation Committee shall not charge additional Registration fees.

Article (3) The Registration Fee and the Annual Maintenance Fee will be charged by department whereas the Review Fee will be charged by the number of programme under the same department. Programme that applies for accreditation in different year from the other programmes under the same department may be charged for additional fees.

Article (4) Accreditation Fee shall be received in Myanmar Kyats. Please note that all local transfer fees are to be paid by the sender. The fee rate is stated in the schedule of Fees.

Article (5) Accreditation Fee shall be paid before the deadline .One percent penalty on the total fees will be added for delays every 7 days.

Article (6) Methods of payment:

I. Check: address to Myanmar Engineering Council

II. Post transfer, account :(……..), payment to: Myanmar Engineering Council.

III. Bank transfer, account: (……), payment to: Myanmar Engineering Council,

Article (7) For cancellation of accreditation within 7 days of payment, 50% of the Accreditation Fees will be refunded .No refund will be made beyond the 7^{th} days.

Article (8) Accreditation programme is required to pay Accreditation Maintenance Fee according to the length of accredited period. EEAC reserves the right to withdraw the accredited status if payment is not made in due time.

Article (9) Programme within the accredited status wishes to register for a change in accreditation criteria will be subject to a documentation review and K 450,000 fee.

Article (10) Programme maintaining multiple accreditation status will be required to pay Annual Accreditation Maintenance fee in full according to the length of accredited status.

Article (11) Programme applies for an appeal shall pay an appeal fee of Kyats 850,000.

Article (12) Programme applies for re-issuing the accreditation certificate shall pay a fee of K100,000 Certificate will only be reissued once per accredited period.

Article (13) Any fee not covered by the above procedures, the Accreditation Committee will refer to Policies for Accreditation of Programmes for ruling.

Article (14) Any revisions of this schedule shall be published on the MEngC website. The Accreditation Committee will invoice the programme with attachment of revised fee schedule.

Article (15) This document and any subsequent amendments thereto shall be approved by the Accreditation Committee and promulgated for implementation by the Accreditation Committee Chair.

Attach: Schedule of Fees

Fee Type	**Fee**		**Charge (kyats)**
General Review (Provisionally Accredited/ Full Accredited)	Registration Fee		250,000
	Review Fee	Programme Base Fee	2,150,000
	Annual Accreditation Maintenance fee (Per year)	Accredited	200,000
		Provisionally Accredited	100,000
Follow Up Review	Revisit Visit Fee(Per Trip)	Action Pending	850,000
		Provisionally Accredited	850,000
		Interim Visit	1,075,000
Appeal	Appeal Fee		850,000
Changes in Criteria	Document Review Fee		450,000
Certificate Reissue	Certificate Reissue - Fee		100,000

Notes: 1. A programme's Review Fee will be based on the number of programme. The maximum fee includes Registration Fee, Review Fee, and Annual Accreditation Maintenance Fee for programmes within the same department in the same period.

2. Annual Accreditation Maintenance Fee shall be paid in full on the valid accredited period engineering is to be accredited for 3 years. The department is required to pay the Annual Accreditation Maintenance Fee of 600,000 kyats in full.

3. A Programme for foreign University which delivers in Myanmar will be –

Registration Fee	-	450 USD
Review Fee	-	3900 USD
Annual Accreditation Maintenance Fee (Per year)		
Accredited	-	300 USD

Myanmar Engineering Council

Engineering Education Accreditation Committee (EEAC)

Guidelines for Accreditation

Programmes request for accreditation must follow Myanmar Engineering Council, Accreditation Committee "Accreditation Manual".

Applying for Accreditation

1. EEAC is to accredit programmes that grant bachelor's degree from Ministry of Education.
2. Registration is according to the MEngC office procedures.
3. For the cost of accreditation, please review MEngC Accreditation Fee Schedule.
4. After registration, for any reason the programme cannot proceed with the review, institution of the programme must apply for an extension or cancelation. Accreditation Committee reserves the right of refusal. For programme already in the review process, such requests cannot be raised by institution.
5. University-level and programme-level liaisons and programme chairs are highly encouraged to attend the EEAC accreditation workshops on a regular basis. If the chair of registered programme has never attended the accreditation workshop, MEngC may suspend the accreditation process. Meanwhile, please notify EEAC immediately for any administrator, liaison, or programme name changes.

Reports:

6. For formatting information, including page limitation, indexing, binding, etc…, please refers to EEAC "Accreditation Manual."
7. Programme head must sign and check on the Self-Assessment /interim Report Checklist.
8. Please have the institution of the programme send 5 copies of the Self-Assessment Report (per programme), including the electronic version to MEngC before July 31th .Have all the reports from one institution on one CD (report and supplements) along with the paper report. Self-Assessment Report must be received by MEngC by July 31th. Any information added / changed after the deadline should be presented during the on-site visit. MEngC and the accreditation Committee will not accept a later version of the Self-Assessment Report.

On-Site Visit:

9. Programme under its first general – review must submit at least 1 year complete records and evidence of student outcomes. Programme under second general review need to have such documents from the past 5 years.
10. Presentation by the head of the programme should be focused on supplementing the Self-Accreditation report and highlights of the programme. Please avoid repeating the report contents.

11. The MEngC liaison will email grouping arrangements of interviews the night before the on-site visit. Please have the programme liaison be on call and assist in the event.
12. Interviewees are highly valuable sources of information. Programme under review must assist in arranging the interviews. If the interview time is in conflict with student class hour, please provide another period for the interview and adjust the schedule accordingly. Also, due to compact schedule, programme should coordinate closely with the review team to be punctual.
13. For safety and confidentiality, none of the visiting activities could be filmed, photographed, voice recorded, or documented during the on–site visit except when prior to the presentation by institution / programme on the first day of the visit.\
14. Except for the Accreditation Committee invited observers, no other visitor is allowed to observe the visit; also, to abide the conflict of interest principles, the programme, and its institution, shall not pressure or present any inappropriate reception and/or gift to the evaluators. Any communication to the evaluators from the institution shall be passed on the MEngC liaison to ensure the objectivity of the review.
15. Please provide means for internet connection and have the programme liaison prepare an empty A4 size box for the review team to collect any disposable papers.
16. In the event of earthquake, flood, cyclones, or other force majeure that prevented an on-site visit from taking place. MEngC will notify the accreditation team and programme under review. MEngC will reschedule the on-site-visit.

Accreditation Action:

17. With the completion of the on-site visit. The Exit interview Statement shall be announced on site. The statement will cover only the programme's advantages and shortcomings. Neither the accreditation action will be presented: nor will any further discussion take place after the announcement.
18. Two weeks after receiving the Exit Interview Statement, the institution of the programme shall send the Response to Exit Interview Statement to the MEngC liaison, which will then be submitted to the review teams for completion of the Accreditation Statements and Recommendation of Accreditation Action.
19. The Response to Exit Interview Statement shall be focused on any errors in facts in the Exit interview Statement. Any future improvement plan and statement should not be in the response.
20. MEngC shall grant accreditation action for each degree programme in the institution.

Other:

21. Accredited programmes are accredited by MEngC, Engineering Education Accreditation Committee (MEngC), not by FEIAP, ABET, Washington accord, Seoul Accord, or any other organization.

22. When announcing the accreditation action, institution of the programme should not reveal accredited period.

23. Programmes are not authorized to disclose any information about the review team, including the EEAC liaison, at any time.

Myanmar Engineering Council

Engineering Education Accreditation Committee (EEAC)

Guidelines on Drafting the Exit Statement

Article 1 Statement:

1. In principle, strength and area for improvement statement should keep to maximum of 3 points. Statement should not go beyond the criteria requirement.
2. Statement should not make or suggest any comment that makes comparison between different institutions or programmes.
3. Statement should not be overly focused on faculty/student ratio or similar points, but rather on what could happen with non-compliance of a criterion.
4. For statement of strength, please point out the programme's uniqueness. For simply compliance of a criterion, no statement of strength is needed. Please do not repeat the wording of the criteria and make them strengths.
5. For area for improvement, please point out how the programme is not in compliance of the criteria. Please do not give statement suggesting specific way of improvement. Detail explanation is needed with Concern, Weakness, and Deficiency in the level of compliance. Three areas are to be considered in drafting the statement: what is asked by the criterion? Is the evidence sufficient? And what will be the effect of noncompliance? Ex: Graduate attributes in criterion 2 is described being attained through surveys without direct evidence; other type of assessment should be considered and needed.
6. All comments of substance should be made into actual statements in the strength or, improvement sections and not to be mentioned only in oral discussions or put into the observation part of the exit statement.
7. The observation section is for commenting on non-criteria related findings. Maximum of 2 points in principle.
8. After reviewing the programme's response to the exit statement, statements on the final accreditation statement can be modified or removed. New additional entry is not recommended.

Article 2 Criteria and Statement Entries

1. Compliance of a criterion and accreditation statement should correlate each other.
2. Programme Educational Objectives, Graduate Attributes and Curriculum are the most important criteria. If criterion, Graduate Attributes and Curriculum is a Concern, Programme Educational Objectives should not be an Observation in level of compliance.

3. If a programme has any criterion that is a Deficiency in compliance; not to be accredited is recommended.
4. For programme in the second cycle, if most criteria are Observation in level of compliance (including Criterion Graduate Attributes and Curriculum), along with few Concerns, to be accredited for a full accreditation cycle (5 year) is recommended.
5. For the purpose of monitoring the effects of continuous improvement, if a department's programmes are currently in the second cycle with additional programme being accredited for the first time, the whole department is required to go through an interim review.
6. For a programme applies for accreditation for the first time and fails to be accredited due to insufficient supporting documents, action pending is recommended.
7. For programme undergoing second cycle and beyond, if its self-assessment report and the supporting evidences are inadequate but do prove to have achieved the educational objective and continuous improvement upon the observation during the on-site visit, it is recommended to be accredited for one year. But, if the programme fails to prove to have achieved the educational objective and continuous improvement, not to be accredited is recommended.
8. If a programme under interim review is lacking in continuous improvement; not to be accredited is recommended.
9. For a combined department (a bachelor's programme and a master's programme in one) under interim review, it is advised to harmonize the accreditation actions between the two programmes. Ex: An interim review bachelor's programme that has already received 2 years accreditation is getting a 4 years accreditation result; its graduate programme should get the same 4 years accreditation for synchronization purpose.

Myanmar Engineering Council

Engineering Education Accreditation Committee (EEAC)

Code of Ethics for Accreditation of Programmes

Article 1 To ensure objectively and fairness of the accreditation process and action and to maintain confidentiality of all accreditation documents and decision–making process, this document is drawn up by the Accreditation Committee in compliance with Article 7 of Policies for Accreditation of programmes. All Committee members, staff, and members of accreditation team who are associated with the Accreditation Committee must abide scrupulously by the following in their accreditation undertakings and professional conducts.

Article 2 All personnel associated with the Accreditation Committee and members of the accreditation team shall identify with the values and spirits of accreditation. They must uphold the honor and credibility of the community by exhibiting professionalism, fairness, and respect for others when executing accreditation.

Article 3 For the purpose of sustaining the impartiality and independence, members of the Appeal and Review Committee may not be appointed as member of the accreditation team.

Article 4 Accreditation team members must attend at least a programme evaluator training workshop, comply with accreditation principles, and conduct each review and interview as regulated by the Accreditation Criteria.

Article 5 Individuals affiliated in the following respects with a programme under review must voluntarily identify and avoid being involved in the accreditation process:

(i) Having, in the past three years, held or is currently holding a full-time or part-time position in the programme;

(ii) Having awarded the highest academic degree by the programme;

(iii) Having awarded an honorary degree by the university that the programme belongs to;

(iv) Having spouse or relative up to twice removed work or enroll in the programme;

(v) Holding a paid position, as member of an advisory committee member or a board member ,etc. in the university that the programme belongs to;

(vi) Serving as a member of the programme's advisory or self–Accreditation committee during the same academic year when the accreditation occurs;

(vii) Having any other stake-holding affiliation with the Programme that is capable of undermining accreditation objectivity.

Article 6 Accreditation team members must exhibit genuine dedication to their work, carefully examining the programme's Self –Assessment Report and related documents prior to the review. Compliance with the accreditation timeline is required. In addition to full participation of every accreditation procedure, members should avoid tardiness and early departure.

Article 7 Accreditation team members must cooperate in mutual respect. They must not shirk responsibilities or workload, cite professional recommendations from other members without their consent, or probe into/criticize privacy/opinions of other team members.

Article 8 Accreditation team members and staff must remain impartiality, declining all forms of lobbying, improper reception, and gifts. Office of the MEngC shall arrange and pay for the expenses for the accreditation team's meals, accommodation, and transportation during the on-site visit.

Article 9 Accreditation team members must endeavor to speak in moderate manner, express sincerity, listen attentively and respect the input of the programme; they should refrain from excessive communication and feedback, and consciously adhere to the roles of a "interviewer" and "listener".

Article 10 Accreditation team members must examine the documents for accuracy and completeness through triangulations, and allow the programme to explain and respond. The team must record the programme's actual merits and areas for improvement in written form that complies with the MEngC format, using language that is fair, reasonable, clear, succinct, and non –emotional.

Article 11 Accreditation team members must keep their identities confidential prior to the review. Direct contact with the programme seeking accreditation should be avoided. They shall contact MEngC liaison should any requests concerning accreditation arise. Prior to the promulgation of the accreditation action, members of the accreditation team should not give lectures or attend activities related to accreditation on invitation by the programme or the university.

Article 12 Documents provided by the programme are to be used exclusively for accreditation purposes. Disclosure is forbidden unless formal authorization is otherwise obtained from the programme. Accreditation forms filled out by accreditation team members, as well as any meeting minutes or records of discussions during the accreditation process are also classified information, not to be disclosed to the public.

Article 13 All individuals involved in reviewing documents during the accreditation process must observe the confidential principles and are forbidden to publicly discuss the

contents. Individuals involved with the deliberation of accreditation actions are also forbidden to discuss the matter in public.

Article 14 Accreditation team members and staff must sign the Conflict of interest and Confidentiality Agreement before nomination, and re-endorse the agreement should further amendments be made.

Article 15 All members, staff, and accreditation team members associated with the Accreditation Committee are responsible for familiarizing themselves with this regulation; all ethics-related issues should be confronted , treated , and addressed based document.

Article 16 This document and any subsequent amendments thereto shall be approved and promulgated for implementation by the Accreditation Committee.

ENGINEERING PROGRAMME
ACCREDITATION MANUAL

(February 2020)

1.0 Introduction

The Myanmar Engineering Council (MEngC) registers graduates and professional engineers under the Myanmar Engineering Council Law (2013 November). The pre-requisite for registration as a graduate engineer is a qualification in engineering recognized by the Council.

There has been an increasing need and demand for accreditation of educational programmes in engineering due to the growing number of students seeking assurance on the standards of programmes being offered by IHLs and the emergence of more IHLs providing education in engineering.

The Engineering Education Accreditation Committee (EEAC) was delegated by the MEngC (Myanmar Engineering Council) to be the body for accreditation of engineering programmes. It is a non-governmental organisation and has the support of stakeholders in the engineering profession.

MEngC has a duty to ensure that the quality of engineering education/programme of its registered engineers attains the minimum standard comparable to global practice.

This Manual outlines details for accreditation of an engineering programme in Myanmar. It serves to facilitate IHLs to meet the minimum standard stipulated for the accreditation of their existing engineering programmes or newly proposed programmes. This Manual includes elements of outcomes in the engineering curriculum to ensure a Continual Quality Improvement (CQI) culture in the spirit of Outcome-Based Education (OBE).

2.0 Composition of Engineering Education Accreditation Committee

The Engineering Education Accreditation Committee (EEAC), representing MEngC shall be an independent body for the accreditation of engineering programmes. The members of EEAC shall be appointed by MEngC President in consultation with the council members for a period of four years in accordance with the 15 members nominated by MEngC. The EEAC Chair is elected by the MEngC members and shall hold office for the duration of his appointment as EEAC chair.

Members of EEAC shall be appointed by MEngC as follows:

a) A Chairman (elected by MEngC)

b) Fourteen members representing each of major branches (e.g. Civil, Mechanical, Electrical, Chemical and Electronics) and each of the constituent organizations nominated by MEngC.

The EEAC shall comprise persons from academic institutions and industries. Appointment of the members of EEAC shall maintain a reasonable spread of expertise across various branches of engineering.

The final decision on the membership of the EEAC is with the MEngC. All members shall be professional engineers.

The terms of reference of EEAC are:

(i) to implement the accreditation policy of the MEngC;

(ii) to formulate guidelines and procedures for accreditation;

(iii) to appoint an Evaluation Team to accredit each engineering programme;

(iv) to receive and review evaluation reports by the Evaluation Teams, and decide on whether accreditation should be granted, as well as the conditions to be imposed, if there is such a need;

(v) to respond to the Council of MEngC on complaints and appeals regarding the accreditation process;

(vi) to represent MEngC in mutual recognition agreements on academic qualifications and professional membership with other countries;

(vii) to report periodically to the MEngC on its work.

3.0 Accreditation Objective

The objectives of accreditation are

(i) to ensure that graduates of the accredited engineering programmes satisfy the minimum academic requirements for registration as a graduate engineer with Myanmar Engineering Council (MEngC).

(ii) to provide feedback to the IHLs for the improvement and development of educational programmes in engineering that can better meet the needs of the local industry.

(iii) to ensure that Continual Quality Improvement (CQI) is being practiced by IHLs. Accreditation may also serve as a tool to benchmark engineering programmes.

4.0 Engineering

The creative application of scientific principles to design or develop structures, machines, apparatus, or manufacturing processes, or works utilizing them singly or in combination; or to construct or operate the same with full cognizance of their design; or to forecast their behavior under specific operating conditions; all as respects an intended function, economics of operation or safety to life and property.

5.0 Accreditation Policy

Accreditation will be considered upon a written request from IHLs.

5.1 Accreditation Process

Accreditation of engineering programmes is undertaken by the EEAC at the request of the IHLs. The EEAC's accreditation process will focus on outcomes and the internal systems to ensure that the graduates are adequately prepared to enter the engineering profession.

The process also involves determining the effectiveness of the quality assurance systems and procedures that ensure graduates are adequately prepared to enter engineering practice.

5.2 The Accreditation Cycle

Accreditation is accorded to a programme for a maximum period of five years. The IHLs shall apply for re-accreditation not less than six months before the expiry of the accreditation period.

5.3 Programmes

IHLs may offer programme/s via various modes and at different locations, such as full-time, part-time, joint degree, multi campus etc. For each of the programmes, the IHLs shall apply for accreditation separately.

A programme shall be evaluated based on the criteria stipulated in Section.8 of this Manual.

5.4 Application and Preparation for Accreditation Visit

IHLs should make an application for programme accreditation as per the requirements of Section 9 of the Manual to EEAC.

If the documents submitted are found to be inadequate, the IHLs shall be required to provide further information before an accreditation visit can be scheduled. The application will be deemed to have been withdrawn if further information is not submitted within a period of 3 months upon request.

5.5 Accreditation Evaluation

An accreditation evaluation is conducted to verify that the programme under evaluation is in compliance with the appropriate accreditation criteria in this Manual.

The evaluation exercise shall be conducted by an Evaluation Team appointed by EEAC.

5.6 Accreditation Decision

Upon completion of the new or new-cycle programme accreditation exercise, the EEAC, based on the recommendation of the Evaluation Team, may decide one of the following conditions for the graduating cohorts:

(i) To accord full accreditation for five (5) years.

(ii) To accord accreditation for less than five (5) years.

(iii) To defer accreditation. This is to allow the IHLs to fulfil condition(s) that may be imposed by the EEAC. In such a case, a re-submission shall be made within a year.

(iv) To decline accreditation. In such a case, a further application is not normally considered within the next one year.

Programme accredited without any concerns is accorded a full five-year accreditation without any condition. Programme with any weakness shall be deferred or declined accreditation. Programme accredited with concerns is accorded accreditation for five (5) years or less **with conditions**, subject to the decision of the EEAC.

