NATIONAL BOARD OF ACCREDITATION

ACCREDITATION MANUAL
FOR
MCA PROGRAMME
(TIER-I)

NATIONAL BOARD
OF **ACCREDITATION**

CONTENTS

1. INTRODUCTION

1.1   Education plays a vital role in the development of any nation. Therefore, there is a premium on both quantity and quality (relevance and excellence of academic programmes offered) of higher education. Like in any other domain, the method to improve quality remains the same, that is, finding and recognising new needs and satisfying them with products and services of international standards. There are two central bodies involved in accreditation in India: the National Accreditation and Assessment Council (NAAC) and the National Board of Accreditation (NBA). The NAAC was set up in 1994 by the University Grants Commission for institutional accreditation through a combination of internal and external quality assessment.

1.2   The NBA was originally constituted in September 1994 to assess the qualitative competence of the educational institutions from diploma level to postgraduate level in engineering and technology, management, pharmacy, architecture, and related disciplines. The NBA, in its present form, has come into existence as an autonomous body with effect from 7th January 2010, with the objective of assurance of quality and relevance of the technical education through the mechanisms of accreditation of programmes offered by the technical institutions.

1.3   The NBA works very closely with stakeholders (faculty, educational institutions, government, industries, regulators, management, recruiters, alumni, students and their parents) to ensure that the programmes serve to prepare their graduates with sound knowledge of fundamentals and to develop in them an adequate level of professional competence, such as would meet the needs of the engineering and computing profession locally as well as globally. The objective of the NBA is to assess and accredit professional programmes offered at various levels by the technical institutions on the basis of norms prescribed by the NBA. In this manual, the phrase "technical institutions" means colleges/ university departments offering MCA programmes.

1.4　The vision of the NBA is *"to be an accrediting agency of international repute by ensuring the highest degree of credibility in assurance of quality and relevance of professional education and fulfill the expectations of its stakeholders, viz., academicians, corporate, educational institutions, government, industry, regulators, students, and their parents."*

1.5　The NBA is working with the mission, *"to stimulate the quality of teaching, self–evaluation, and accountability in the higher education system, which help institutions realise their academic objectives and adopt teaching practices that enable them to produce high-quality professionals and to assess and accredit the programmes offered by the colleges or the institutions, or both, imparting technical and professional education."*

1.6　**The main objectives of the NBA are to:**
   a) assess and grade colleges and/or institutions of technical and professional education, the courses and programmes offered by them, their various units, faculty, departments etc.,
   b) stimulate the academic environment and quality of teaching and research in these institutions,
   c) contribute to the sphere of knowledge in its discipline ,
   d) motivate colleges and/or institutions of technical and professional education for research, and adopt teaching practices that groom their students for the innovation and development of leadership qualities,
   e) encourage innovation, self-evaluation and accountability in higher education,
   f) promote necessary changes, innovation and reforms in all aspects of the working of the colleges/ institutions of technical and professional education for the above purpose , and
   g) help institutions to realise their academic objectives.

2. AUTHORITIES OF NBA

At present, the NBA has the following authorities.

(i) The General Council

(ii) The Executive Committee

(iii) The President

2.1 General Council

The General Council is the principal authority of the NBA, and is responsible for its overall activities and affairs. It gives policy directions/ guidelines to the Executive Committee, which takes steps for managing the activities and affairs of the NBA accordingly.

The General Council consists of the following members:

(i) Chairperson of AICTE – President.   - **ex-officio**

(ii) Secretary of the Department dealing with Higher and

    /or Technical Education, Govt. of India or his/ her nominee.   - **ex-officio**

(iii) Chairperson of Statutory Authorities established   - **ex-officio**

by Parliament for coordinating, determining and regulating the standards of higher and/or technical and professional education in their respective fields or his/her nominee.

(iv) The President of the Association of Indian   - **ex-officio**

Universities (A.I.U) or his/her nominee.

(v) Five members of the Executive Committee nominated by the Executive Committee.

(vi) Four Vice-Chancellors, two from the state universities/ one each from the central university, essentially having faculty in technical and /or professional education and institute declared as deemed to be university, essentially having faculty in technical and/ or professional education to be nominated by Chairperson, AICTE.

(vii) Six Principals of affiliated/ autonomous colleges, including polytechnics, one each from discipline of Engineering, Technology, Architecture, Town Planning, Management, Pharmacy and Applied Arts and Crafts to be nominated by Chairperson, AICTE.