The IHLs shall take appropriate actions to remedy the concern(s), and submit evidence of such corrective action(s). A further visit will be scheduled to verify the results of the remedial action(s), in an interim or continuing accreditation visit, if deemed necessary. If adjudged satisfactory, based on the recommendation of the Evaluator, the interim condition may be lifted for programmes with interim condition and the earlier accreditation award is upheld, or the remaining period of the accreditation may be accorded by the EEAC for continuing accreditation.

Failure to address the concern(s) may result in cessation of accreditation at the end of the stated period.

The EEAC's decision shall be sent to IHLs. The accreditation shall be accorded to a specific programme pathway (location and mode).

5.7 Revisions to an Accredited Programme

The IHLs shall update the EEAC of major changes (such as, 30% or more of the curriculum, location, pathways, programme name or programme duration) that may impact an accredited programme. Failure to do so may cause the EEAC to reconsider the accreditation decision awarded earlier. The EEAC may then direct the IHLs to apply for re-accreditation of the revised programme.

5.8 The Approval to Conduct a Programme

The IHL intending to conduct a new programme shall obtain approval from the relevant authorities.

The IHLs should submit the complete set of documents as specified in Section 9 of this Manual to the EEAC for programme evaluation. The recommendation from EEAC shall be forwarded to the relevant authorities. The evaluation exercise shall be conducted by an Evaluator appointed by EEAC.

When the documents are considered to be inadequate, the IHLs shall be required to provide further information before an evaluation is carried out. If the required information is not provided within a period of three (3) months, it shall be deemed that the IHLs no longer intends to conduct the programme.

5.9 Publication of Accreditation Status

EEAC shall regularly update the list of accredited programmes on the website.

5.10 Appeal Procedures

IHLs may appeal against a decision made by EEAC. The notice of appeal must be made in writing to the Accreditation Appeals Board within 2 weeks upon receiving the decision, stating the basis of the appeal. Appeal documents are to be submitted within **4** weeks after the above notice of appeal.

The Appeals Board shall consist of MEngC President, EEAC Chair and Corresponding

Rector of IHL or their nominated representatives. The President of MEngC or his nominated representative shall be the Chairman of the Appeals Board.

If necessary, the Appeals Board may appoint a Special Committee, comprising members who are experienced in the accreditation process, to consider an appeal. Any expenses incurred shall be borne by the IHL.
The decision of the Appeals Board shall be forwarded to the IHLs within 3 months from the receipt of the complete documents. The decision of the Appeals Board shall be final.

Only not-to-accredit actions may be appealed. A notice of appeal must be submitted in writing by the Rector of the Universities/Institutions to the Registrar of MEngC within 2 weeks of receiving notification of the not-to-accredit action. This submission must include the reasons why the not-to-accredit decision of the responsible accreditation committee is inappropriate because of either errors of fact or failure of the respective accreditation committee to conform to MEngC's published criteria, policies, or procedures.

Upon receipt of a notice of appeal, the President of MEngC will notify the MEngC Board of the appeal and will select three or more members or past members of the MEngC, Executives Committee (EC) to serve as an appeal committee. Current members of the MEngC staff are ineligible to serve on the appeal committee. At least one member of this committee will be experienced as a programme evaluator and/or former member of the appropriate committee. At least one member of this committee shall represent the Member Society with curricular responsibility for each of the programmes (for example; ex-member of universities/institutions) for which there is an appeal. The President of MEngC will designate one of the committee members as chair of the committee.

The appeal committee will be provided with copies of all documentation that has been made available to the University/institution during the different phases of the accreditation cycle, including the institution's due process response and other materials submitted by the institution.

The institution is required to submit a response (normally one page) to the committee's executive summary previously sent to the institution. The institution may also submit other material it deems necessary to support its appeal. However, such materials must be confined to the status of the programme at the time of accreditation action of the committee and to information that was then available to the committee.

It is emphasized that improvements made to programme subsequent to the annual meeting of the committee will not be considered by the appeal committee.

The respective committee, through its executive committee, may submit written materials beyond the statement to the institution and the executive summary for clarification of its

position. Such materials must be provided to the institution and appeal committee at least 30 days prior to the date of the committee's meeting. Any rebuttal by the institution must be submitted to the committee at least 30 days prior to the committee meeting.

The appeal committee will meet and, on behalf of the MEngC Executives Committee (EC), consider only the written materials submitted by the institution and the respective committee in arriving at its determination. Representatives from the institution and the committee may not attend this meeting. The appeal committee's decision is limited to the options available to the committee responsible for the not-to-accredit determination. The appeal committee's findings and its decision will be reported to the MEngC Executives Committee (EC) in writing by the appeal committee chair. The decision rendered by the appeal committee is the final decision of MEngC.

The institution and the Committee will be notified in writing of this decision, and the basis for the decision, by the Executive Director within 15 days of the final decision.

5.11 Confidentiality

Documents or other information obtained by the Evaluation Team, Engineering Education Accreditation Committee (EEAC) staff, and EEAC members in connection with the accreditation exercise shall be treated as confidential.

5.12 Expenses

The IHLs shall bear all costs incurred in carrying out activities related to the approval and accreditation of a programme.

5.13 Conflict of Interest

Members of the EEAC, Evaluation Team, Appeals Board and MEngC staff are expected to be constantly aware of any conflict of interest. Members shall declare their interest or withdraw from any situation or activity that may constitute a conflict of interest.

A record of known conflicts of interest will be maintained for every individual involved in the accreditation process. Each individual will be provided the opportunity to update this record annually. The records of conflicts of interest will be utilized in selection of team chairs and programme evaluators.

Each individual representing MEngC must sign a conflict of interest and confidentiality statement indicating that she/he has read and understands MEngC policies on conflict of interest and confidentiality. The policies on conflict of interest and confidentiality will be presented and discussed at the start of each committee meeting. Individuals must refuse themselves from any portion of a MEngC meeting involving discussions or decisions for which they have a real or perceived conflict of interest. MEngC will maintain a record of the

names of individuals refusing themselves for conflicts of interest at each meeting related to accreditation decision making.

6.0 Accreditation Procedure

This section describes EEAC's accreditation procedures from the process of application to the notification of accreditation results.

6.1 Application for Accreditation

The following gives the various types of programmes accreditation, and the deadlines for applications:

a) New programme (first-cycle) accreditation: at least six (6) months before the final examination of the first intake of students.
b) New-cycle accreditation of accredited programme: at least six (6) months before the expiry date of the accreditation.
c) Interim or continuing accreditation: at least six (6) months before the expiry date of the accreditation or interim period.
d) Deferred accreditation: latest one (1) year after deferment decision.
e) Declined accreditation. Not less than one (1) year after declined decision.

The EEAC upon receiving the application by the IHLs will decide on the dates of the accreditation visit. Once the visit dates have been fixed, the programme is given three (3) months deadline prior to the visit to submit the necessary accreditation documentations as specified in Section 9 of this Manual. The application will be deemed to have been withdrawn, if the documents are not submitted latest three (3) months before the set dates for the visit.

The cut-off period for submission of application for programme accreditation by IHL is twelve (12) months beyond the year of graduation for any cohort, if the graduates are to be included in the accreditation decision.

Failing to abide with the deadlines may result in delay or rejection of graduates' registration with MEngC.

6.2 Appointment of Evaluation Team

On submission of all required documents, an Evaluation Team shall be appointed. Members of the Evaluation Team are selected on the basis of their expertise and standing in a particular discipline of engineering. Representatives from both the industry and academia are appointed because of the perspective and experience that each area of endeavour can bring to the assessment of a programme, and to the maintenance of high professional standards. The EEAC needs to ensure that not only high standards of academic teaching and achievement are being met, but also that the skills acquired and quality of graduates, are relevant to the practices and continued development of engineering.

The Evaluation Team needs to be aware of EEAC policies on accreditation as outlined in Section 3 of this Manual. The Evaluation Team will assess all the accreditation criteria set forth in this Manual. The assessment includes the auditing and confirmation of documents submitted by the IHL.

6.3 Scheduling of a Visit

A visit is arranged and coordinated by the EEAC on an appropriate date suitable to both the Evaluation Team and the IHLs. The visit should be held promptly after the appointment of the Evaluation Team. It is important that as far as possible, the agreed dates of visit are adhered to.

6.4 Pre-Accreditation Visit Meeting

The Evaluation Team for a programme should meet at least **once** (either virtual or physical) upon receiving the accreditation documents, and again on the evening of Day - 0 before the actual accreditation visit in order to study and discuss documents, and systematically identify and agree on the shortcomings prior to the visit. The Evaluation Team/Evaluator should strategically plan and/or put in request supplementary input or Request for Information (RFI) or Request for Clarification (RFC) from the IHLs to fill the gaps before the visit. This request for further information required should be communicated to the IHLs through the EEAC.

6.5 Accreditation Visit

The accreditation visit will normally be scheduled for a period of two (2) days for new programme/new-cycle/revisit (in deferment case), or one (1) day for continuing/interim visit. The overall conduct of the visit shall be managed by the EEAC. The visit shall normally include but not limited to the following:

(a) Opening meeting with the programme administrators
(b) Meeting with staff members
(c) Meeting with students
(d) Meeting with external stakeholders such as alumni, employers, and industry advisor
(e) Visiting and checking of facilities
(f) Checking relevant documents
(g) Exit meeting with programme administrators

Meetings with all stakeholders are important as this would give an indication of their involvement in the CQI process of the programme.

6.6 Report and Recommendation

The report from the Evaluation Team shall be submitted to the EEAC within 4 weeks after the visit.

7.0 Qualifying Requirements and Accreditation Criteria

An engineering programme shall be assessed by EEAC to enable graduates of the programme to register as graduate engineers with the MEngC. The assessment involves a review of qualifying requirements of the IHLs and an evaluation based on the following criteria.

Criterion 1 - Programme Educational Objectives (PEOs)
Criterion 2 - Graduate Attributes (GAs) and Assessment
Criterion 3 - Academic Curriculum
Criterion 4 - Students
Criterion 5 - Academic and Support Staff
Criterion 6 - Facilities
Criterion 7 - Quality Management Systems
Criterion 8 - Discipline-based Criteria

The assessment process will involve two parts:
(i) Initial assessment of qualifying requirements
(ii) Detailed assessment of the programme based on the accreditation criteria.

The qualifying requirements are meant to screen out programmes that do not meet the core requirements of the assessment criteria. **Failure to meet any one of the qualifying requirements will disqualify the programme from further assessment.**

There are 8 components of the qualifying requirements and each programme is expected to have all the components. These components are:

1. Outcome-based Education (OBE) implementation.
2. A minimum of 135SLTcredits* of which 90SLT credits* must be engineering courses offered over a period of four years
3. Integrated design project (IDP) (minimum six (6) SLT credits).
4. Final year project (minimum six (6) credits)
5. Industrial training (minimum of 8 weeks)
6. Full-time academic staff (minimum of eight (8)) with at least three (3) Professional Engineers with the MEngC or equivalent.
7. Staff: student ratio 1: 20 or better
8. External examiner's report (minimum of two reports over five years)

* SLT - Student Learning Time

* If the programme has met all the qualifying requirements, a detailed assessment of the programme based on the accreditation criteria as explained in the following sections will be carried out.

8.0 Criterion 1: Programme Educational Objectives (PEOs)

Programme Educational Objectives (PEOs) are specific statements/goals consistent with the mission and vision of the IHLs, are responsive to the expressed interest of programme stakeholders, and describe the expected achievements of graduates in their career and professional life a few (3 to 5) years after graduation. The PEOs must be considered in the design and review of the curriculum in a top down approach.

The programme shall publish and appropriately review the PEOs at the determined time, and ensure the PEOs are linked to the GAs and considered for the curriculum delivery.

8.1 Criterion 2: Graduate Attributes (GAs) and Assessment

Graduate Attributes describe what students are expected to know and be able to perform or attain by the time of graduation. These relate to the skills, knowledge, and behaviour that students acquire through the programme.

Students of an engineering programme are expected to attain the following GAs:

(xiii) **Engineering Knowledge** - Apply knowledge of mathematics, natural science, engineering fundamentals and an engineering specialisation as specified in WK1 to WK4 respectively to the solution of complex engineering problems;

(xiv) **Problem Analysis** - Identify, formulate, conduct research literature and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences (WK1 to WK4);

(xv) **Design/Development of Solutions** - Design solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations (WK5);

(xvi) **Investigation** – Conduct investigation of complex engineering problems using research-based knowledge (WK8) and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions;

(xvii) **Modern Tool Usage** - Create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex engineering problems, with an understanding of the limitations (WK6);

(xviii) **The Engineer and Society** - Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice and solutions to complex engineering problems (WK7);

(xix) **Environment and Sustainability** - Understand and evaluate the sustainability and impact of professional engineering work in the solutions of complex engineering problems in societal and environmental contexts. (WK7);

(xx) **Ethics** - Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice (WK7);

(xxi) **Individual and Team Work** - Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings;

(xxii) **Communication** - Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions;

(xxiii) **Project Management and Finance** - Demonstrate knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, to manage projects in multidisciplinary environments;

(xxiv) **Life Long Learning** - Recognise the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

The range of **complex problem solving** and **complex engineering activities** are given in Appendix A – Section (d) Definition of Complex Problem Solving; Section (e) Definition of Complex Engineering Activities; and Section (f) lists the Knowledge Profile (WK).

An Engineering programme for which accreditation is sought must respond to the following:

(i) **Graduate Attributes (GAs)**: The IHLs shall have published GAs that have been formulated considering items (i) to (xii) given above, and any added outcome that can contribute to the achievement of its stated PEOs.

(ii) **Processes and Results:** All GAs shall be considered in designing the curriculum. The attainments of the GAs must be adequately assessed, and use for improvements including course and programme levels.

(iii) **Stakeholders' Involvement**: The IHLs shall provide evidence of stakeholders' involvement with regard to (i) and (ii) above.

8.2 Criterion 3: Academic Curriculum

The academic curriculum and curricular design shall strongly reflect the philosophy and approach adopted in the programme structure, and the choice of the teaching-learning (delivery) and assessment methods. The curricular approach, the educational content and the

teaching-learning and assessment methods shall be appropriate to, consistent with, and support the attainment or achievement of the GAs.

A balanced curriculum shall include all technical and non-technical attributes listed in the GAs, and there shall be a balance between the essential elements forming the core of the programme and additional specialist or optional studies (electives). The curriculum shall integrate theory with practice through adequate exposure to laboratory work and professional engineering practice.

Guidelines on academic programmes outlined in this Manual provide essential elements and features, which when combined will render a programme acceptable for accreditation by the EEAC.

All engineering programmes need to cover the broad areas of their respective disciplines. Appendix A of this Manual provides list of most courses that underpin the broad areas of the respective traditional programmes. Appropriate breadth and depth of the content shall be ensured for all courses. The course structure and sequence of content shall be appropriate. Adequate time shall be allocated for each component of the content/course. Evidence shall be presented to show that the contents are being updated to keep up with scientific, technological and knowledge developments in the field, and to meet societal needs. The IHLs shall have mechanisms for regularly identifying topics of contemporary importance at local, national and global levels and topics that may not be adequately addressed in the curriculum.

Other contributing components to the curriculum such as a variety of teaching-learning (delivery) modes, assessment and evaluation methods shall be designed, planned and incorporated within the curriculum to enable students to effectively develop the range of intellectual and practical skills, as well as positive attitudes that are constructively aligned with the PEOs and GAs. The assessment to evaluate the degree of the achievement of the GAs of the programme shall be done and its level of attainment recorded. The assessment of GAs and the Course Outcomes (COs) by the students may also be done both at the programme as well as at course levels, respectively. The teaching-learning methods shall enable students to take full responsibility for their own learning and prepare them for life-long learning. The programme shall demonstrate the relationship between the courses and the GAs.

The IHLs need to consult the industry in keeping the PEOs, GAs, and content up-to-date. However, they should not lose sight of the need to provide an education in engineering, which will form a sound basis for a career that is likely to see rapid changes in technology. As a general rule, it will be appropriate for the programme structure to be designed to give a progressive shift of emphasis from engineering science and principles in the early stages towards more integrated studies in the final year, in a way that will impart knowledge of application of fundamentals and provide a focus for a professional approach.

The emphasis on particular elements or features of the programme must remain flexible, but it will be required in the accreditation process to confirm that minimum levels of understanding and standards of achievement are attained in the basic courses relevant to the fields of engineering.

The academic programme component must consist of a minimum total **135 SLT credits** (not including credits for remedial courses) based on a 14-weeks of teaching semester, made up as follows:

(a) A **minimum of 80 SLT credits** shall be **engineering courses** consisting of engineering sciences and engineering design/projects appropriate to the student's field of study.

(b) The **35 SLT credits** shall include sufficient content of **mathematics and engineering science** component, and **20 SLT credits** for **complementary studies** (such as languages, general studies, co-curriculum, management, law, accountancy, economics, social sciences, etc.) that complements the technical contents of the curriculum.

The essential elements and features are identified for convenience under several headings, without implying that each is to be treated as a separate or isolated component. In general, the syllabus and curriculum content must be adequate in quality and quantity in terms of coverage and depth. Emphasis on the curriculum shall be placed on the understanding and acquisition of basic principles and skills of a discipline, rather than memorisation of details and facts. The curriculum shall also provide students with ample opportunities for analytical, critical, constructive, and creative thinking, and evidence-based decision making in dealing with complex engineering problems. The curriculum shall include sufficient elements for training students in rational thinking and research methods.

Typical core contents for selected traditional engineering disciplines are shown in Appendix A of this Manual. The curriculum shall encompass the **complex problem solving, complex engineering activities** and **knowledge profile,** as summarised in Sections (d), (e), and (f) in the same Appendix.

SLT Credit

The SLT credit is based on the Student Learning Time (SLT). The SLT defines that for every one credit hour specified, students need to spend 40 hours of learning. This was determined by considering the total amount of time available in a week, the time needed for personal matters, the time for rest and recreational activities, and the time for studying. For a course of three SLT credit, students will have to spend 120 hours, which involves both face-to-face meetings (lectures/laboratory work/tutorials, etc.) and non-face-to-face activities. The programme shall calculate the SLT credit based on the amount of time students spend in the lecture, tutorial, laboratory sessions, project work, problem based learning, e-learning modules, discovery learning, and coursework projects and independent study accordingly.

For industrial training, the following guideline shall be followed:

- Industrial training shall be for a minimum of eight (8) weeks of continuous training. One (1) credit is allocated for every two (2) weeks of training subjected to a maximum of six (6) credit. The training shall be adequately structured, supervised and recorded in log books/report. The industrial training must be conducted before the final semester.

For final year project, the following guideline shall be followed:

- A final year project is subjected to a minimum of six (6) credits and a maximum of twelve (12) credits.

Notes:

- **Tutorial**

  Tutorial is part and parcel of the programme so as to complement the lectures. A tutorial session should preferably not exceed 30 students at any one time.

- **Laboratory Work**

  Students should receive sufficient laboratory work to complement engineering theory that is learnt through lectures. The laboratory should help students develop competence in executing experimental work. Students should work in groups, preferably not more than five (5) in a group. It is expected that laboratory works shall involve open-ended exercises to be conducted by students with clear COs and Graduate Attributes.

  Throughout the programme, there should be adequate provision for laboratory or similar investigative work, which will develop in the future engineer the confidence to deal with complex engineering problems.

- **Industrial Training**

  Exposure to professional engineering practice is a key element in differentiating an engineering degree from an applied science degree.

  Familiarity with all common engineering processes is essential and exposure at a practical level to a wide variety of processes is required at a level appropriate to the young professional. Whilst it is clearly desirable for students to get a feel of the skills involved, the central aim of the Industrial Training is to achieve appreciation, not to acquire craft skills. Clearly, many of the latest processes and large scale or costly operations can only be the subject of observation or demonstration, and visits to engineering works may be helpful in many such cases. It is considered that there is no real substitute for first-hand experience in an engineering-practice environment, other than exposure to the industrial environment outside the IHL.

  There should be a structured industrial training and supervision by a qualified personnel. Industrial training is a key component of learning in an integrated academic curriculum. Due

to its importance, the programme shall have a minimum of eight (8) weeks of continuous industrial training for each student.

- **Exposure to Engineering Practice**

  Exposure to engineering practice shall also be integrated throughout the curriculum as it is a key component. In addition, exposure to professional engineering practice may also be obtained through a combination of the following:

  (i) Lectures/talks by guest lecturers from industry.
  (ii) Academic staff with industrial experience.
  (iii) Courses on professional ethics and code of conduct.
  (iv) Industry visits.
  (v) Industry-based project.
  (vi) Regular use of a logbook in which industrial experiences are recorded.

- **Final-Year Project**

  The final-year project should preferably industry related, and can provide one of the best means of introducing an investigative research oriented approach to engineering studies. It is a requirement of the programme to include a significant project in its later stages. The final-year project is required to seek individual analysis and judgement, capable of being assessed independently. The student among others is expected to develop techniques in literature review and information processing, as necessary with all research approaches.

  It is recommended that final-year projects should also provide opportunities to utilise appropriate modern technology in some aspects of the work, emphasizing the need for engineers to make use of computers and multimedia technology in everyday practice.

- **Integrated Design Projects**

  Integrated Design Projects (IDP) shall involve complex engineering problems and design systems, components or processes integrating (culminating) core areas and meeting specified needs with appropriate consideration for public health and safety, cultural, societal, project management, economy, and environmental considerations where appropriate.

  The IDPs are multifaceted assignment that serves as a culminating academic and intellectual experience for students, typically towards the end of an academic programme or learning-pathway experience.

  The IDP should involve students working in group. The programme should seize the opportunity to deliver and assess many relevant Graduate Attributes through the Integrated project.

- **Condition for Passing Courses**

  The IHL must ensure that no students shall pass a course if they fail in their final examination of that course, unless the continuous assessment approach adopted can demonstrate the attainment of the depth of knowledge.

8.3 Criterion 4: Students

The quality and performance of students, in relation to the Graduate Attributes of utmost importance in the evaluation of an engineering programme.

Students intending to pursue engineering programmes shall have a good understanding of mathematics and physical sciences.

The normal entry qualification is matriculation examination (with good principal passes in mathematics and physical sciences) or its equivalent.

IHL shall ensure that students, who do not meet the above criteria, undertake suitable remedial programmes in order to attain the equivalent entry qualification.

The programme shall provide the necessary teaching-learning environment to support the achievement of the Programme Educational Objectives and Graduate Attributes. The teaching-learning environment shall be conducive to ensure that students are always enthusiastic and motivated. The IHL shall provide necessary counselling/guardian services to students regarding academic, career, financial, and health matters.

The programme should demonstrate the necessary avenues for students to get their feedback and suggestions on improving the programme such as committee, forum, feedback services, and so on.

Students shall not be over burdened with workload that may be beyond their ability to cope with. Adequate opportunities, such as involvement in co-curricular activities in student clubs, sports and campus activities, shall be provided for students to develop their character apart from academic development.

8.4 Criterion 5: Academic and Support staff

A viable engineering programme is expected to have a minimum of 8 full-time academic staff relevant to the particular engineering discipline. Every Programme shall have at least three (3) full-time Professional Engineers (PEs) with the MEngC or equivalent, and actively teach in programme. All academic staff who are eligible must register with MEngC.

IHL may engage part-time staff with acceptable professional qualifications in the related engineering fields. The full-time equivalent of part-time staff shall not exceed 40%.

Academic staff shall have postgraduate degrees (Masters level or higher). However, a staff member with a good first degree and wide industrial/specialist experience with acceptable professional qualifications may be considered.

It must be demonstrated that the academic staff have the competencies to cover all areas of the programme, and are implementing the outcome-based approach to education. The overall competence of the academic staff may be judged by such factors as education, diversity of background, engineering experience, teaching experience, ability to communicate, enthusiasm for developing more effective programmes, level of scholarship, participation in professional societies and attainment of Professional Engineer status or as Corporate Members of Learned

Bodies. The IHL should ensure its staff gain the necessary industrial experience required to achieve professional status.

The full-time equivalent academic staff to student ratio shall ideally be 1:20 or better to ensure effective teaching, student-staff interaction, student advising and counselling, IHL service and research activities, professional development and interaction with industries.

There shall also be sufficient, qualified and experienced technical and administrative staff to provide adequate support to the educational programme. It is recommended that each technical staff shall be in charge of not more than two laboratories.

8.5 Criterion 6: Facilities

The quality of the environment in which the programme is delivered is regarded as key to providing the educational experience necessary to accomplish the Learning Outcomes.

There must be adequate teaching and learning facilities such as classrooms, learning-support facilities, study areas, information resources (library), laboratories and workshops, and associate equipment to cater for multi-delivery modes.

Sufficient and appropriate experimental facilities must be available for students to gain substantial experience in understanding and operating engineering equipment and of designing and conducting experiments. The equipment must be reasonably representative of modern engineering practice. Where practical work is undertaken at another institution, or in industry, arrangements must be such as to provide reasonable accessibility and opportunity for learning. IHL must ensure that all facilities are maintained and adhered to best practices in safety, health and environment where appropriate. The IHL shall comply with any or all applicable rules or regulations pertaining to safety, health and environment.

Support facilities such as hostels, sport and recreational centres, health centres, student centres, and transport must be adequate to facilitate students' life on campus and to enhance character building.

8.6 Criterion 7: Quality Management Systems

The IHL must ensure that there exists a quality management system to oversee and monitor the overall achievement of the programme educational objectives and graduate attributes. These include the controlling, managing, directing, organising and supervising of the overall management system of the IHL. It must have adequate arrangements for planning, development, delivery and review of engineering programmes together with the academic and professional development of its staff.

8.6.1 Institutional Support, Operating Environment, and Financial Resources

The IHL must regard quality engineering education as a significant and long-term component of its activity. This would most commonly be reflected in the IHL's vision and mission statements and strategic plans. In addition, institutional support may be reflected in the

constructive leadership, adequate policies and mechanisms for attracting, appointing, retaining and rewarding well-qualified staff and providing for their ongoing professional development; and for providing and updating infrastructure and support services. It must ensure that creative leadership is available to the IHL through the appointment of highly qualified and experienced senior staff in sufficient numbers.

The development of academic staff, in particular, through opportunities for further education, industrial exposure, as well as research and development, is of utmost importance for the sustainability and quality improvement of the programme. Opportunities for the development of support staff should also be provided. The IHL shall provide sound policies, adequate funding and infrastructure for this purpose. Financial resources must be adequate to assure the overall quality and continuity of the engineering programme. The IHL must have sufficient financial resources to acquire, maintain, and operate facilities and equipment appropriate for the engineering programme.

8.6.2 Programme Quality Management and Planning

The IHL processes for programme planning, curriculum development, and regular curriculum and content review must involve all academic staff. The processes include reviewing Programme Educational Objectives and Learning Outcomes, tracking the contributions of individual courses to the Learning Outcomes, tracking performance assessment processes, the comments from External Examiners, reviewing feedback and inputs from stakeholders including students and alumni. The process of continual quality improvement shall be implemented with full accountability.

The IHL must demonstrate appropriate benchmarking is carried out with similar accredited/ recognized programme(s) offered at other IHL. For a new programme, the processes surrounding the decision to introduce the programme should be established. The IHL awarding the degree shall be responsible for ensuring the quality and management of these programmes.

8.6.3 External Assessment and Advisory System

The IHL shall have at least an external examiner for programme to independently review the overall academic standard in the format as shown in Appendix B (Examiner's Report) of this Manual.

The external examiner is a person of high academic standing in the engineering discipline. The external examiner is expected to carry out the overall assessment of the programme including staff as well as all courses and laboratory work undertaken by the students. Assessment is to be made at least twice during the 5-year accreditation cycle, preferably once during the initial period of the accreditation cycle and another before the next accreditation visit.

The IHL shall have an industry advisory panel for participation by professional engineers, and employers of engineers for the purpose of planning and continuous improvement of programme quality. These industry advisors shall be expected to provide inputs and recommendation on an on-going basis through participation in discussion and forums.

The external examiner's **report** and feedback from industry advisors shall be used for continuous quality improvement.

8.6.4 Quality Assurance

A quality management system must be in place to assure the achievement of Learning Outcomes. The IHL shall maintain its quality management system, based on an established quality assurance standard, for example, ISO 9001 Quality Management System, or other quality assurance systems and benchmarking. The quality assurance processes should include, among others but not limited to:

(a) Student admission including credit and course transfer/exemption.

(b) Teaching and learning.

(c) Assessment and evaluation which include:

- examination regulations and criteria for pass/fail
- preparation and moderation processes
- level of assessment
- assessment processes including final year project/industrial training

8.6.5 Safety, Health and Environment

The IHL shall demonstrate that it has in place, a system for managing and implementation of safety, health and environment. Safety culture is of utmost importance, and among a major factor affecting accreditation decision. The IHL shall demonstrate activities to inculcate safety culture among the staff and students and comply with any or all applicable rules or regulations pertaining to safety, health and environment.

8.7 Criterion 8: Discipline-based Criteria

This criterion assesses whether the programme satisfies the criteria stipulated specifically for each discipline, where: all courses and faculty qualifications must be consistent with the respective disciplines; and if a programme encompasses multiple disciplines, it must satisfy the criteria of all respective disciplines. (Please see Appendix A)

9.0 Accreditation Documents

9.1 New Programme (First-cycle) or New-cycle Accreditation or Approval of New Programme

The IHL applying or reapplying (in deferment case) for accreditation of new programme (first-cycle) or new-cycle accreditation, or approval of new programme, must submit documents that provide accurate information and sufficient evidence for the purpose of evaluation. It should not be necessary to develop extensive documentation specifically for accreditation evaluation, since the purpose of accreditation is to evaluate the systems already in place.

For each application, unless otherwise stated, the IHL shall submit the following documents:

(i) A completed Self-Assessment Report (SAR) (as noted in Section 9.3) – Hardcopy and digital format.

(ii) Supporting and other relevant Documents (as noted in Section 9.4) – Digital format.

(iii) A completed Self-Assessment Report Template (Checklist of Documents for Accreditation/Approval of New Programme and Relevant Information).

Institutional Documents and Additional Documentation (as noted in Section 9.5) are to be made available during the visit.

9.2 Interim and Continuing Programmes Accreditation

For programme that has been accorded accreditation with interim conditions, or programme applying for extension of accreditation in the same cycle, unless otherwise stated, the IHL shall submit the following documents:

(i) The earlier SAR prepared for previous accreditation visit (as noted in Section 9.3) – Hardcopy and digital format.

(ii) An addendum to the SAR – Hardcopy and digital format.

The addendum shall include:

- **Report related to concerns listed under accreditation conditions. Self-assess the closing of concerns, substantiated with evidences of actions taken to close the concerns, and results achieved from the actions. Summarise the closing of concerns in a tabular form.**
- Updates on the fulfilment of the eight (8) Qualifying Requirements.
- Report of how the programme is addressing (closing the gap) newly introduced/revised accreditation requirements by the EEAC (if any).
- Updates on any changes in information, data, statistics, status, policies, etc., and report on Continual Quality Improvement (CQI) activities related to the seven (7) accreditation criteria. These may involve for example change of programme name, PEO or GA statements, OBE model, academic curriculum (structure or content), students' entry requirements, number of academic or support staff, number of academic staff with professional qualifications, staff student ratio, facilities, QMS.

- Report on action taken to address issues listed under OFI in the previous accreditation visit with CQI being put into practice, where appropriate.
- Any other related matters to be highlighted in any section/criteria.

(iii) Supporting and other relevant Documents – Digital format.

Institutional Documents and Additional Documentation (as noted in Section 9.5) are to be made available during the visit.

9.3 Self-Assessment Report – Hardcopy

A Self-Assessment Report (SAR) is an account of the IHL's plan, implementation, assessment and evaluation of the programme conducted. It reflects the processes with results obtained used in continual quality improvement at all levels of the programme's activities. This appropriately bound document, ranging between 50 – 100 pages with all pages numbered and a table of contents, shall provide the information and description about the programme **including its self-evaluation of the outcomes and subsequent corrective actions** to enable the Evaluation Team to objectively assess the programme for accreditation or approval. The emphasis shall be on qualitative description of each aspect and criterion, and how these meet the standards and expectation as set out in this Manual. In other words, this summary document is a form of self-assessment of the IHL programme outcomes attainment.

The general structure of the SAR shall follow the guidelines as described in, but not limited to, **Sections 9.3.1 to 9.3.9** in conjunction with Self-Assessment Report Template of this Manual. Appendix D provides sample formats for presenting some required information.

The submission must be comprehensive, readable, self-contained and provide a coherent overview with the text addressing each major point in a definitive manner. It must be concise with sufficient depth and detail in conjunction with the supporting information to appropriately represent the programme. It will not be sufficient to merely provide a collection of disparate items, or point to a web site, and requiring the EEAC to find the relevant information. The IHL is advised to provide accurate information as required by this Accreditation Manual, for verification by the Evaluation Team during the visit.

9.3.1 General Information and Programme Accreditation History

(i) Provide general information on the IHL and the specific programme.

(ii) Provide detailed information on programme history of accreditation (year of accreditation, conditions imposed and actions taken).

(iii) Describe any self-initiated changes made to the programme and state the year the changes were introduced.

9.3.2 Programme Educational Objectives (PEOs)

(i) State the vision and mission of the IHL.

(ii) List the PEOs and state where they are published or publicised.

(iii) Describe how the PEOs are consistent with the vision and mission of the IHL and stakeholders' requirements.

(iv) Describe the definition or PEO elements/performance indicators, achievement criteria, and performance targets.

(v) Describe the processes used to establish/formulate, define elements/performance indicators, setting achievement criteria and performance targets, and review the PEO statements. This includes describing the tools used in the processes (survey, meetings, interviews, etc.) and frequency of activities and timelines.

(vi) Describe the processes used to evaluate the level of achievement of the PEOs. This includes describing graduates/alumni database, tools (surveys, meetings, interviews, etc.) and frequency of activities and timelines.

(vii) Discuss the PEOs achievement results by the graduates/alumni.

(viii) Describe how the feedback and results obtained from the above processes are being used for the CQI of the programme.

(ix) Describe the extent to which the programme's various stakeholders are involved in these processes.

(x) Describe CQI strategies to be implemented in relation to PEOs.

(xi) Self-assess on programme performance related to PEOs based on the following scale (with justifications) referring to Guidelines for Evaluation Team of EEAC:
*Poor/Satisfactory/Good

9.3.3 Graduate Attributes (GAs) and Assessment

(i) List down the GAs and state where they are published or publicised.

(ii) Describe how the GAs relate to the PEOs.

(iii) Describe how the GAs encompass and are consistent with the 12 EEAC's GAs of Section 8.1.

(iv) Describe the GA definition or elements/performance indicators.

(v) Describe the processes used to establish/formulate, define GA elements/performance indicators, and review the GA statements. This includes describing the tools used in the processes (survey, meetings, interviews, etc.) and frequency of activities and timelines.

(vi) Describe the OBE model adopted to deliver, assess and evaluate achievement of the GAs. Highlight how **direct** assessments (as primary evidence) of the achievement of the GAs by the Programme are reached. Give example on how the assessment from related COs from various courses that are mapped to a particular GA are used in determining the attainment of the GAs, i.e. elaborate on the GAs achievement criteria and performance targets. Similar description for student assessments and attainment may be given.

(vii) Describe the processes used to establish the model to deliver, assess and evaluate (with achievement criteria and performance targets) of the GAs.

(viii) Discuss the data gathered and explain the results of the assessment and evaluation of each GA.

(ix) Describe how the feedback and results obtained from the above processes are being used for the CQI at both the course and programme levels, and/or improving individual student's performance.

(x) Describe any GA management system (computer software etc.) used by the programme, including screen captures of OBE management system (computer software).

(xi) Describe the extent to which the programme's various stakeholders are involved in the processes.

(xii) Describe CQI strategies to be implemented in relation to GAs.

(xiii) Self-assess on programme performance related to GAs based on the following scale (with justifications):

*Poor/Satisfactory/Good

9.3.4 Academic Curriculum

(i) Describe the programme structure and course contents to show how they are appropriate to, consistent with, and support the development of the range of intellectual and practical skills and attainment or achievement of the GAs.

(ii) Describe the programme delivery and assessment (include description of assessment rubrics for projects, case studies, etc. and non-cognitive GAs) methods and how these are appropriate to, consistent with, and support the development of the range of intellectual and practical skills and attainment or achievement of the GAs.

(iii) The information required in items (i) and (ii) should include but is not limited to the following:

- A matrix linking courses to GAs to identify and track the contribution of each course to the GAs. IHL may adopt the sample overall 'Courses to GAs' mapping matrix included in Appendix E of this Manual to identify and track the contribution of the courses to the GAs as a guiding template. IHL may adopt own mapping strategy that may be different from the sample template.
- Distribution of the engineering courses according to areas specific to each programme referring to underpinning Engineering Sciences, Principles, and Applications for traditional courses (Civil, Mechanical, Electrical, Chemical and Electronics) of Appendix A and areas obtained from benchmarking exercises with established programme elsewhere for non-conventional programmes.
- Mapping of the courses to the Knowledge Profile in Appendix A.
- Distribution of the related non-engineering (general education) courses.
- Distribution of the courses offered according to semester.

(**Note**: Samples of table formats are available in Appendix D).

(iv) Describe how benchmarking report/s and other feedback (from EEAC, IAP, External Examiner, etc.) have resulted in Academic Curriculum improvement.

(v) Describe how the requirements of Complex Problem Solving (CPS) and Complex Engineering Activities (CEA) have been addressed.

(vi) Describe laboratory exercises, related GAs, and approach to deliver and assess. Give examples of open-ended laboratory activities.

(vii) Describe industrial training scheme and relate it to GAs using appropriate examples.

(viii) Describe exposure to professional practice and relate it to GAs. Cite examples of exposure to professional practice activities.

(ix) Describe Final Year Projects (FYPs), related GAs, and how FYPs fulfil the specific requirements stipulated in the Manual.

(x) Describe Integrated Design Projects, related GAs, and how the projects fulfil the specific requirements stipulated in the Manual.

(xi) Describe the 'Condition for Passing Courses' practice(s).

(xii) Describe the extent to which the programme's various stakeholders are involved in the curriculum development and review process.

(xiii) Describe CQI strategies to be implemented in relation to Academic Curriculum.

(xiv) Self-assess on programme performance related to Academic Curriculum based on the following scale (with justifications):

*Poor/Satisfactory/Good

9.3.5 Students

(i) Describe the requirements and process for admission of students to the programme.

(ii) Describe the policies and processes for credit and course transfer/exemption.

(iii) Describe students' counselling services available.

(iv) Describe formal or informal feedback platform/channel to obtain students feedback and suggestions for further programme improvement, and how have the feedback resulted in programme improvement.

(v) Describe students' workload.

(vi) Describe students' activities and involvement in student organisations and relevant professional engineering bodies that provide experience in management and governance, representation in education and related matters and social activities.

(vii) The information required in items (i) to (vi) should include but is not limited to the following:

- The distribution of students' enrolment for all academic years for the past four years (Table 6 in Appendix D).

- The entry qualifications of final year students of the current semester (Table 7 in Appendix D).

(viii) Discuss students' performances in relation to GAs from overall holistic perspective involving both curricular and co-curricular activities, such as participating in design competitions, public speaking activities, etc.

(ix) Describe CQI strategies to be implemented in relation to Students.

(x) Self-assess on programme performance related to Students based on the following scale (with justifications):

*Poor/Satisfactory/Good

9.3.6 Academic and Support Staff

(i) Discuss the adequacy and competencies of the academic staff in covering all areas of the programme, and in implementing the Outcome-based approach to education. The overall competence of Academic staff is viewed from their diversity of background, academic qualification, academic and professional practice experiences, including their track record in teaching, research, publications, administration and service to the society, ability to communicate, enthusiasm for developing more effective programmes, level of scholarship, participation in professional societies and attainment of Professional Engineer status.

(ii) Discuss how the overall staff workload enables effective teaching, student-staff interaction, student advising and counselling, IHL service and research activities, professional development and interaction with industry.

(iii) Discuss the sufficiency and competency of technical and administrative staff in providing adequate support to the educational programme.