(viii) Member Secretary of the NBA is the Member Secretary of the General Council.

The term of the nominated members is three years.

2.2 Executive Committee

The affairs of the NBA are managed, administered, directed and controlled as per Rules and Bye-laws approved by the Executive Committee (EC), the General Council and the Chairman of the AICTE. The Executive Committee of the NBA for the purpose of Societies Registration Act consists of the following members:

(i) Chairperson - appointed as per the procedure given under Rules 37 and 38 of memorandum of association and rules of the NBA.

(ii) Vice-Chairperson of the All India Council for Technical Education.   **- ex-officio**

(iii) Additional Secretary /Joint Secretary, MHRD, Department of Education dealing with Technical Education or his/ her nominee.   -**ex-officio**

(iv) Secretary of statutory, regulatory bodies for higher, technical and professional education like other specialty Councils (UGC, AICTE, NCTE, Council for Architecture and Council of Pharmacy etc.).   -**ex-officio**

(v) Four Secretaries of Higher & Technical Education of State Governments nominated by the President.   -**ex-officio**

(vi) Four academicians and two experts from industry nominated by the President.

-**ex-officio**

(vii) Two experts from academia or industry nominated by the Central Government.

-**ex-officio**

(viii) The Executive Committee may co-opt maximum two experts in the field of accreditation from India and/or abroad.   **-ex- officio**

(ix) Member Secretary of the General Council of the NBA is the Member Secretary of the Executive Committee.

2.3 NBA Committees for Accreditation

2.3.1 Evaluation and Accreditation Committee (EAC)

The EAC is constituted for Master of Computer Applications (MCA) programme to review the reports of the evaluation team and submit its recommendations on accreditation to the EC. If any further clarification is required, the chairperson/evaluators will be called over phone or video conference.The composition of the EAC is as follows.

1. The chairman of the EAC, appointed by the EC, is an eminent academician from academia or a distinguished professional from industries/R&D organisations/professional bodies.
2. Three experts, preferably from Computer Science, Information Systems, Computer Applications etc.
3. One expert from industries/R&D organisations.
4. One representative from professional bodies.
5. One representative of the NBA nominated by the Member Secretary of the NBA.

2.3.2 Appellate Committee (AC)

The grievances and redressal of the institution received by the NBA, on the accreditation of the programmes shall be addressed by the Appellate C ommittee. The composition of the AC is as follows.

1. The Chairman of AC, appointed by the EC, shall be an eminent academician from academia or a distinguished professional from industries/R&D organisations/professional bodies.
2. One expert from academia.
3. One representative from industries/R&D organisations.
4. One representative from professional bodies.
5. One legal representative nominated by the Member Secretary of the NBA.

3. ACCREDITATION

Accreditation is a process of quality assurance and improvement, whereby a programme in an institution is critically appraised to verify that the institution or the programme continues to meet and exceed the norms and standards prescribed by the appropriate designated authorities. Accreditation does not seek to replace the system of award of degree and diplomas by the universities/autonomous institutions. But, accreditation provides quality assurance that the academic aims and objectives of the institution are honestly pursued, and effectively achieved by the resources available, and that the institution has demonstrated capabilities of ensuring effectiveness of the educational programmes over the validity period of accreditation. NBA accreditation is a quality assurance scheme for higher technical education.

The NBA operates a two-tier system of accreditation for MCA programmes. Having discussed with stakeholders, it has been decided to prepare two separate Manuals (TIER-I and TIER-II) for Accreditation of MCA programmes. The TIER-I document has been designed for the MCA programmes offered by autonomous institutions and university departments better, while the TIER-II document is fine-tuned for the needs of the non-autonomous institutions affiliated to a university. In both TIER-I and TIER-II documents, the same set of criteria have been considered for accreditation. In the TIER-I document, the criteria, which are based on outcome parameters, has been given more weightage, whereas in the TIER-II document, the weightage has been reduced, thereby, enhancing the weightage of the output-based criteria. However, a non-autonomous institution may also apply for accreditation on the basis of TIER-I document, if they feel that their curriculum is capable of attaining the desired outcomes of a programme.