(iv) The information required in items (i) to (iii) should include but is not limited to the following:

- A breakdown in terms of numbers of academic staff (full-time, part-time and inter-programme) by year for the past four years (Table 8 in Appendix D).
- An analysis of all academic staff (Table 9 in Appendix D).
- A summary of the academic qualifications of academic staff (Table 10 in Appendix D).
- A summary of the professional qualifications and membership in professional bodies/societies of academic staff (Table 11 in Appendix D). This shall also include registration with Myanmar Engineering Council in line with the requirement.
- A summary of the posts held by full time academic staff (Table 12 in Appendix D).
- A summary of teaching workload of academic staff for the current semester (Table 13 in Appendix D). An analysis of all support staff (Table 14 in Appendix D).
- A summary of the posts held by support staff (Table 15 in Appendix D).

- The staff: student ratio by year for all academic years for the past four years (Table 16 in Appendix D).
- A listing of lecturers/invited speakers from industry/public bodies and their level of involvement.

(v) Describe the implemented professional training scheme and incentives for academic staff. List down academic staff who have undergone or still undergoing training. Provide future projected professional training programme.

(vi) Describe participation of academic staff in consultancy activities.

(vii) Describe participation of academic staff in research and development activities.

(viii) Describe CQI strategies to be implemented in relation to Academic and Support Staff.

(ix) Self-assess on programme performance related to Academic and Support Staff based on the following scale (with justifications):
*Poor/Satisfactory/Good

9.3.7 Facilities

(i) Discuss the adequacy of teaching and learning facilities such as classrooms, learning-support facilities, study areas, information resources (library), computing and information-technology systems, laboratories and workshops, and associated equipment to cater for multi-delivery modes.

(ii) For programmes offered wholly or partly in distance mode, or at multiple or remote locations, describe how the facilities provided are equivalent to those provided for on-campus students.

(iii) Describe the adequacy of support facilities such as hostels, sport and recreational centres, health centres, student centres, and transport in facilitating students' life on campus and enhancing character building.

(iv) The information required in items (i) to (iii) should be provided in the supporting documents but is not limited to the following:

- A summary, in tabulated form, of the lecture facilities (give number, capacity, and audio video facilities available).
- A summary, in tabulated form, of the laboratories (list down the equipment available in each laboratory).
- A summary, in tabulated form, of the workshops (list down the equipment/machinery available in each workshop). A summary, in tabulated form, of the computer laboratories (list down the hardware and software available).
- A summary, in tabulated form, of the other supporting facilities such as the library (list down the titles of books/journals/magazines/standards of relevance to the programme).
- A summary, in tabulated form, of recreational facilities.

- A summary, in tabulated form, of information on recent improvements and planned improvements in these facilities.

(v) Describe procedures and monitoring of health, safety and environmental aspects of facilities including lecture halls, laboratories, equipment, etc.

(vi) Describe maintenance and calibration aspects of teaching facilities and equipment/apparatus.

(vii) Discuss how the safety, health and environment issues being managed by the IHL.

(viii) Describe CQI strategies to be implemented in relation to Facilities.

(ix) Self-assess on programme performance related to Facilities based on the following scale (with justifications):

*Poor/Satisfactory/Good

9.3.8 Quality Management Systems

(i) Describe the Quality Management Systems and organisational structure of the IHL as well as the structure within the faculty/department/programme. Discuss the commitment and level and adequacy of institutional support, operating environment, financial resources, constructive leadership, policies and mechanisms for attracting, appointing, retaining and rewarding well-qualified staff and provision of professional development, and provision of infrastructure and support services to achieve the PEOs and GAs and assure continuity/sustainability of the programme. All relevant policies are to be made available during the visit.

(ii) Discuss the mechanism for the following: programme planning; curriculum development; curriculum and content review; responding to feedback and inputs from stakeholders including Industry Advisory Panel (IAP), students and alumni; tracking the contribution of individual courses to the GAs; tracking outcomes of performance through assessment; responding to External Examiners comments; reviewing of PEOs and GAs; and Continual Quality Improvement (CQI). Where these are discussed elsewhere in the report, specify their locations. For a new programme, the IHL also needs to discuss the processes surrounding the decision to introduce the programme.

(iii) Summarise feedback obtained from all stakeholders (External Examiner, IAP, students and alumni, etc.) and how CQI was carried out.

(iv) Summarise benchmarking reports and how CQI was carried out.

(v) Describe how the Quality Management System (QMS) of the IHL provides quality assurance covering (not limited to) the following:

- System for Examination Regulations including Preparation and Moderation of Examination Papers: The programme has established a working system for examination regulations including preparation and moderation of examination papers.

- System of Assessment for Examinations, Projects, and Industrial Training: The programme has established a working system for assessment of examinations, projects, industrial training and other forms of learning delivery. The scope of assessment is wide enough to cover the achievement of GAs.
- System for student admission and teaching and learning: The programme has established a working system for student admission and teaching and learning.

Quality assurance can be reflected through proper and sufficient policies/ rules/regulations/procedures in the Department/Faculty or IHL, and whether those systems are implemented.

(vi) Describe the management system for safety, health and environment.

(vii) Describe CQI strategies to be implemented in relation to QMS.

(viii) Self-assess on programme performance related to Quality Management Systems (QMS) based on the following scale (with justification).
*Poor/Satisfactory/Good

9.3.9 Discipline-Based Criteria

(i) An accredited programme is mentioned to cover the broad areas of the respective disciplines at an appropriate level of Appendix A (a)(i).

(ii) Discuss engineering application for respective discipline programme to check Appendix A (a)(ii).

9.3.10 Other Relevant Information

Include additional information which supports the continuing progress and visibility of the programme, such as major research accomplishments.

9.4 Supporting Material Document – Digital Format

The supporting documents are evidences to substantiate claims made in the SAR by IHL. These documents are to be submitted in digital format as Appendices to the SAR as follows:

9.4.1 General Information and Programme Accreditation History

(i) Provide official publications relating to the Faculty/School/ Department/Programme, undergraduate prospectus and other information accessible through website.

(ii) Provide programme's previous accreditation history, reports, relevant letters, and other relevant documents.

9.4.2 Programme Educational Objectives (PEOs)

(i) Provide documented evidences of publication of vision and mission statements.

(ii) Provide documented evidences of publication or dissemination of PEO statements.

(iii) Provide documented evidences of publication or dissemination of definition or PEO elements/performance indicators, achievement criteria, and performance targets.

(iv) Provide sample responded questionnaires/survey forms and/or other tools used to establish/formulate/define PEO elements/performance indicators, and review the PEOs.

(v) Provide sample responded questionnaires/survey forms and/or other tools used to evaluate achievement of the PEOs.

(vi) Provide documented evidences of how the processes and results obtained from the processes resulted in the CQI of the programme.

(vii) Provide documented evidences such as minutes of meetings, training lists and documents, workshop reports, briefing notes, reminders, relevant forms, and internal communications, instructions, etc. of the processes related to PEOs, and the involvement of various internal and external stakeholders in these processes to support claims made in this section.

9.4.3 Graduate Attributes (GAs) and Assessment

(i) Provide documented evidences of publication or dissemination of GA statements.

(ii) Provide documented evidences of publication or dissemination of definition of GA elements/performance indicators.

(iii) Provide sample responded questionnaires/survey forms and/or other tools used to establish/formulate/define GA elements/performance indicators, and review of the GAs.

(iv) Provide documented evidences of publication or dissemination of the OBE model adopted to deliver, assess and evaluate achievement of the GAs.

(v) Provide 'GA box/tray' for each GA, to cover from mapping of courses to the selected GAs, until the results of the GA achievements (based the adopted model), and CQI process.

(vi) Provide documented evidences of OBE management system (computer software etc.).

(vii) Provide documented evidences such as minutes of meetings, training lists and documents, workshop reports, briefing notes, reminders, relevant forms, and internal communications, instructions, etc. of the processes related to GAs, and the involvement of various internal and external stakeholders in these processes to support claims made in this section.

9.4.4 Academic Curriculum

(i) Provide documented evidences of publication or dissemination of overall 'Courses to GAs' mapping matrix.

(ii) Provide documented evidences of publication or dissemination of the elaboration/definition of Complex Problem Solving (CPS), Complex Engineering Activities (CEA) and Knowledge Profile.

(iii) Provide list of titles of experiments in the laboratory and documented evidences showing open-ended laboratory activities.

(iv) Provide list of companies that offered industrial training for students.

(v) Provide list of exposure to professional practice activities and describe the level of student's engagement.

(vi) Provide list of final-year project titles.

(vii) Provide Integrated Design project's synopsis and list of titles.

(viii) Provide documented evidences showing programme implementation of the 'Condition for Passing Courses'.

(ix) Provide documented evidences such as minutes of meetings, training lists and documents, workshop reports, briefing notes, reminders, relevant forms, and internal communications, instructions, etc. of the processes related to Academic Curriculum, and the involvement of various internal and external stakeholders in these processes to support claims made in this section.

(iv) Provide documented evidences showing formal or informal feedback platform/channel to obtain students feedback and suggestions for further programme improvement.

(v) Provide documented evidences showing students' involvement in student organisations and relevant professional engineering bodies that provide experience in management and governance, representation in education and related matters, non-academic or co-curricular activities, and social activities.

(vi) Provide documented evidences showing students' performance in relation to GA from an overall holistic perspective, from both curricular and co-curricular activities, such as participating in design competition, public speaking activities, etc.

9.4.5 Students

(i) Provide documented evidences showing the students admission requirements to the programme.

(ii) Provide documented evidences showing the policies and processes for credit transfer/exemption.

(iii) Provide documented evidences showing available students' counselling services.

(iv) Provide documented evidences showing formal or informal feedback platform/channel to obtain students feedback and suggestions for further programme improvement.

(v) Provide documented evidences showing students' involvement in student organisations and relevant professional engineering bodies that provide experience in management and governance, representation in education and related matters, non-academic or co-curricular activities, and social activities.

(vi) Provide documented evidences showing students' performance in relation to GA from an overall holistic perspective, from both curricular and co-curricular activities, such as participating in design competition, public speaking activities, etc.

9.4.6 Academic and Support Staff

(i) Provide documented evidences of staff training to ensure real understanding and implementation of OBE, as well as other training such as effective communication skills, teamwork, leadership, etc.

(ii) Provide documented evidences showing participation of academic staff in professional training and qualifications, and programme's projection/plan on professional training schemes for academic staff.

(iii) Provide documented evidences showing participation of academic staff in consultancy activities.

(iv) Provide documented evidences showing participation of academic staff in research and development activities.

9.4.7 Facilities

(i) Provide a list of all equipment and software used by the programme including recent additions and planned additions, as well as the titles of books, and journals for the programme.

(ii) Provide documented evidences of procedures and monitoring of health, safety and environmental aspects of facilities including lecture halls, laboratories, equipment, etc.

(iii) Provide documented evidences of maintenance and calibration of facilities and equipment/apparatus in the laboratories or elsewhere.

9.4.8 Quality Management System (QMS)

Provide documented evidences of:

(i) QMS and organisational structure.

(ii) Available policies.

(iii) Standard Operating Procedures (SOP), or ISO or other certifications.

(iv) Relevant files (including course files) and documentations.

(v) Relevant minutes of meeting related to QMS, such as from IAP's meetings, Quality Committee meeting, etc.

(vi) Management system for safety, health and environment.

(vii) Letters of appointment of IAP, External Examiner(s), and committee members, etc.

(viii) Continual Quality Improvement (CQI) document for Course Learning Outcome (CLO) level.

(ix) Continual Quality Improvement (CQI) document for Programme Learning Outcome (PLO) level.

(x) External Examiners' reports.

(xi) Benchmarking report/s.

(xii) Responses to close the loop of feedback from stakeholders.

9.4.9 Discipline-based Criteria

Provide documented evidences of:

(i) Engineering Science and Principles for respective disciplines.

(ii) Engineering Application.

9.5 Institutional Documents and Additional Documentation to be Made Available during the Visit – Hardcopy.

The Institutional Documents and Additional Documentation shall be made available during the visit in hardcopies or other tangible forms. They are to support the information/evidences requested in Section 9.3 and 9.4 for verification purposes by the Evaluation Team.

These documents are either hardcopies of the supporting documents already provided by the IHL during the SAR submission digital format, or additional documents to further support the supporting documents, or evidences not submitted with the SAR but to be viewed during the visit. These may include:

(i) The IHL/programme's handbook, undergraduate prospectus, academic calendar or other official publications relating to the faculty/school/department, and containing the statement of programme details; IHL prospectus; and any other documents that relate to the faculty/school/department, and programme.

(ii) Completed questionnaire survey forms.

(iii) Documents related to IAP activities.

(iv) Documents related to training workshops related to OBE and Curriculum development.

(v) OBE user manual.

(vi) GA trays/boxes for each of the 12 EEAC's GAs.

(vii) OBE management software (if any).

(viii) Course files – for every course offered by the programme, provide the course information to include the targeted course learning outcomes, a matrix linking course outcomes to programme outcomes, course synopsis/syllabus, and a list of references (texts used). Examination papers complete with answer scheme and graded examination papers with low, medium and high grades are also to be provided. Any information with regard to other learning activities and assessment measures such as projects, quizzes, tutorial questions, assignments, class projects, copies of the course notes, and any other materials used for the course are also to be included. Sample of projects with low, medium and high grades are also to be provided. Assessment rubrics or projects and non-cognitive outcomes shall be included.

(ix) Final year project reports and assessment rubrics.

(x) Integrated design projects and assessment rubrics.

(xi) Moderation forms for examination papers and other continuous assessments.

(xii) Laboratory exercises to include experiment instruction sheets, as well as supporting information, and marked laboratory exercises.

(xiii) Laboratory reports.

(xiv) Documents related to industrial training (IT)/placement and students' IT report.

(xv) Documents related to industrial exposure for students (industrial visit, talks, etc.).

(xvi) Documents related to students' feedback.

(xvii) Documents related to students' participation in design competition, public speaking activities, etc.

(xviii) Documents related to industrial attachment/professional scheme for academic staff.

(xix) Documents related to academic staff attending training, conferences and workshops.

(xx) Documents related to support staff training.

(xxi) Documents related to staff industry linked consultancy activities.

(xxii) Documents related to staff industry linked research activities.

(xxiii) Documents related to staff promotion exercises.

(xxiv) Equipment calibration records.

(xxv) Facilities and equipment maintenance records.

(xxvi) Documents related to health, safety, and environment.

(xxvii) IHL/programme annual report.

(xxviii) Published policies.

(xxix) External Examiners' report.

(xxx) Benchmarking reports.

(xxxi) Minutes of meetings involving all criteria.

(xxxii) Other relevant documentation/evidences.

Myanmar Engineering Council

Engineering Education Accreditation Committee (EEAC)

Self-Assessment Report Template

2020-2021

ENGINEERING EDUCATION ACCREDITATION COMMITTEE

1. BASIC PROGRAMME INFORMATION

Please tick:

Accreditation	
Approval of New Programme	

1.1 Qualifying Requirements

* **For accreditation of programme only, please fill out the table below for qualifying requirements:**

No.	Qualifying Requirements for Application Programme Accreditation	Yes/No
1	Outcome-based Education (OBE) implementation.	
2	A minimum 135 credits of which 90 credits must be engineering courses offered over a period of four years. (Based on SLT)	
3	Integrated design project (minimum six (6) SLT credits).	
4	Final year project (minimum six (6) credits).	
5	Industrial training (minimum of eight (8) weeks).	
6	Full-time academic staff (minimum of eight (8)) with at least three (3) Professional Engineers with the MEngC or equivalent.	
7	Staff: student ratio of 1: 20 or better.	
8	External examiner's report.	

Failure to meet any one of the qualifying requirements will mean that the programme shall not be assessed for accreditation, and the process shall stop here and no submission to the EEAC can be made by the IHLs. IHLs are advised to ensure all requirements are fulfilled by the programme before re-applying for accreditation.

** **For Approval of a New Programme, please fill respond to this Appendix wherever applicable.**

1.2 General Information

No.	Refer to Section 9.3.1	To be filled out by the IHL where applicable	Checked by EEAC
1	Name of IHL.		
2	Address of IHL.		
3	Name of Faculty/School/ Department.		
4	Name and phone number of Staff to be Contacted.		
5	Programme for Accreditation.		
6	EEAC Reference Number.		
7	Degree to be Awarded and Abbreviation.		
8	IHL Awarding the Degree: (if different from A1).		
9	Mode of Study [Full-Time/Twinning/Part-Time/Others (please specify)].		
10	Duration of Programme (in years).		
11	Medium of Instruction of Programme Evaluated.		
12	Language Available for Reference Materials.		
13	IHL Academic Session.		
14	URL Address; IHL website.		

1.3 Programme Accreditation History

No.	Refer to Section 9.3.1	To be filled out by the IHL where applicable	Checked by EAD
1.	Introduction Year of Programme		
2.	Year of Last Accreditation for this Programme		
3.	Conditions (if any) from Previous Accreditation		
4.	Action Taken on the Conditions Above		
5.	Major Changes (Self-Initiated) Reasons and Year of Changes.		

Criterion 1: Programme Educational Objectives (PEOs)

Criterion		Self-Study Report	Performance Indicators	Checked by Evaluation Team
1.1	Publish detailed educational objectives that demonstrate the programme's characteristics and consistency with contemporary trends and societal demands.	1) State the vision and mission of the IHL and/or faculty. 2) List the PEOs and state where they are published or publicised. 3) Describe how the PEOs are consistent with the vision and mission of the IHL and/or faculty and stakeholders' requirements.	1) Promotion materials. 2) Records of procedures/meeting minutes for the forming of the educational objectives, including procedures on establishment of an advising committee. 3) Assessment of educational objectives by alumni, employers, and industry representatives through feedbacks such as surveys, interviews, etc. 4) Records on educational objectives reviews, curriculum designs, and related meetings.	
1.2	Describe the relationship between the educational objectives of the programme and those of the institution, as well as the process of establishing these objectives.	1) Describe the processes used to establish / formulate, define elements / performance indicators, setting achievement criteria and performance targets, and review the PEO statements. This includes describing the tools used in the processes (surveys, meetings, interviews, etc.) and frequency of activities and timelines. 2) Describe the processes used to evaluate the level of achievement of the PEOs. This includes describing graduates/alumni database, tools (surveys, meetings, interviews, etc.) and frequency of activities and timelines. 3) Describe the extent to		

		which the programme's various stakeholders are involved in these processes		
1.3	Describe the manner in which the designs of the curriculum are consistent with these objectives	1) Describe the definition or PEO elements/ performance indicators, achievement criteria, and performance targets.		
1.4	Institutionalize an effective assessment process to assure the achievement of these objectives.	1) Discuss the PEOs achievement results by the graduates/ alumni. 2) Describe how the feedback and results obtained from the above processes are being used for the CQI of the programme. 3) Describe CQI strategies to be implemented in relation to PEOs. 4) Self-assess on programme performance related to PEOs based on the following scale (with justifications). *Poor/Satisfactory/Good		

Criterion 2: Graduate Attributes (GAs) and Assessment

Criterion		Self-Study Report	Performance Indicators	Checked by Evaluation Team
2.1	The programme must demonstrate that their students have attained the following outcomes by gradation (i) Apply knowledge of mathematics, natural science, engineering fundamentals and an engineering specialisation as specified in WK1 to WK4 respectively to the solution of complex engineering problems; (ii) Identify, formulate, conduct research literature and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences (WK1 to WK4); (iii) Design solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and	1) List down the GAs and state where they are published or publicised. 2) Describe how the GAs relate to the PEOs. 3) Describe how the GAs encompass and are consistent with the 12EEAC's GAs of Section 8.1. 4) Describe the GA definition or elements / performance indicators. 5) Describe the processes used to establish/ formulate, define GA elements/performance indicators, and review the GA statements. This includes describing the tools used in the processes (surveys, meetings, interviews, etc.)	1) Records of meetings in forming the student core abilities. 2) Two work samples organized by grade (low, middle, high) from each course. 3) Two mid-term, final exam samples organized by grade (low, middle, high) from each course. 4) Two special project/report samples organized by grade (low, middle, high). 5) Student transcripts organized by years, ranked by grade. 6) Related curriculum review questionnaires and data.	

	safety, cultural, societal, and environmental considerations (WK5); (iv) Conduct investigation of complex engineering problems using research-based knowledge (WK8) and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions; (v) Create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex engineering problems, with an understanding of the limitations (WK6); (vi) Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice and solutions to complex engineering problems (WK7);	and frequency of activities and timelines. 6) Describe the extent to which the programme's various stakeholders are involved in these processes.		

	(vii) Understand and evaluate the sustainability and impact of professional engineering work in the solutions of complex engineering problems in societal and environmental contexts. (WK7); (viii) Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice (WK7); (ix) Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings; (x) Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions; (xi) Demonstrate			

	knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, to manage projects in multidisciplinary environments; (xii) Recognise the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.			
2.2	The program must institutionalize a process to assess and evaluate the extent to which the student outcomes are being attained and demonstrate that the results of such evaluations are being systematically utilized as input for the continuous improvement of the program.	1) Describe the OBE model adopted to deliver, assess and evaluate achievement of the GAs. Highlight how direct assessments (as primary evidence) of the achievement of the GAs by the students are reached. Give example on how the assessment from related COs from various courses that are mapped to a particular GA are used in determining the achievement of	1) Evaluations on the related data and analyses. 2) Evaluations on the analyses record keeping system. 3) Records of meetings/ procedures on the curriculum and related information, in the cultivation of graduate outcomes/attributes.	

		the GAs by the students, i.e. elaborate on the GAs achievement criteria and performance targets. 2) Describe the processes used to establish the model to deliver, assess and evaluate (with achievement criteria and performance targets) of the GAs. 3) Discuss the data gathered and explain the results of the assessment and evaluation of each GA. 4) Describe how the feedback and results obtained from the above processes are being used for the CQI at both the course and programme levels, and/or improving individual student's performance. 5) Describe any GA management system (computer software etc.) used by the programme, including screen captures of OBE management		

		system (computer software). 6) Describe CQI strategies to be implemented in relation to GAs. 7) Self-assess on programme performance related to GAs based on the following scale (with justifications): *Poor/Satisfactory/ Good		

Criterion 3: Academic Curriculum

Criterion		Self-Study Report	Performance Indicators	Checked by Evaluation Team
4.1	Design and content of the curriculum must be consistent with the programme's educational objectives and must include at least three major components: mathematics and basic sciences, technical and professional engineering component, and general education. Specifically: 4.1.1 Mathematics and basic science must account for at least one fourth of the credits required for graduation. 4.1.2 Technical and professional component must account for at least three eighths of the credits required for graduation. 4.1.3 General	1) Describe the programme structure and course contents to show how they are appropriate to, consistent with, and support the development of the range of intellectual and practical skills and attainment or achievement of the GAs. 2) Discuss the programme delivery and Assessment (include description of assessment rubrics for projects, case studies, etc. and non-cognitive GAs) methods, methods and how these are appropriate to, consistent with, and support the development of the range of intellectual and practical skills and attainment or achievement of the GAs. The information required in items 1 and 2 above should include but is not limited to the following: • A matrix linking courses to GAs to identify and track the contribution of each course to the GAs. IHL may adopt the sample overall 'Courses to GAs' mapping matrix included in Appendix D of this Manual to identify and track the	1) Curriculum plan/roadmap. 2) List of courses offered and their analysis. 3) Senior transcripts. 4) Hand-on courses syllabi. 5) Contents/ samples of professional ethics topics covered in courses. 6) Contents/ samples of cultivating students continuing growth covered in courses. 7) Course syllabi including list of textbooks used.	

	education component must complement the technical contents of the discipline and be consistent with the programme's educational objectives.	contribution of the courses to the GAs may be referred to as a guiding template. IHL may, however, adopt own mapping strategy that may be different from the sample template. • Distribution of the engineering courses According to areas specific to each Programme referring to Appendix A underpinning Engineering Sciences, Principles, and Applications) for traditional courses (Civil, Mechanical, Electrical, Chemical and Electronics), and are as obtained from benchmarking exercises with established programme elsewhere for non-conventional programmes. • Mapping of the courses to the Knowledge Profile in Appendix A • Distribution of the related non-engineering (general education) courses • Distribution of the courses offered according to semester (Note: Samples of table formats are available in Appendix D).		
4.2	Planning and implementation of the curriculum must consider the development of the industry and	1) Describe how benchmarking report/s and other feedback (from EEAC, IAP, External Examiner, etc.) have resulted in Academic	1) Records of student internships and related information. 2) Records of	

	prepare students to culminate the learned knowledge and skills in engineering practice.	Curriculum improvement. 2) Describe how the requirements of Complex Problem Solving (CPS) and Complex Engineering Activities (CEA) have been addressed. 3) Describe laboratory exercises, related GAs, and approach to deliver and assess. Give examples of open-ended laboratory activities. 4) Describe industrial training scheme and relate it to GAs using appropriate examples. 5) Describe exposure to professional practice and relate it to GAs. Cite examples of exposure to professional practice activities. 6) Describe Final Year Projects (FYP), related GAs, and how FYP fulfils the specific requirements stipulated in the Manual. 7) Describe Integrated Design Projects, related GAs, and how IDP fulfils the specific requirements stipulated in the Manual. 8) Describe the 'Condition for Passing Courses'.	students-industry events and related information 3) Records of curriculum planning and related meetings, including inputs/ comments from advisory board and/or academic-industry partnership.	

		9) Describe the extent to which the programme's various stakeholders are involved in the curriculum development and review process. 10) Describe CQI strategies to be implemented in relation to Academic Curriculum. 11) Self-assess on programme performance related to Academic Curriculum based on the following scale (with justifications): *Poor/Satisfactory/Good		

Table 4-1 (Academic Year) Curriculum Road Map

(Please provide curriculum roadmap, including course enrollment restriction policy)

Table 4.2 (Academic Year) Curriculum Analysis

Course Type	Year	Course Name	Instructor	Credits			
				Math and Core Science	**Engineering Discipline Specification**	**Engineering Design and Project**	**Complementary Studies**
	1st Semester						
	2nd Semester						
	3rd Semester						
	4th Semester						
	5th Semester						
	6th Semester						
	7th Semester						
	8th Semester						
	9th Semester						
	10th Semester						
	11th Semester						
	12th Semester						
Electives							
Total Course Credits Taken							
Minimal Programme Graduation Credits							

Note:

Please used courses offered in the (academic year) for curriculum analysis. Course without students is to be excluded in the analysis.

Table 4.3 (Academic Year) Curriculum Analysis

Roll Number of the student:

Year	Course Name	Instructor	Required/ elective	Credits			
				Math and Core Science	**Engineering Discipline Specification**	**Engineering Design and Project**	**Complementary Studies**
1st Semester							
2nd Semester							
3rd Semester							
4th Semester							
5th Semester							
6th Semester							
7th Semester							
8th Semester							
9th Semester							
10th Semester							
11th Semester							
12th Semester							
Total Required Course Credits Taken (A)							
Minimal Programme Graduation Credits (B)							
Percentage of Required Course over Total Credits (A/B)							
EEAC Criteria 4 Curriculum Credits Requirement				**34 SLTCH (25%)**	**54 SLTCH (40%)**	**27 SLTCH (20%)**	**20 SLTCH (15%)**
Is it in compliance with the guideline?							

Criterion 4: Students

Criterion		Self-Study Report	Performance Indicators	Checked by Evaluation Team
4.1	Have appropriate regulations that consistent with the educational objectives of the programme	1) Describe the requirement and process for admission of students to the programme	1) Guidelines and requirements on the institution enrollment and graduating policies.	
4.2	Have measures and policies encouraging students to engage in academic exchange and related learning activities	1) Describe the policies and processes for credit transfer/exemption. 2) Describe students' activities and involvement in student organisations and relevant professional engineering bodies that provide experience in management and governance, representation in education and related matters and social activities. 3) The required information should include but is not limited to the following: • The distribution of students' enrolment for all academic years for the past four years (Table 6 in Appendix D). • The entry qualifications of final year students of the current semester (Table 7 in Appendix D).	2) Record of regulations and results on student dropout/suspension advising and early warning system. 3) Records and results on transfer student advising. 4) Records and results of advising on graduating, advancement, and career search. 5) Records and results of student advising on club activity, domestic/ international academic exchange, internship, exchange student, scholarship, intercollegiate	

		4) Discuss students' performance in relation to GAs from overall holistic perspective involving both curricular and co-curricular activities, such as participating in design competitions, public speaking activities, etc.	competition, etc.. 6) Records and results of financial support and advising for high achieving and low income students. 7) Records and results of intra/cross campus and international competition by students. 8) Records of student advising such as office hour, faculty advisor-student time, early warning systems, etc. 9) Regulations on graduation.	
4.3	Institutionalize an effective advising and assessment system.	1) Describe students' counselling services available. 2) Describe formal or informal feedback platform/channel to obtain students feedback and suggestions for further programme improvement, and how have the feedback resulted in programme improvement		
4.4	Assure that all students fulfillment requirements for graduation	1) Describe students' workload. 2) Describe CQI strategies to be implemented in relation to Students. 3) Self-assess on programme performance related to Students based on the following scale (with justifications): *Poor/Satisfactory/Good		

Criterion 5: Academic and Support Staff

Criterion		Self-Study Report	Performance Indicators	Checked by Evaluation Team
5.1	The full-time faculty must be of sufficient number	1) Discuss the adequacy and competencies of the academic staff in covering all areas of the programme, and in implementing the Outcome-based approach to education. The overall competence of Academic staff is viewed from their diversity of background academic qualification, academic and professional practice experiences, including their track record in teaching, research, publications, administration and service to the society, ability to communicate, enthusiasm for developing more effective programmes, level of scholarship, participation in professional societies and attainment of Professional status from the MEngC. 2) The information required should include but is not limited to the following: - A breakdown in terms of numbers of academic staff (full-time, part-time and inter-programme) by year for the past four years (Table 8 in Appendix D). - An analysis of all academic staff (Table 9 in Appendix D).	1) Faculty hourly instructing duty roster. 2) Faculty review meeting minutes. 3) Records and procedures on faculty hiring, promoting, and reviewing. 4) Records and results of faculty involvements with the formation of the educational objectives. 5) Faculty CVs (including the publication records of the last 5 years). 6) Lists of faculty office hour. cords of improvement on teaching by faculty. 11) Policies on encouraging faculty professional development and research.	
5.2	The faculty must be involved in the formation and execution process of the programme's educational objectives.			
5.3	The faculty must have the qualification and competencies to cover the professional knowledge of the subjects areas in which they teach			

		- A summary of the academic qualifications of academic staff (Table 10in Appendix D). - A summary of the professional qualifications and membership in professional bodies/societies of academic staff (Table 11 in Appendix D). - This shall also include registration with Myanmar Engineering Council in line with the requirement. - A summary of posts held by full time academic staff (Table 12 in Appendix D). - A summary of teaching workload of academic staff for the current semester (Table 13 in Appendix D). - An analysis of all support staff (Table 14 in Appendix D). - A summary of the posts held by support staff (Table 15 in Appendix D). - The staff: student ratio by year for all academic years for the past four years (Table 16 in Appendix D). - A listing of lecturers/ invited speakers from industry/ public bodies and their level of involvement.	12) Policies on encouraging faculty participating in professional activities. 1) Records on faculty student advising and related information, including faculty-student meetings. 8) Records and procedures on applying grants from government, and industry by the faculty. 9) Records of faculty industry involvements. 10) Records of improvement on teaching by faculty. 11) Policies on encouraging faculty professional development and	
5.4	The programme must demonstrate the effectiveness of	1) Discuss how the overall staff workload enables effective teaching, student-staff		

	faculty-student interactions and student advising.	interaction, student advising and counseling, IHL service and research activities, professional development and	research. 12) Policies on encouraging faculty participating in professional activities.	
5.4	The program must demonstrate the effectiveness of faculty-student interactions and student advising.	1) Discuss how the overall staff workload enables effective teaching, student-staff interaction, student advising and counseling, IHL service and research activities, professional development and interaction with industry.		
5.5	The programme must demonstrate the effectiveness of interactions of the faculty with industry.	1) Describe participation of academic staff in consultancy activities		
5.6	The programme must provide the faculty with appropriate channels and incentives for processional growth and development	1) Discuss the sufficiency and competency of technical and administrative staff in providing adequate support to the educational programme. 2) Describe the implemented professional training scheme and incentives for academic staff. List down academic staff who have undergone or still		
5.7	The faculty must participate in relevant academic and professional organizations and activities	1) Describe participation of academic staff in research and development activities. 2) Describe CQI strategies to be implemented in relation to Academic and Support Staff.		

		3) Self-assess on programme performance related to Academic and Support Staff based on the following scale (with justifications): *poor/Satisfactory/Good		

Criterion 6: Facilities

Criterion		Self-Study Report	Performance Indicators	Checked by Evaluation Team
6.1	The programme must provide an environment to foster effective faculty-student interaction.	1) Discuss the adequacy of teaching and learning facilities such as classrooms, learning-support facilities, study areas, information resources (library), computing and information- technology systems, laboratories and workshops, and associated equipment to cater for multi-delivery modes	1) Inventory of subscribed domestic/ international periodicals, magazines, professional journals, etc 2) Plans and records of facilities and space usage. 3) Management policy on labs and teaching facilities. Inventory of labs and teaching facilities. 4) Lab course syllabi, manuals, and safety guides. 5) Records and logs on sanitation safety seminars/ meetings.	
6.2	The programme must provide an environment to support the development of professional knowledge and skills of students.	1) For programmes offered wholly or partly in distance mode, or at multiple or remote locations, describe how the facilities provided are equivalent to those provided for on-campus students. 2) Describe the adequacy of support facilities such as hostels, sport and recreational centres,		

		health centres, student centres, and transport in facilitating students' life on campus and enhancing character building.		
6.3	The programme must provide enough opportunities and guidance for students to learn the use of specialized equipments and tools	1) The information required in items 1 to 3 above should be provided in the supporting documents but is not limited to the following: - A summary, in tabulated form, of the lecture facilities (give number, capacity, and audio video facilities available).		
6.4	Computing and information infrastructure must be in place to support the teaching activities of the programme	- A summary, in tabulated form, of the laboratories (list down the equipment available in each laboratory). - A summary, in tabulated form, of the workshops (list down the equipment/ machinery available in each workshop). - A summary, in tabulated form, of the computer laboratories (list down the hardware and software available). - A summary, in tabulated form, of the other supporting facilities such as the library(list down the titles of books/ journals/ magazines/		

		standards of relevance to the programme). - A summary, in tabulated form, of recreational facilities. - A summary, in tabulated form, of information on recent improvements and planned improvements in these facilities.		
6.5	The programme must have an appropriate system in place to maintain, upgrade, and manage these facilities.	1) Describe procedures and monitoring of health, safety and environmental aspects of facilities including lecture halls, laboratories, equipment, etc. 2) Describe maintenance and calibration aspects of teaching facilities and equipment/ apparatus. 3) Discuss how the safety, health and environment issues being managed by the IHL. 4) Describe CQI strategies to be implemented in relation to Facilities. 5) Self-assess on programme performance related to Facilities based on the following scale (with justifications): *poor/Satisfactory/ Good		

Criterion 7: Quality Management Systems (QMS)

Criterion		Self-Study Report	Performance Indicators	Checked by Evaluation Team
7.1	The institution must provide adequate support and financial resources to assure the quality and continuity of the programme, along with constructive leadership and management	Describe the Quality Management Systems and organisational structure of the IHL as well as the structure within the faculty/ department/ programme. Discuss the commitment and level and adequacy of institutional support, operating environment, financial resources, constructive leadership, policies and mechanisms for attracting, appointing, retaining and rewarding well-qualified staff and provision of professional development, and provision of infrastructure and support services to achieve the PEOs and GAs and assure continuity/sustainability of the programme. All relevant policies are to be made available during the visit	1) Records and procedures on programme head selection. 2) Meeting minutes on forming the programme's short, intermediate, and long term, goals. 3) Policies and budgeting on supporting faculty growth 4) Job description of the supporting staff. 5) Policies and budgeting for facilities and space. 6) QMS and organizational structure 7) Available policies 8) Standard operating procedure (SOP), or ISO or other certifications 9) Relevant files (including course files) and documentation 10) Relevant minutes of meeting related to QMS, such as IAP's	
7.2				
7.3	Resources must be sufficient to support the ongoing professional development of the faculty.			
7.4	Administrative personnel and technical staff must be adequate to meet the program's needs. Financial resources must be sufficient to acquire, maintain, and operate the facilities, infrastruc-ture,			

	and equip-ment, appropri-ate for the program to support education-nal needs		meeting, Quality Committee meeting, etc. 11) Management system for safety, health and environment 12) Letters of appointment of IAP, External examiner, and committee members, etc. 13) External examiners' reports 14) Benchmarking report/s 15) Responses to close the loop of feedback from stakeholders	
7.5	Demonstrate in a consistent manner that students have attained the graduate attributes by graduation.	Describe how the Quality Management System (QMS) of the IHL provides quality assurance covering (not limited to) the following: - System for Examination Regulations including Preparation and Moderation of Examination Papers: The programme has established a working system for examination regulations including preparation and moderation of examination papers. - System of Assessment for Examinations, Projects, and Industrial Training: The programme has established a working system for assessment of examinations, projects, industrial training and other forms of learning delivery. The scope of assessment is wide enough to cover the achievement of GAs. - System for student admission and teaching and learning: The programme has established a		

		working system for student admission and teaching and learning		
7.6	Demonstrate in a consistent manner that planning and implementation of the curriculum must correlate the development of the industry and prepared students for engineering practice.	Discuss the mechanism for the following: programme planning; curriculum development; curriculum and content review; responding to feedback and inputs from stakeholders including Industry Advisory Panel (IAP), students and alumni; tracking the contribution of individual courses to the GAs; tracking outcomes of performance through assessment; responding to External Examiners comments; reviewing of PEOs and GAs; and Continual Quality Improvement (CQI). Where these are discussed elsewhere in the report, specify their locations. For a new programme, the IHL also needs to discuss the processes surrounding the decision to introduce the programme.		
7.7	Demonstrate in a consistent manner that continuous improvements are attained in other areas	1) Discuss benchmarking process: a) Implementation of regular processes for external referencing of specified learning outcomes and observed graduate capabilities against the expectation of employers, as well as national/ international		

		practices b) Implementation of regular processes for external referencing of the success of student cohorts against comparable programmes, including: i. Analysis of success, retention progression rates, attrition rates and completion times and rates, and where applicable, for different locations of delivery and modes of study ii. The assessment methods and grading of students' achievements of specified learning outcomes for selected courses of study within the programme 2) Summarise feedback obtained from all stakeholders (External Examiner, IAP, students and alumni, etc.) and how CQI was carried out. 3) Summarise benchmarking reports and how CQI was carried out. 4) Describe the management system for safety, health and environment. 5) Describe CQI strategies to be implemented in relation to QMS. 6) Self-assess on programme		

		performance related to Quality Management Systems (QMS) based on the following scale (with justifications): *poor/Satisfactory/Good		

Criterion 8: Discipline-Based Criteria

Criterion		Self-Study Report	Performance Indicators	Checked by Evaluation Team
8.1	All courses and faculty qualifications must be consistent with the respective disciplines; and if a programme encompasses multiple disciplines, it must satisfy the criteria of all respective disciplines.	1) Demonstrate the programme name reflects the educational objectives of the programme. 2) Demonstrate the programme/curriculum name reflects courses of the programme. 3) Demonstrate evidences and supports of coordination and leadership by the institution when two and/or more programmes consolidate into one. 4) Self-assess on programme performance related to discipline-based criteria based on the following scale (with justifications): *poor/Satisfactory/ Good	1) Information on the logical association between the programme name and the disciplines it covers. 2) Records of procedures on programme consolidation.	

SUPPORTING DOCUMENTS

To be submitted as evidences with SAR in digital format.

Ref. item	Supporting documents required	Indicate the location of these items in the submitted SAR	Checked by Evaluation Team
A1–A14	Official publications relating to the Faculty/School/Department/Programme, undergraduate prospectus and other information accessible through website.		
B1–B5	Programme's previous accreditation history, reports, relevant letters, and other relevant documents.		
C1	Documented evidences of publication or dissemination of vision and mission statements.		
C2	Documented evidences of publication or dissemination of PEO statements.		
C4	Documented evidences of publication of PEO elements/performance indicators, achievement criteria, and performance targets		
C5	Sample responded questionnaires/survey forms and/or other tools used to establish/formulate/define PEO elements/performance indicators, and review the PEOs.		
C6	Sample responded questionnaires/survey forms and/or other tools used to evaluate achievement of the PEOs.		

C8	Documented evidences of how the processes and results obtained from the processes resulted in the CQI of the programme.		
C9	Documented evidences such as minutes of meetings, training lists anddocuments, workshop reports, briefing notes, reminders, relevant forms, and internal communications, instructions, etc. of the processes related to PEOs, and the involvement of various internal and external stakeholders in these processes to support claims made in this section.		
D1	Documented evidences of publication or dissemination of GA statements.		
D4	Documented evidences of publication or dissemination of definition of GA elements/performance indicators.		
D5	Sample responded questionnaires/survey forms and/or other tools used to establish/formulate/define GA elements/performance indicators, and review of the GAs.		
D6	Documented evidences of publication or dissemination of the OBE model adopted to deliver, assess and evaluate achievement of the GAs.		
D6–D9	'GA box/tray' for each GA, to cover from mapping of courses to the selected GAs, until the determination of the GA achievements (based the adopted model).		
D10	Documented evidences of established GA management system (computer software etc.).		

D11	Documented evidences such as minutes of meetings, training lists and documents, workshop reports, briefing notes, reminders, relevant forms, and internal communications, instructions, etc. of the processes related to GAs, and the involvement of various internal and external stakeholders in these processes to support claims made in this section.		
E3	Documented evidences of publication or dissemination of overall 'Courses to GAs' mapping matrix.		
E5	Documented evidences of publication or dissemination of the elaboration/definition of CPS, CEA and Knowledge Profile.		
E6	List of titles of experiments in the laboratory and documented evidences showing open- ended laboratory activities.		
E7	List of industrial training companies.		
E8	List of exposure to professional practice activities and sample students' reports.		
E9	List of final-year project titles.		
E10	Integrated design project's synopsis and learning outcomes and Course to Graduate Attributes matrix.		
E11	Documented evidences showing programme implementation of the 'Condition for Passing Courses'.		
E12	Documented evidences such as minutes of meetings, training lists and documents, workshop reports, briefing notes, reminders, relevant forms, and internal		

	communications, instructions, etc. of the processes related to Academic Curriculum, and the involvement of various internal and external stakeholders in these processes to support claims made in this section.		
F1	Documented evidences showing the students admission requirements to the programme.		
F2	Documented evidences showing the policies and processes for credit transfer/exemption.		
F3	Documented evidences showing available students' counselling services.		
F4	Documented evidences showing formal or informal feedback platform/channel to obtain students feedback and suggestions for further programme improvement.		
F6	Documented evidences showing students' involvement in student organisations and relevant professional engineering bodies that		
	provide experience in management and governance, representation in education and related matters, non-academic or co-curricular activities, and social activities.		
F8	Documented evidences showing students' performance in relation to GA from an overall holistic perspective, from both curricular and co-curricular activities, such as participating in design competition, public speaking activities, etc.		

G1	Documented evidences of staff training to ensure real understanding and implementation of OBE, as well as other training such as effective communication skills, teamwork, leadership, etc.		
G5	Documented evidences showing participation of academic staff in professional training and qualifications, and programme's projection/plan on professional training schemes for academic staff.		
G6	Documented evidences showing participation of academic staff in consultancy activities.		
G7	Documented evidences showing participation of academic staff in research and development activities.		
H5	Documented evidences of procedures and monitoring of health and safety aspects of facilities including lecture halls, laboratories, equipment, etc.		
H6	Documented evidences of maintenance and calibration of facilities and equipment/apparatus in the laboratories or elsewhere.		

11-16	Documented evidences of (not limited to): • QMS and organisational structure. available policies. • Standard Operating Procedures (SOP), or ISO or other certifications. • Relevant files (including course files) and documentations. • Relevant minutes of meeting (MOM) related to QMS, such as from IAP's meetings, Quality Committee meeting, etc. • Management system for safety, health and environment. • Letters of appointment of IAP, External Examiner(s), and committee members, etc. • External Examiners' reports. • Benchmarking report/s. • Provide responses to close the loop of feedback from stakeholders.		

APPENDIX A

ENGINEERING CONTENT FOR SELECTED ENGINEERING DISCIPLINES AND INNOVATIVE PROGRAMMES

(a)(i) Engineering Science and Principles for Traditional Programmes

An accredited programme is expected to cover the broad areas of the respective disciplines at an appropriate level. The following are the underpinning areas to be introduced for the respective traditional programmes/disciplines programmes:

CHEMICAL	CIVIL	COMPUTER ENGINEERING AND INFORMATION TECHNOLOGY	ELECTRICAL
Chemical Thermo-dynamics	Strength of Materials	Cryptography and Information Protection	Circuits and Signals
Material and Energy Balance	Structural Analysis and Design	Communications. Wireless and Mobile Computing	Electromagnetic Field and Waves
Chemical Kinetics and Reactor Design	Fluid Mechanics/ Hydraulics	Operating Systems	Instrumentation and Control
Momentum Transfer	Soil Mechanics/ Geotechnical Engineering	Distributed Systems	Digital and Analogue Electronics
Heat Transfer	Civil Engineering Materials	Computer Systems: Architecture, Parallel Processing, and Dependability	Machines and Drives
Mass Transfer	Statics and Dynamics	Embedded Systems	Power Electronics
Separation Process	Construction Engineering	Circuit and Systems	Electrical Power Generation and High Voltage Engineering
Process Design	Surveying	Computer Vision and Image Processing Signal and Speech Processing	Communications System
Process Control and	Water Resources and Hydrology	IoT and Cloud Computing	Power System Analysis

Instrumentation			
Safety and Environmental Protection	Highway and Transportation	Software Engineering	Electronic Drives and Applications
Environmental Studies	Environmental Studies	Programming	Electrical Energy Utilisation
Plant, Equipment Design and Economics			

ELECTRONIC	**MECHANICAL**	**NAVAL ARCHITECTURE AND MARINE ENGINEERING**	**PETROLEUM**
Circuits and Signals	Materials	Strength of Materials	Geology for Petroleum Engineers
Electromagnetic Fields and Waves	Statics and Dynamics	Statics and Dynamics	Strength of Materials
Instrumentation and Control	Fluid Mechanics	Fluid Mechanics Hydrodynamics	Chemical Engineering Thermodynamics
Digital and Analogue Electronics	Thermo- dynamics and Heat Transfer	Thermodynamics Heat Transfer	Fundamentals of Petroleum Engineering
Microprocessor Systems	Mechanical Design	Structural Design and Analysis	Reservoir Rock and Fluid Properties
Programmeming Techniques	Instrumentation and Control	Marine and Marine Engineering Design	Reservoir Engineering
Introduction to Electrical power System	Vibrations	Resistance and Propulsion	Well Drilling Equipment and Operations
Computer Architecture	Solid Mechanics	Ship and Machinery Production Technology	Production Engineering (Oil & Gas Facilities Operations inclusive)

Communications System	Manufacturing/ Production	Naval Architecture	Natural Gas Engineering (Gas Processing, Transportation, Operating Facilities such as LNG, CNG, etc. & Fiscal Metering inclusive)
Electronic System Analysis and Design	Electrical Power and Machines	Marine and offshore Engineering	Reservoir Characteristics & Simulation
Digital signal processing and application	Electronics and Micro-Processors	Computer Application in Marine Design	Well Technology
	Computer Aided Engineering	Marine Electrical Systems and Electronics	Petroleum Economics
			Petroleum Engineering Design
			Fundamentals of Enhanced Oil Recovery
			Environmental Technology and Safety in Petroleum Industry

(a)(ii) **Engineering Applications**

Emphasis on engineering applications in degree programmes aims to ensure that all engineering graduates have a sound understanding of up-to-date industrial practice, in particular:

Chemical Engineering

1. To appreciate the physical/chemical characteristics and properties of materials.
2. To be able to adopt these materials in process design and analysis.
3. To calculate and analyse the material and energy flows for a given chemical process.
4. To understand the general sequence of processing steps for any given type of chemical process.
5. To understand the selection or estimation of process operating conditions, selection of process equipment, maintenance and process troubleshooting.
6. To analyse the various types of unit operations and processing steps and to decide their relative advantages or disadvantages on the basis of environment, economics, safety and operability.

7. To understand the various process control schemes for the purpose of maintaining production quality, ensuring process safety and preventing waste.

Civil Engineering:

1. To appreciate the characteristics and structural behaviour of materials in a variety of user environments.
2. To be able to analyse and design structural components from these materials.
3. To appreciate the range of construction technology currently available and the skills which they require in people for their use.
4. To appreciate the cost aspects of material selection, construction methods, operation and maintenance in their interaction with design and the delivery of civil engineering facilities and services.
5. To understand the whole process of industrial decision-making in design, manufacturing and use and how it is influenced not only by technical ideas but also by the practical constraints of financial and human resources as well as the business and social environment of engineering.

Computer Engineering and Information Technology:

1. To be able to analyze a problem, to identify and define the requirements appropriate to its solution, to design, implement, and evaluate a solution to meet the requirements.
2. To be able to analyze and design the components of a computing system.
3. To be able to make sure computer systems developed methodically result in building the right components with quality built in from the beginning.
4. To build integrated environments for computing, communications, and information access and work advancements in telecommunication systems and networks including security issues.
5. To appreciate the quality and innovations using IoT and emerging technologies.

Electrical and Electronic Engineering:

1. To appreciate the characteristic behaviour of materials in electrical and electronic systems.
2. To be able to analyse and design electrical and electronic systems from devices/components made of various materials.
3. To understand the concepts of generation, transmission and distribution of low and high voltage power.
4. To appreciate cost effectiveness and energy consumption of component/device equipment selection, manufacturing process and integration process.
5. To appreciate the range of manufacturing methods currently available and the skills which they require in people for their use.
6. To understand the whole process of industrial decision making in design, manufacturing and use and how it is influenced not only by technical ideas but also by the practical constraints of financial and human resources and by the business and social environment of engineering.

Mechanical Engineering:

1. To appreciate the characteristic behavior of materials in a variety of user environments.
2. To appreciate the range of manufacturing systems and industry energy currently available and the skills which they require in people for their use.
3. To appreciate the cost aspects of material selection, manufacturing methods, operation and maintenance in their interaction with design and product marketing.
4. To understand the whole process of industrial decision-making in design, manufacturing and use and how it is influenced not only by technical ideas but also by the practical constraints of financial and human resources as well as the business and social environment of engineering.

Naval Architecture and Marine Engineering

A minimally competent Naval Architecture and Marine Engineer demonstrates sound engineering judgement in the application of science and engineering principles and practices to the design of vessels, marine craft, and offshore structures. The minimally component engineer shall:

1. Be knowledgeable of global and local ship structure, its arrangement, weight and load bearing capability, and its interrelation with the marine environment, giving due consideration to environmental degradation and external loads such as wind and waves.
2. Be knowledgeable concerning ship resistance and energy conversion, its application to ship propulsion, power plant selection and ship system design.
3. Be knowledgeable of the principles and practices of marine engineering including chemical, thermal, mechanical, environmental, pollution-prevention, and electrical systems, and component selection and integration.
4. Be knowledgeable of the principles and practices of hydrostatics, stability, and hydrodynamics.
5. Be knowledgeable of the effects of changes of ship form and parameters on dynamic response, seakeeping and controllability.
6. Be able to size, select, specify, and evaluate ship components and their materials of construction.
7. Be knowledgeable of the life-cycle economic effects of ship design characteristics, component selection and operations.
8. Be knowledgeable concerning constraints and practicability of shipbuilding, ship repair, and operational maintainability.
9. Be knowledgeable concerning fire fighting, structural fire protection, life saving, ship survivability, personnel safety and associated systems.
10. Be aware of and be able to apply applicable codes and standards.
11. Be knowledgeable concerning vessel mission and its effect on design.
12. Be aware of computer applications as they apply to naval architecture and marine engineering.

Petroleum Engineering

To produce well-rounded graduates with the following outcome:

1. Apply Knowledge of mathematics, science, engineering fundamentals and specialisation to the solution of complex Petroleum Engineering problems
2. Identify, formulate and analyse complex Petroleum Engineering Problems reaching sustantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.
3. Design Solutions for complex Petroleum Engineering problems and design systems, components or processes that meet specified needs with appropriate considerate for public health and safety, cultural, societal, and environmental considerations.
4. Conduct investigation into complex problems using research based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions.
5. Create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling, to complex Petroleum Engineering activities, with an understanding of the limitations.
6. Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional Petroleum Engineering Practice.
7. Understand the impact of professional Petroleum Engineering solutions in societal and environment context and demonstrate knowledge of and need for sustainable development.
8. Apply ethical principles and commit to professional practice ethics, responsibilities and norms of engineering practice.
9. Communicate effectively on complex Petroleum Engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
10. Ability to function effectively as an individual and as a member or leader in diverse teams and in multi-disciplinary settings
11. Recognise the need for and have the preparation and ability to engage in indpendent and life-long learning in the broadest context of technological change.
12. Demonstrate knowledge and understanding of Petroleum Engineering an management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environment.

(b) **Mathematics, Statistics and Computing**

These courses should be studied to a level necessary to underpin the engineering courses of the programme accordingly and with a bias towards application. The use of numerical methods of solution is encouraged, with an appreciation of the power and limitations of the computer for modelling engineering situations. Wherever practicable, it is preferred that mathematics, statistics and computing are taught in the context of their application to engineering problems and it follows that some mathematical techniques may be learnt within other subjects of the course. In

addition to the use of computers as tools for calculation, analysis and data processing, the programme should introduce their application in such area as given in the following table:

CHEMICAL	CIVIL	COMPUTER ENGINEERING AND INFORMATION TECHNOLOGY	ELECTRICAL
Computer Analysis and Design	Computer Aided Analysis and Design	Mathematical Applications	Mathematical Applications
Economics Analysis for Decision Making	Economics Analysis for Decision Making	Statistical and Numerical Techniques	Statistical and Numerical Techniques
Numerical Methods and Optimisation	Databases and Information Systems	Computer Applications	Computer Applications
Operatinal Research	Operatinal Research		
Databases and Information	Business and Management Systems		
	Statistical and Numeral Techniques		

ELECTRONICS	MECHANICAL	NAVAL ARCHITECTURE AND MARINE ENGINEERING	PETROLEUM
Mathematical Applications	Computer Aided Design and Manufacture	Computer Aided Analysis, Design and Manufacture	Computer aided Reservoir Simulation and Management
Statistical and Numerical Techniques	Economics Analysis for Decision Making	Economics Analysis for Decision Making	Economic Analysis for asset Management
Computer Applications	Databases and Information Systems	Database and Information Systems	Data Base Oil Field Management
	Operational Research	Operational Research Techniques	Operational Research
	On-line Control of Operations and Processes	Maritime Economics and Management Systems	Computer aided Well Design

		Statistical and Numerical Techniques	Statistical and Numerical Applications
			Programmemable Logic Control

c) **Evaluating non-Traditional or Innovative Programme**

It is a challenge for an accreditation process to promote innovation, experimentation and dissemination of good practice, while maintaining standards that can be objectively certified nationally and internationally. Innovation by its nature challenges existing wisdom, but not every programme that departs from existing norms can be said to be innovative or desirable. **All fundamentals required in the programme must be maintained.**

Since this Manual is silent on the broad or underpinning areas of these non-traditional programmes/disciplines, the IHL needs to conduct extensive Academic Curriculum benchmarking exercise with established IHLs conducting similar programme. A good External Examiner report will also help justify the adopted Academic Curriculum.

The EEAC accreditation system encourages innovation by minimising prescriptiveness in how the required outcomes are attained. Programme evaluation will always focus on the intent of the criteria and on the demonstrated capability of graduates to enter engineering practice at a professional level. Clearly however, a programme which departs radically from the methods normally thought necessary – for example, by employing only a fraction of the normal complement of staff – may expect a searching examination of method as well as outcomes. The EEAC and the Evaluation Team are expected to be receptive to new approaches, and to use the best judgment available to evaluate the substance and merit of the programme.

Continuing innovation and development can be expected to lead to restatement of the criteria and policy of accreditation.

(d) **Definition of Complex Problem Solving**

The range of **complex problem solving** is defined as follows:

No.	**Attribute**	**Complex problems** have characteristic WP1 and some or all of WP2 to WP7:
WP1	Depth of Knowledge Required	Cannot be resolved without in-depth engineering knowledge at the level of one or more of WK3, WK4, WK5, WK6 or WK8 which allows a fundamental-based, first principles analytical approach.
WP2	Range of conflicting requirements	Involve wide-ranging or conflicting technical, engineering and other issues.

WP3	Depth of analysis required	Have no obvious solution and require abstract thinking, originality in analysis to formulate suitable models.
WP4	Familiarity of issues	Involve infrequently encountered issues.
WP5	Extent of applicable codes	Are outside problems encompassed by standards and codes of practice for professional engineering.
WP6	Extent of stakeholder involvement and level of conflicting requirements	Involve diverse groups of stakeholders with widely varying needs.
WP7	Interdependence	Are high level problems including many component parts or sub-problems.

(e) Definition of Complex Engineering Activities

The range of **complex problem activities** is defined as follows:

No.	**Attribute**	**Complex activities** mean (engineering) activities or projects that have some or all of the following characteristics:
EA1	Range of resources	Involve the use of diverse resources (and for this purpose resources includes people, money, equipment, materials, information and technologies).
EA2	Level of interactions	Require resolution of significant problems arising from interactions between wide ranging or conflicting technical, engineering or other issues.
EA3	Innovation	Involve creative use of engineering principles and research-based knowledge in novel.
EA4	Consequences to society and the environment	Have significant consequences in a range of contexts, characterized by difficulty of prediction and mitigation.
EA5	Familiarity	Can extend beyond previous experiences by applying principles-based approaches.

(f) Knowledge Profile**

The curriculum shall encompass the **knowledge profile** as summarised in the table below:

**A programme that builds this type of knowledge and develops the attributes listed below is typically achieved in 4 to 5 years of study, depending on the level of students at entry.

No.	Knowledge Profile
WK1	A systematic, theory-based understanding of the **natural sciences** applicable to the discipline.
WK2	Conceptually-based **mathematics**, numerical analysis, statistics and formal aspects of computer and information science to support analysis and modelling applicable to the discipline.
WK3	A systematic, theory-based formulation of **engineering fundamentals** required in the engineering discipline.
WK4	Engineering **specialist knowledge** that provides theoretical frameworks and bodies of knowledge for the accepted practice areas in the engineering discipline; much is at the forefront of the discipline.
WK5	Knowledge that supports **engineering design** in a practice area.
WK6	Knowledge of **engineering practice** (technology) in the practice areas in the engineering discipline.
WK7	**Comprehension of** the role of engineering in society and identified issuesin engineering practice in the discipline: ethics and the professional responsibility of an engineer to public safety; the impacts of engineering activity: economic, social, cultural, environmental and sustainability.
WK8	Engagement with selected knowledge in the **research literature** of the discipline.

APPENDIX B

EXTERNAL EXAMINER'S REPORT

The external examiner's report shall contain but is not limited to the following:

(i) Assessment of programme curriculum.

(ii) Assessment of OBE implementation and achievement of the GAs by the students.

(iii) Assessment of staff quality including qualifications and industry exposure. This is to include assessment of loading of each staff in teaching, research, consultancy and supervision of student projects.

(iv) Assessment of staff-student ratio and student workload. If found to be not sufficient, corrective action to be taken by the IHL.

(v) Assessment of preparation process of examination papers i.e. procedures for setting and vetting, quality assurance, confidentiality and security.

(vi) Assessment of examination papers and marking schemes set for the standard of questions, coverage of syllabus, adequate balance between theory and application, setting of questions of equal level, adequate choice of questions, and appropriateness of marking scheme.

(vii) Assessment of the marked answer scripts based on a sample of good, average and weak candidates. Fairness/disparity of marking, follow-through method adopted if answer to one section is wrong, response of candidates to the question, and distribution of marks.

(viii) Assessment of coursework, laboratory work, assignments, design projects, final-year projects.

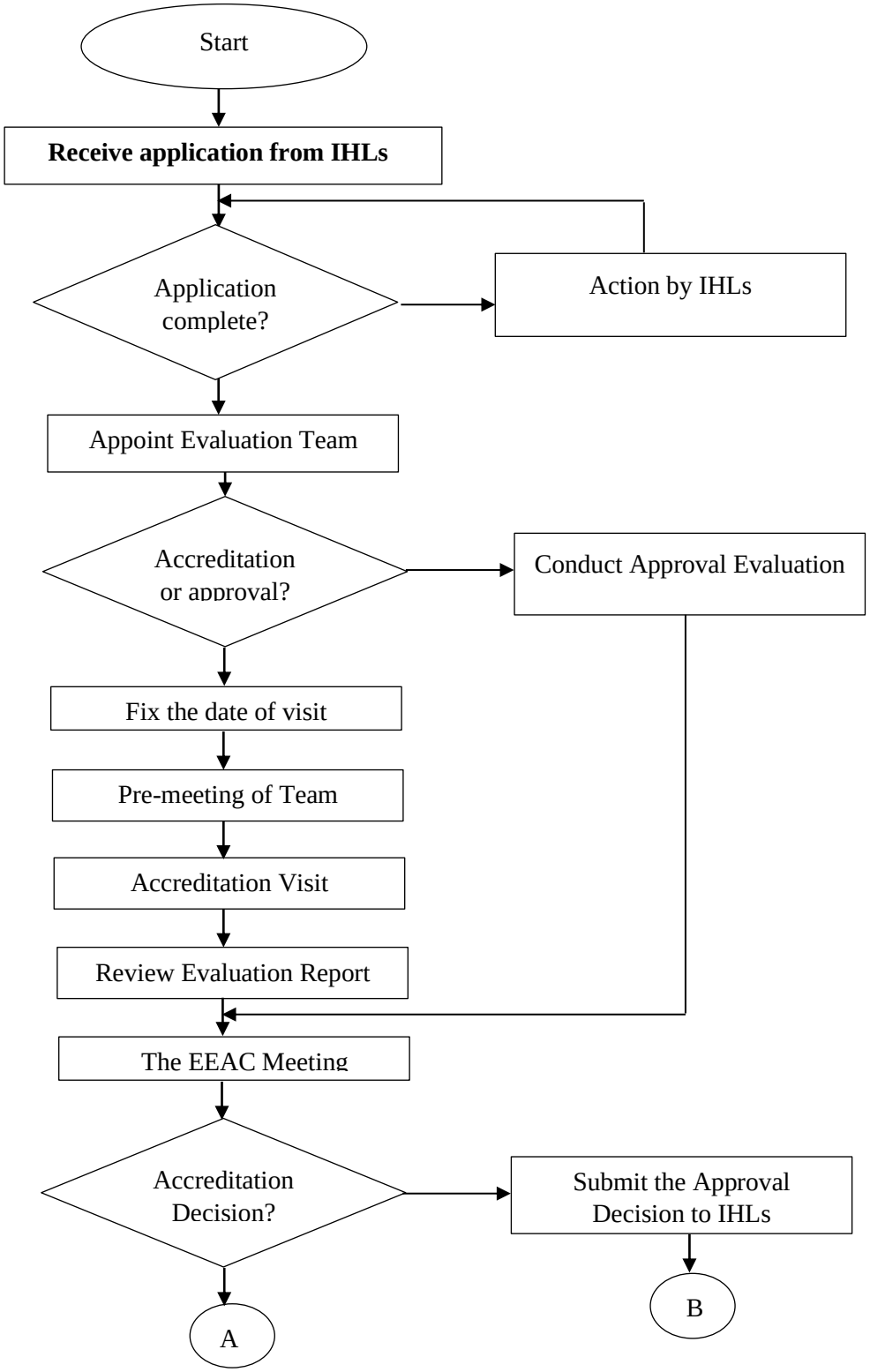
(ix) Assessment of examination procedures and regulations.

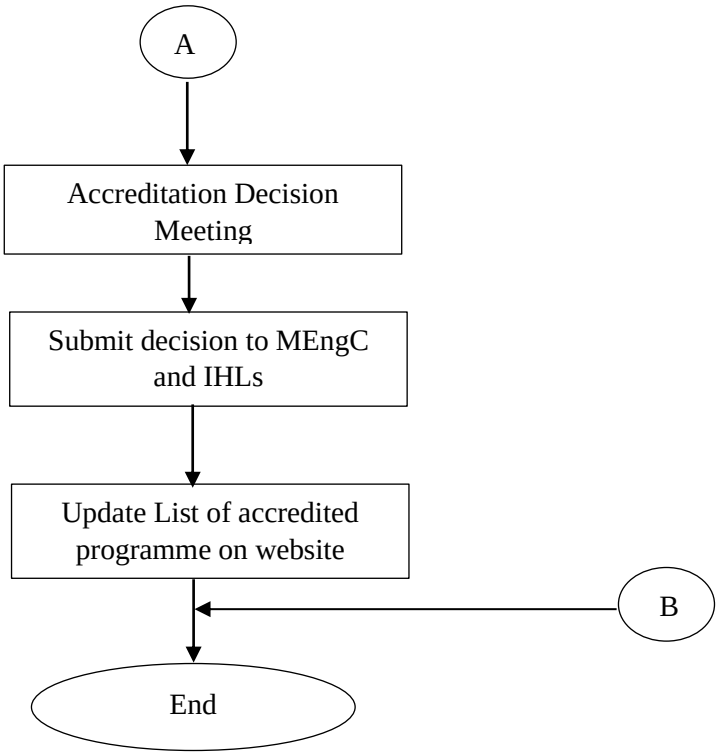
(x) Management commitment towards the programme.

(xi) Assessment of assessments moderation process.

APPENDIX C

PROCESS FLOW CHART FOR APPLICATION OF ACCREDITATION AND APPROVAL OF ENGINEERING PROGRAMMES




A
Accreditation Decision Meeting
Submit decision to MEngC and IHLs
Update List of accredited programme on website
B
End

APPENDIX D

TABLE 1 Course to GA Matrix (SAMPLE)

Code	Course	Core/ Elective	Graduate Attributes											
			1	2	3	4	5	6	7	8	9	10	11	12
XX1A	Subject 1	Core	/											
XX1B	Subject 2	Core	/											
XXC	Subject 3	Core	/	/										
XXD	Subject 4	Core	/		/			/						
XX1E	Subject 5	Core						/		/				
XX1F	Subject 6	Core	/								/			
XXG	Subject 7	Core	/	/										
XXH	Subject 8	Core	/											
XX1I	Subject 9	Core		/		/								
XX1J	Subject10	Core		/	/			/			/	/		/
XX2A	Subject 1	Core									/	/		/
XX2B	Subject 2	Core		/		/								
XXC	Subject 3	Core	/										/	
XXD	Subject 4	Core							/	/				/
XX2E	Subject 5	Core		/	/			/			/	/		/
XX2F	Subject 6	Core		/	/	/	/	/			/		/	
XXG	Subject 7	Elective	/										/	
XXH	Subject 8	Elective							/	/				/
XX2I	Subject 9	Elective	/			/								
XX2J	Subject10	Elective			/			/	/					
XX2A	Subject11	Elective		/		/								

TABLE 2 Distribution of Engineering Courses for an Engineering Programme

(SAMPLE)

Groupings	Course Code	Course	Course Type	Student Learning Time							Credits
				Guided Learning					Self-Learning	Others Eg: assessment	
				Lecture	Lab/ Workshop	Project	PBL/ Design	Tutorial			
Broad Area 1	XXXX	Subject 1	Core	28	28	-	-	-	xxx		3
	XXXY	Subject 2	Core	28	-	-	-	28			3
	XXXZ	Subject 3	Core	28	-	28	-	-			3
Broad Area 2	YYYY	Subject 4	Core	42							3
	YYYX	Subject 5	Core	14	28	-	28	-			3
	YYYZ	Subject 6	Core								
Broad Area 3	etc.	etc.									
Broad Area 4											
Elective Courses	FGHI	Elective I	Elective								
	HUK	Elective II	Elective								
	UKL	Elective III	Elective								
Total Credits											
Industrial Training	ABCD	Industrial Training	Core	10 Weeks							5 credits
Final Year Project	BCDE	Project I	Core	Thesis							
	DEFG	Project II	Core	Thesis							
TOTAL CREDITS FOR ENGINEERING COURSES											

TABLE 3 **List of Elective Courses according to Areas of Field of Specialisation (if applicable)**

AREAS	CODE	ELECTIVE COURSES
Broad Area 1		
Broad Area 2		
Broad Area 3		
Broad Area 4		
Broad Area 5		

TABLE4 Distribution of General Education Courses for an Engineering Programme (SAMPLE)

Areas (EAC)	Code	Course	Course Type	Student Learning Time						Credits
				Guided Learning				Self-Learning	Others Eg: assessment	
				Lecture	Lab/Work-shop/ Project	Tutorial	Others			
Applied Science/ Maths/Computer	XXXX	Subject 1	Core	42		14	xxx			xxx
	XXXY	Subject 2	Core	28	28					xxx
	XXXZ	Subject 3	Core	42		6				xxx
	TOTAL CREDITS									**XXX**
Management/Law/ Accountancy	XXXX	Subject 1	Core	42						
	XXXY	Subject 2	Core	42						
	TOTAL CREDITS									**XXX**
Communication Skills/Humanities/ Ethics	XXXV	Subject 1	Core	35		14				
	XXXW	Subject 2	Core	42						
	XXXX	Subject 3	Core	28						
	XXXY	Subject 4	Core	28						
	XXXZ	Subject 5	Core	42						
	TOTAL CREDITS									**XXX**
Co-curriculum	H	Co-curriculum 1	Core	14						
	H	Co-curriculum 2	Core	14						
	TOTAL CREDITS									
TOTAL CREDITS FOR GENERAL EDUCATION COURSES										**XXX**

TABLE 5 Courses Offered (Programme Structure) According to Semester and Total Credits

(SAMPLE)

Semester	Code	Courses	Course Type	Credits	
				Engineering Courses	Non Engineering Courses
1	XXXA	Subject 1	Core		1
	XXXB	Subject 2	Core	3	
	XXXC	Subject 3	Core	3	
	XXXD	Subject 4	Core		3
	XXXE	Subject 5	Core		3
II	XXXV	Subject 1	Core	3	
	XXXW	Subject 2	Core		3
	XXXX	Subject 3	Core	3	
	XXXY	Subject 4	Core		3
	XXXZ	Subject 5	Core		3
INTER SESSION	etc.	etc.	Core		
III					
IV					
V					
VI					
INTER SESSION					
VII					
VIII					
TOTAL CREDITS					
TOTAL CREDITS					

TABLE 6 Distribution of Student Enrolment for all Academic Years for the Past Four Years

YEAR	YEAR					
	Current academic year - 5	Current academic year - 4	Current academic year - 3	Current academic year - 2	Current academic year - 1	Current academic year
1st Year						
2nd Year						
3rd Year						
4th Year						
5th Year						
6th Year						
Total No. of students Per Year						

TABLE 7 Entry Qualification of Final Year Students of the Current Year

ENTRY QUALIFICATIONS	NUMBER
Matriculation	

TABLE 8 Breakdown in Terms of Numbers of Academic Staff (Fulltime, Part-Time and Interprogramme) by Year for all Academic Years for the Past Six (6) Years

ACADEMIC STAFF	YEAR					
	Current academic year-5	Current academic year-4	Current academic year-3	Current academic year-2	Current academic year-1	Current academic year
(a) Total number of full-time staff (including those servicing other programmes, staff on study or sabbatical leave)						
(b) Full-time equivalent of academic staff servicing other programmes						
(c) Academic staff (on study or sabbatical leave)						
(d) Effective full-time academic staff = (a)-(b)-(c)						
(e) Full-time equivalent of academic staff from other programmes servicing this programme						
(f) Full-time equivalent of part time academic staff						
Full-Time Equivalent Academic Staff (FTES) Contributing to Staff: Student Ratio = (d)+(e)+(f)						

Notes :

If an academic staff member is involved in teaching more than one degree programme (including off-campus and distance learning), then the full-time equivalent of that particular staff has to be calculated.

For full time equivalent staff calculation, the following can be used as a basis:

One Full-Time Equivalent Staff Member should normally have 15 contact hours (lecture/tutorial/lab supervision/student consultation) per week.

Table9 Analysis of all Academic Staff

Name	Post Held	Date of First Appointment at the Fac/Sch/Dept	Part or Full Time or from Other Programmes	Academic Qualifications/ Field of Specialization/ Institution and Year of Award	Professional Qualifications	Membership in Professional Bodies/learned Societies	Years of Experience		Level of Activity (high, med, low, none)				
							Govt./Industry Practice	This Fac/Sch/Dept.	Professtional Society (Indicate Society)	Research	Consulting/ Work in Industry	Publications	Administration

TABLE 10 Academic Qualifications of Academic Staff

Academic Qualifications	Number
Doctorate	
Masters	
Bachelor	
TOTAL	

TABLE 11 Professional Qualifications and Membership in Professional Bodies/Learned Societies of Academic Staff

Type of Qualification/Field	**Number**
P.E.	
R.S.E.	
R.E.	
A.E.C	
RGTech	
AGTechC	
R.Tech	
ATechC	
Others (please specify)	

TABLE 12 Post Held by Academic Staff

Post	Number	
	Full Time	Part Time
Professor		
Assoc. Professor		
Assistant Professor		
Senior Lecturer		
Lecturer		
Others (please specify)		
Total		

TABLE 13 Academic Staff Teaching Workload Summary for the Current Semester

Staff Member (Name)	Part or Full Time or From Other Programmes	Courses Taught (Course Code/Credits*)

Table 14 Analysis of all Support Staff

Name	Post Held	Date of First Appointment at the Fac/ Sch/ Dept.	Academic Qualifications/Field of Specialization/Institution and Year of Award	Years of Experience	
				Govt./Industry Practice	This Fac/Sch/ Dept.

TABLE 15 Post Held by Support Staff

Post	Number
TOTAL	

TABLE 16 Staff: Student Ratio

SESSION	Current academic year - 5	Current academic year - 4	Current academic year - 3	Current academic year - 2	Current academic year - 1	Current academic year
RATIO						

APPENDIX F

Glossary of Key Terms for Engineering Education Accreditation

Serial	Term	Definition
1.	Accreditation	A process of self-study by the programme and external peer review by appropriately trained and independent teams from both academia and engineering practice for quality assurance, accountability, and quality improvement of an academic programme designed to determine whether or not it has met or exceeded the published standards of the accredit or and is achieving its missions and objectives. Success results in an accredited programme. Accreditation of an engineering educational programme is the primary process used to ensure the suitability of graduates of that programme meeting the entry level of the engineering profession.
2.	Accreditation Action	A judgment by an accrediting body regarding accreditation for institutions and/or programmes. Includes, for example, accredited, denial of accreditation, probation, and warning. etc. *Also often called: decision; status.* *See also:*
3.	Accreditation Body	A body that develops accreditation standards and criteria and conducts peer review to assess whether or not those criteria are met. There are different types of accreditation bodies (e.g., agencies, councils, commissions, etc.), focused on general accreditation, specialized accreditation, professional accreditation, regional accreditation, national accreditation, distance education accreditation, etc. Generally, the accreditation body must make independent decisions without influence of education providers, government and other interest organizations.
4.	Accreditation Cycle	Accreditation decisions are time-limited, normally good for five or six years. The duration of validity of the accreditation license is established by the accrediting body, which generally holds the right to suspend and/or to renew the license, upon the satisfactory resolution of any identified issues. *Also often called: duration of accreditation.*
5.	Assessment	The process of the systematic gathering, quantifying, qualifying, and using information through a total range of written, oral and practical tests, as well as surveys, projects and portfolios, to judge the instructional effectiveness and the curricular adequacy in light of

		student learning outcomes. Assessment is necessary in order to validate a formal accreditation decision, but it does not necessarily lead to an accreditation outcome.
6.	Attributes	A list of characteristics, namely knowledge, skills, and attitudes, associated with an individual. *See also: outcomes.*
7.	Graduate Attributes	A list of characteristics, namely knowledge, skills, and attitudes, associated with an individual upon graduation from a degree-granting programme.
8.	Benchmarks	Reference point or standard against which progress or outcomes may be measured and compared. Subject benchmark statements provide a means for the academic community to describe the nature and characteristics of programmes in a specific term. They also represent general expectations about the standards for the award of qualifications at a given level and articulate the attributes and capabilities that those possessing such qualifications should be able to demonstrate.
9.	Best Practice	A superior method or an innovative process involving an actual accepted range of reasonable practices resulting in the improved performance of a higher education institution or programme, usually recognized as “best” by other peer organizations. A best practice does not necessarily represent an absolute, ultimate example or pattern, the application of which assures the improved performance of a higher education institution or programme; rather, it has to do with identifying the best approach to a specific situation, as institutions and programmes vary greatly in constituencies and scope.
10.	Competence	A concept which embodies the ability of an individual to transfer skills and knowledge to specific situations.
11.	Continuous Professional Development	The planned acquisition of knowledge, experience and skills, and the development of personal qualities necessary for the execution of professional and technical duties throughout an engineer's professional life.
12.	Credit	The "currency" used to measure student workload in terms of the national learning time required to achieve specified learning outcomes. To each course unit a certain amount of credits are assigned. A credit system facilitates the measurement and comparison of learning outcomes achieved in the context of different qualifications, programmes of study and learning environments.

13.	Criteria	Checkpoints/benchmarks by which the attainment of certain objectives and/or standards can be examined. These involve expectations about quality, effectiveness, financial viability, compliance with national rules and regulations, outcomes, and sustainability. Criteria describe in a certain degree of detail the characteristics of the requirements and conditions to be met [in order to meet a standard] and therefore provide the (quantitative and/or qualitative) basis on which an evaluative conclusion is drawn.
14.	Performance Criteria	Yardsticks/checkpoints/benchmarks that are used to judge the attainment of performance standards. As qualities, characteristics, or dimensions of a standard for student performance, they indicate how well students meet expectations of what they should know and be able to do, as expressed by varying gradients of success by (scoring) rubrics or by grades.
15.	Curriculum	Comprehensive description of a study programme. It includes learning objectives or intended outcomes, contents, assessment procedures.
16.	Degree	Qualification awarded to an individual by a recognized higher education institution after successful completion of a prescribed study programme. In a credit accumulation system the programme is completed through the accumulation of a specified number of credits awarded for the achievement of a specific set of learning outcomes.
17.	Design	The process of devising a system, component, or process to meet desired needs. It is a decision-making process (often iterative), in which the basic science and mathematics and engineering sciences are applied to convert resources optimally to meet a stated objective. Among the fundamental elements of the design process are the establishment of objectives and criteria, synthesis, analysis, construction, testing and evaluation. The engineering design component of a curriculum must include most of the following features: development of student creativity, use of open-ended problems, development and use of modern design theory and methodology, formulation of design problem statements and specification, consideration of alternative solutions, feasibility considerations, production processes, concurrent engineering design, and detailed system description. Further it is essential to include a variety of realistic constraints, such as economic factors, safety, reliability, aesthetics, ethics and social impact.

18.	Effectiveness	An output of specific review/analyses that measure (the quality of) the achievement of a specific educational goal or the degree to which a higher education institution or a programme can be expected to achieve specific requirements. It is different from efficiency, which is measured by the volume of output or input used. As a primary measure of success of a programme or of a higher education institution, clear indicators, meaningful information, and evidence best reflecting institutional effectiveness with respect to student learning and academic achievement have to be gathered through various procedures (inspection, observation, site visits, etc.). Engaging in the measurement of educational effectiveness creates a value-added process through quality assurance and accreditation review and contributes to building, within the institution, a culture of evidence.
19.	Efficiency	An ability to perform well or to achieve a result without wasted resources, effort, time, or money (using the smallest quantity of resources possible). Educational efficiency can be measured in physical terms (technical efficiency) or in terms of cost (economic efficiency). Greater educational efficiency is achieved when the same amount and standard of educational services are produced at a lower cost, if a more useful educational activity is substituted for a less useful one at the same cost, or if unnecessary educational activities are eliminated. A programme or a higher education institution may be efficiently managed, but not effective in achieving its mission, goals, or objectives.
20.	Engineer	The term "engineer" refers to a professional dedicated to engineering. "Engineering" is defined as a profession in which engineers make full use of their knowledge in mathematical science, natural science, and science of the artificial, to develop, research, manufacture, operate, and maintain hardware and software of artificial device and systems that contribute to the welfare and security of mankind, through economic exploitation of resources and natural forces, with good perspective of the future impact of such exploitation on society and the environment. A segment of the engineering profession that requires the individuals to complete an accredited programme of study typified by four years or more of post-secondary study. The expected outcomes of the graduates are such as those accepted by the Washington Accord or its equivalent. *Also often called: Professional Engineer; Chartered Engineer.*

21.	Engineering Technician	A segment of the engineering profession that requires the individuals to complete an accredited programme of study typified by two years or more of post-secondary study. The expected outcomes of the graduates are such as those accepted by the Dublin Accord or
22.	Engineering Technologist	A segment of the engineering profession that requires the individuals to complete an accredited programme of study typified by three years or more of post-secondary study. The expected outcomes of the graduates are such as those accepted by the Sydney Accord or its equivalent. *Also often called: Incorporated Engineer.*
23.	Ethics	Moral issues and decisions confronting the individuals involved in engineering practice.
24.	Indicators	Operational variables referring to specific empirically measurable characteristics of higher education institutions or programmes on which evidence can be collected that allows for a determination of whether or not standards are being met. Indicators identify performance trends and signal areas in need for action and/or enable comparison of actual performance with established objectives. *See also: Criteria.*
25.	Performance Indicators	A range of statistical parameters representing a measure of the extent to which a higher education institution or a programme is performing in a certain quality dimension. They are qualitative and quantitative measures of the output (short-term measures of results) or of the outcome (long-term measures of outcomes and impacts) of a system or of a programme. They allow institutions to benchmark their own performances or allow comparison among higher education institutions. Performance indicators work efficiently only when they are used as part of a coherent set of input, process, and output indicators. As higher education institutions are engaged in a variety of activities and target a number of different objectives, it is essential to be able to identify and to implement a large range of performance indicators in order to cover the entire field of activity.
26.	Laboratory	Practical experimental class where the students are active and supervised by a staff member and/or assistants.
27.	Licensure	The process by which a governmental agency grants official permission to persons meeting predetermined qualifications to engage in a given occupation and/or use of a particular title. Licensure is usually obtained through examination or graduation from an accredited institution. In some countries, a period of practical experience may be required.

		Also often called: licensing.
28.	Metrics	Specific statements identifying the performance required to meet specific standards, the performance is measurable, the performance is documentable.
29.	Objectives	Short statements that describe the specific knowledge, skills, abilities and/or attitudes expected of graduates three to five years after graduation.
30.	Outcomes	Specific knowledge, skills, abilities, and attitudes that students possess at graduation that lead to achievement of the programme's objectives. An outcome must be distinguished from an objective. *Also often called: learning outcomes; student outcomes; attributes.*
31.	Outcomes Assessment	The process of evaluation and improvement of specific results of a higher education programme in order to demonstrate its effectiveness. Assessment may concern the performance of teaching staff, the effectiveness of institutional practices, and/or the functioning of departments or programmes (e.g., programme reviews, budget reviews, etc.). It is a formative procedure used for self-study, financial retrenchment, programme evaluation, and better understanding of the current needs of students.
32.	Peer	Increasingly used for "evaluator" or "Team member" in a quality assurance and/or accreditation process, to underline that it is a "peer process."
33.	Profile	List of attributes for specific competencies.
34.	Programme	It is a generic term to represent departments and courses concerned. Programmes here are not confined to those provided solely by a department within a faculty as is typically the case with the majority of the universities. A programme can consist of multiple departments, while a department can provide multiple programmes. It is desirable that the name of a newly established programme appropriately represents the programme's specialized field of study, clearly indicating its learning or educational objectives, so that it can be precisely recognized by the public.
35.	Qualification	A generic term that usually refers an award granted for the successful completion of a study programme, in accord to the standard set by an institution of education in a particular filed of study. A qualification is important in terms of what it signifies: competencies and range of knowledge and skills. Sometimes it is equivalent to a license to

		practice.
36.	Professional Qualification	The set of requirements necessary for access to a profession, in particular a regulated profession.
37.	Quality	The extent to which a course, the teaching activities and the provider's facilities help students achieve worthwhile learning goals. Quality in higher education is a multi-dimensional, multi-level, and dynamic concept that relates to the contextual settings of an educational model, to the institutional mission and objectives, as well as to specific standards within a given system, institution, programme, or discipline.
38.	Quality Assurance	An all-embracing term referring to an ongoing, continuous process of evaluating (assessing, monitoring, guaranteeing, maintaining, and improving) the quality of a higher education system, institutions, or programmes. As a regulatory mechanism, quality assurance focuses on both accountability and improvement, providing information and judgments (not ranking) through an agreed upon and consistent process and well-established criteria. The scope of quality assurance is determined by the shape and size of the higher education system. *Also often called: quality control; quality management.*
39.	Recognition	The provision by which a body or institution (recognizer) considers another body or institution (recognized) appropriate or competent for a certain purpose.
40.	Academic Recognition	Approval of courses, qualifications, or diplomas from one (domestic or foreign) higher education institution by another for the purpose of student admission to further studies. Academic recognition can also be sought for an academic career at a second institution and in some cases for access to other employment activities on the labor market (academic recognition for professional purposes).
41.	Mutual Recognition	Agreement by two or more institutional bodies to validate each other's degrees, programmes, or institutions and/or affirmation by two or more quality assurance or accrediting agencies that the methodology of the agencies are sound and that the procedures are functioning accordingly.
42.	Review	The general process of a systematic and critical analysis leading of assessment data to judgments and/or recommendations regarding the quality of a higher education institution or a programme. Evaluation is carried out through internal or external procedures. *See also: Accreditation.*

43.	Interim Review	A checkpoint during the accreditation cycle to monitor the continuous improvement of the programme.
44.	Monitoring Review	A periodic evaluation of the accreditation body by its peers on its effectiveness of reviewing the programmes and on its fulfillment to meet the requirements of the collective peers.
45.	Self-study	The review and evaluation of the quality and effectiveness of an institution's own academic programmes, staffing, and structure, based on standards set by an outside quality assurance body, carried out by the institution itself. Self-studies usually are undertaken in preparation for a quality assurance site visit by an outside team of specialists. Results in a self-study report.
46.	Site Visit	Site visit is normally part of the accreditation process, which is conducted by a team of peer reviewers who, after examining the institution's or the programme's self-study, interview faculty, students, and staff; and examine the structure and effectiveness of the institution and its academic programmes.
47.	Standards	The level of requirements and conditions that must be met by institutions or programmes to be accredited or certified by a quality assurance or accrediting agency. These conditions involve expectations about quality, attainment, effectiveness, financial viability, outcomes, and sustainability.
48.	Substantial Equivalent	The recognition by an organization/competent authority that a course unit, a study programme or degrees awarded by different institutions of higher education are equivalent. When not considered complete, equivalence is often qualified as substantial
49.	Programme educational objectives	broad, general statements that communicate how an engineering programme intends to fulfill its educational mission and meet its constituencies' needs.
50.	Programme outcomes	more specific statements of programme graduates' knowledge, skills, and attitudes that serve as evidence of achievement of the programme's educational objectives.
51.	Outcome indicators	the instruments and methods that will be used to assess the students' attainment of the programme outcomes
52.	Performance targets	the instruments and methods that will be used to assess the students' attainment of the programme outcomes
53.	Outcome elements	different abilities specified in a single outcome that would generally require different assessment measures.

54.	Outcome attributes	actions that explicitly demonstrate mastery of the abilities specified in an outcome or outcome element. The main thrust of the work of Besterfield-Sacre et al. is to define attributes at the six levels of Bloom's taxonomy of cognitive objectives [11] and at the valuation level of Krathwohl's taxonomy of affective objectives for each of Outcomes 3a–3k.
55.	Programme core	a set of courses designated to address some or all of the programme outcomes. Required courses in the major field of study would be obvious candidates for the core. Required courses given in other programmes, such as mathematics, physics, chemistry, and English—might be included as long as they consistently address outcomes. Elective courses or courses whose content varies from one offering to another (so that the outcomes might not be addressed in a particular offering) would not be included.
56.	Course outcomes	knowledge, skills, and attitudes that the students who complete a course are expected to acquire. Some of the outcomes in programme core courses should map onto or be identical with one or more programme outcomes.
57.	Course learning objectives (instructional objectives)	statements of observable student actions that serve as evidence of the knowledge, skills, and attitudes acquired in a course.
58.	Outcome-related course learning objectives	learning objectives for a core course that specifically address one or more programme outcomes. These objectives would normally be cited in the self-study to establish where and how the programme is addressing the outcomes in its curriculum, and they must be guaranteed to be in place whenever the course is given. Core courses would also generally include other learning objectives unrelated to programme outcomes.
59.	Faculty	The entity which includes schools and departments responsible for designing and conducting the programme to be accredited.
60.	Programme	The sequence of structured educational experience undertaken by students leading to completion, on satisfactory assessment of performance.
61.	Degree	An engineering qualification normally titled Bachelor of Engineering.
62.	Course	Subject offered in the programme.

63.	Stakeholders	Parties having an interest (direct or indirect) in the programme output, for example, employers, sponsors, lecturers and students.
64.	Academic staff	Staff responsible for teaching and learning activities in the programme leading to the award of an engineering degree.
65.	Student	Anyone undertaking an undergraduate programme.
66.	Graduate	Anyone who has been conferred a degree.
67.	Support staff	Staff responsible for supporting teaching, learning and administrative activities in programme implementation.
68.	External Examiner	A person with high academic standing appointed by the IHL to assess academic quality and standard of the programme.
69.	Industry Advisory Panel	A body consisting of professionals from industries, government, professional organisations, regulatory bodies, alumni etc., appointed by the IHL to ensure programme relevancy to stakeholder needs.
70.	Rubric	A scoring guide used to evaluate the quality of students' constructed responses.

Appendix F

Student Learning Time Calculation Form

Course Code and Title : _____

Academy/Faculty/Institute/Centre : _____

Department : _____

Programme : _____

Lecturer/Course Coordinator : _____

Academic Session : _____

Semester : 1 / 2 / 3

COMPONENTS	TEACHING AND LEARNING ACTIVITIES	STUDENT LEARNING TIME (SLT)
Face to Face		
Guided Learning		
Independent Learning		
Assessment		
	TOTAL SLT	
	CREDIT = SLT/40	

Note: 40 notional hours = 1 Credit

GUIDELINES FOR ESTIMATING STUDENT WORKLOAD (General)

Reference for 2018 EEAC Manual

The hours suggested are only guidelines and depend on the complexity of the activity. Where available, please refer to the requirements of the discipline.

1. For every hour of lecture, add 1-2 hours of study time. Complex subjects may require 3 or more hours of independent learning.
2. For every tutorial (which may last between 1-2 hours) add 1-2 hours of preparation time.
3. A three-hour laboratory work usually includes the time for writing the report. In some disciplines such as Biomedical and Health Science as well as Engineering, a 2-hour laboratory work may require 2-3 hours of preparation and report writing.
4. Final year project (6-12 credits) should take about 240-400 hours of student work with 1-2 hours per week contact time with the supervisor. Contact time may either be based on laboratory/experimental work or literature survey or both.
5. Industrial training should be calculated based on the number of effective learning hours per day multiplied by the number of days per week and the number of weeks allocated for the training.
6. For studio courses add 2 hours of independent work for every 2 hours of studio work.
7. Practical based programmes require more time for developing specific skills through repetitive practice. Medicine, Nursing, Language courses, Architecture and the Performing Arts are some examples. Time for these activities (e.g. ward rounds and other clinical teaching, research, demonstration and practice) should be adequately reflected in the calculation of credits. No additional hours for independent learning may be required.
8. For every session of problem-based learning (about 2 hours) add 2-3 hours of self-directed study followed by another 2 hours of group discussion.
9. For small group discussion lasting 1-2 hours add 1 hour of preparation time.
10. A fixed learning module (FLM) in Medicine or e-learning may take about 3 hours of student time but these are considered independent learning.
11. For a 1 hour presentation session, allocate 3-4 hours of preparation time.
12. For a 2000 word written assignment allocate about 10-20 hours.
13. For creative writing (e.g. 100-150 page novel or 50-70 pages of script) allocate about 8-10 hours per day over a period of 1 semester.
14. For case summaries allocate about 3 hours per case.

Reference for 2015 EEAC Manual

Credit hours

For a (14-16) week semester (not including examination or mid-term break), one credit hour is defined as:

1. One hour per week of lecture (additional independent study of two hours is assumed to have been included).

2. Two hours per week of laboratory or workshop lecture (additional independent learning time of one hour is assumed to have been included).
3. Two hours per week of supervised and compulsory tutorial session (additional independent learning time of one hour is assumed to have been included), subject to a maximum of one credit hour for each course in that semester.
4. Three hours per week of facilitated activities involving other modes of delivery such as problem-based learning, e-learning modules, site visits, discovery learning, integrated design and coursework projects.
5. Three hours per week of activities involving final year project inclusive of meeting with supervisor.

For industrial training, the following guideline shall be followed:

6. Industrial training shall be for a minimum of 8 weeks of continual training. One credit hour is allocated for every two weeks of training subject to a maximum of six credit hours. The training shall be adequately structured, supervised and recorded in log books/report. The industrial training must be conducted before the final semester.

For a final year project, the following guideline shall be followed:

7. A final year project is subject to a minimum of six credit hours and a maximum of twelve credit hours.

APPENDIX G

MYANMAR ENGINEERING COUNCIL

ENGINEERING EDUCATION ACCREDITATION COMMITTEE

Evaluation Team Report

Name of IHL:

Programme for Accreditation:

General Remarks

A. **QUALIFYING REQUIREMENTS**

1	Outcome-based Education (OBE) implementation	Yes/No
2	Minimum 135 credits of which 90 credits must be engineering subjects (based on SLT)	Yes/No
3	Integrated design project (minimum six (6) SLT credit)	Yes/No
4	Final year project (minimum (6) credits)	Yes/No
5	Industrial training (minimum of eight (8) weeks	Yes/No
6	Full-time teaching staff (minimum of eight (8)) with at least (3) Registered Engineers with the MEngC or equivalent	Yes/No
7	Teaching staff : student ratio of 1:20 or better	Yes/No
8	External examiner's report	Yes/No

B ASSESSMENT

***** Delete where applicable

ASSESSMENT CRITERIA

1 CRITERION: PROGRAMME EDUCATIONAL OBJECTIVES

1.1 General Observations:

Overall Comments/Remarks: *Poor/Satisfactory/Good

Strength	
Weakness	
Concern	
Opportunity for Improvement	

2 CRITERION 2: GRADUATE ATTRIBUTES

2.1 Observation on Graduate Attributes:

2.2 Stakeholder Involvement:

2.3 Observation on Stakeholder Involvement:

Overall Comments/Remarks: *Poor/Satisfactory/Good

Strength	
Weakness	
Concern	
Opportunity for Improvement	

3 CRITERION 3: ACADEMIC CURRICULUM

3.1 Credits

(a) Total number of credit hours

(b) Number of Credit hours for engineering subjects

(c) Number of Credit hours for related non-engineering subjects

3.2 The Curriculum

(a) Programme Structure, Course Contents, and Balanced Curriculum

(b) Programme Delivery and Assessment Methods

(c) Laboratory

(d) Integrated Design Project

(e) Final Year Project

(f) Industrial Training

(g) Exposure to Professional Engineering Practice

Overall Comments/Remarks: *Poor/Satisfactory/Good

Strength	
Weakness	
Concern	
Opportunity for Improvement	

4 CRITERION 4: STUDENT

4.1 Student Admission

(a) Entry requirements (Academic)

(b) Transfer Policy/Selection Procedure/Appropriateness of arrangements for Exemptions from part to the course

4.2 Student Development

(a) Student counseling

(b) Workload

(c) Enthusiasm and motivation\

(d) Co-curricular activities

(e) Observed attainment of Programme Outcomes by students

Overall Comments/Remarks: *Poor/Satisfactory/Good

Strength	
Weakness	
Concern	
Opportunity for Improvement	

5 CRITERION 5: TEACHING AND SUPPORT STAFF

5.1 Teaching Staff

(a) Number and Competency of Teaching staff

(b) Qualification, industrial experience & development

(c) Research/publication/consultancy

(d) Industrial Involvement

(e) Teaching load/contact hours

(f) Motivation and enthusiasm

(g) Use of lectures from industry/public bodies

(h) Implementation of the Outcome-Based approach to education

5.2 Support Staff (Laboratory and Administration)

(a) Qualification and experience

(b) Adequacy of support staff

5.3 Development of Staff

(a) Staff development

(b) Staff assessment

(c) Academic staff: student ratio

Overall Comments/Remarks: *Poor/Satisfactory/Good

Strength	
Weakness	
Concern	
Opportunity for Improvement	

6 CRITERION 6: FACILITIES

(a) Lecture rooms – quality provided and quality of A/V

(b) Laboratory/workshop – student laboratory and equipment

(c) IT/computer laboratory – adequacy of software and computers

(d) Library/resource centre – quality and quantity of books, journals, and multimedia

(e) Recreation facilities

Overall Comments/Remarks: *Poor/Satisfactory/Good

Strength	
Weakness	
Concern	
Opportunity for Improvement	

7 CRITERION 7: QUALITY MANAGEMENT SYSTEMS

7.1 Institutional Support, Operation Environment, and Financial Resources

(a) Sufficient to assure quality and continuity of the programme

(b) Sufficient to attract and retain well-qualified teaching and support staff

(c) Sufficient to acquire, maintain, and operate facilities and equipment

7.2 Programme Quality Management and Planning

(a) System for programme planning, curriculum development, and regular review of curriculum and content

7.3 External Assessment's Report and Advisory System

(a) External examiners report and how these are being use for quality improvement

(b) Advisory panel from industries and other relevant stakeholders

7.4 Quality Assurance

(a) System for student admission and teaching and learning

(b) System of assessment and evaluation of examinations, projects, industrial training, etc. including preparation and moderation of examination papers

7.5 Safety, Health and Environment

(a) System for managing and implementation of safety, health and environment

Overall Comments/Remarks: *Poor/Satisfactory/Good

Strength	
Weakness	
Concern	
Opportunity for Improvement	

EVALUATION TEAM ASSESSMENT REPORT SUMMARY

Overall Comments/Remarks:

Strength	
Weakness	
Concern	
Opportunity for Improvement	
Other remarks	
Suggested Discipline	

Date of Visit: _____

Programme Title: _____

Faculty: _____

Full Accreditation (5 years) ☐

Condition(s) to meet/Recommendation for further improvement

_____

_____

Accreditation (1 year/2 years/ 3 years/ 4 years/5 years) ☐

Conditions to meet/Recommendation for further improvement

_____

_____

Decline Accreditation ☐

Comments:

_____

_____

Prepared and submitted by Evaluation Team:

(i) Chairman: _____ Signature:_____

(ii) Member: _____ Signature:_____

(iii) Member: _____ Signature:_____

(iv) Member: _____ Signature:_____

Date: _____

ACTION BY ENGINEERING EDUCATION ACCREDITATION COMMITTEE (EEAC)

Date Received by the EEAC: _____

Comments by the EEAC:

(i) _____

(ii) _____

(iii) _____

(iv) _____

Recommendation by EEAC

Concurs with Evaluation Team * Yes/No

If not agreeable with Evaluation Team's recommendation, EEAC recommendations are:

(i) Full Accreditation (5 years) ☐

Condition(s) to meet/Recommendation for further improvement

_____

_____

(ii) Accreditation (1 year/2 years/ 3 years/ 4 years/5 years) ☐

_____

_____

_____

(iii) Decline Accreditation ☐

Reasons

_____

_____

_____

(iv) Condition(s) to meet ☐

Reasons

_____

_____

_____

ACTION BY SECRETARIAT

(i) Date of Transmission of decision to EEAC _____

(ii) Date of Transmission of decision to M.Eng.C _____

(iii) Date of Transmission of decision to MOC _____

(iv) Date of Transmission of decision to IHL _____

(v) Date of Issue of Accreditation Certificate _____