3.1 Significance of Accreditation

- To make the institute/department aware of weaknesses of the programme offered by it and act on suggestions for improvement.
- To encourage the institute to move continuously towards the improvement of quality of its programme, and the pursuit of excellence.
- To facilitate institutions for updating themselves in programme curriculum, teaching and learning processes, faculty achievements, students' skills/abilities/knowledge.

- To excel among stakeholders. (peers, students, employers, societies etc.)
- To facilitate receiving of grants from Government regulatory bodies and institutions/agencies.
- To attain international recognition of accredited degrees awarded.
- To facilitate the mobility of graduated students and professionals.

4. ACCREDITATION POLICY

The following general policies are the guiding principles for the accreditation of technical programmes:

(i) Programmes, instead of educational institutions, are accredited at present.

(ii) Programmes to be accredited should be offered by an educational institution which has been formally approved by the appropriate designated authorities.

(iii) The name of a programme to be accredited shall be the same as that shown on the student's degree certificate. All routes leading to the completion of the programmes will have to satisfy the accreditation criteria.

(iv) Programmes which have produced graduates for at least two academic years will be considered for full accreditation. However, provisional accreditation may also be granted to newer programmes.

(v) Programmes will be considered for assessment and accreditation only at the written request of the educational institution and after agreeing to abide by the NBA's accreditation manual, rules, regulations and notification issued from time to time.

(vi) Accreditation of a programme will normally be granted for a specific term of up to a maximum of five academic years. Provisional accreditation may also be granted to new programmes (not matured for full accreditation).

(vii) After accreditation, the institutions are expected to submit their annual self-assessment report to eNBA online. If any aspect of the programme is found to be sufficiently unsatisfactory and/or does not comply with norms, the NBA reserves

the right to revoke the accreditation. If necessary, the NBA may appoint a maximum of two members to form an Evaluation Team to act as mentors at the request of institution. The mentor(s) may visit the educational institution at its request for mentoring purposes and provide a report to the NBA on their findings for each visit. The educational institution will bear the expenses of the visit and pay honorarium to the mentors as prescribed by the NBA.

(viii) Programmes will be assessed and evaluated in accordance with the accreditation criteria. Accreditation is based on satisfying the minimum standards.

(ix) All correspondence between the educational institution and the NBA vis-à-vis accreditation process is confidential and may not be revealed to any unauthorised persons under any circumstances, except with written permission from the concerned educational institution.

(x) A three day onsite visit shall be a part of the accreditation process. An evaluation team appointed by the NBA will carry out the evaluation of the programme. The evaluation team consists of two evaluators for each programme and is headed by a Chairperson. The institute shall propose such set of dates for the visit when the regular classes and all academic activities are on.

(xi) The final decision made by the NBA will be communicated to the educational institution, together with comments which portray strengths, weaknesses and scope for improvement. In the event that a programme is not accredited, reasons for the decision will also be given. If accreditation is denied and if the educational institution wishes, it may appeal to the Appellate Committee (AC) against the decision.

xii) The total credits to be earned for the award of the degree shall be uniformly distributed in the various academic years of the programme to the extent possible.

(xiii) The educational institution shall bear the cost of accreditation.

5. ACCREDITATION CRITERIA

5.1 General Information

The assessment and evaluation process of accreditation of MCA programme is based on 9 broad criteria developed through a participatory process involving experts from reputed national-level technical institutions, industries, R&D organisations and professional bodies. Reference is also made to accreditation criteria adopted by the Washington Accord signatories. Each criterion relates to a major feature of institutional activity and its effectiveness. The criteria has been formulated in terms of parameters, including quantitative measurements that have been designed for maximally objective assessment of each feature.

The MCA programme to be accredited or re-accredited will have to satisfy all the criteria during the full term of accreditation. The educational institution should periodically review the strengths and weaknesses of the programme and seek to improve standards and quality continually, and to address deficiencies, if any aspect falls short of the standards set by the accreditation criteria. During the full term of accreditation, the institutions are required to submit their annual self-assessment report to eNBA online.

The definitions of the terms used in this manual are as follows:

(a) Mission and Vision statement -- Mission statements are essentially the means to achieve the vision of the institution. For example, if the vision is to create high-quality computing professionals, then the mission could be to offer a well-balanced programme of instruction, practical experience, and opportunities for overall personality development. Vision is a futuristic statement that the institution would like to achieve over a long period of time, and Mission is the means by which it proposes to move toward the stated Vision.

(b) Programme Educational Objectives (PEOs) – Programme educational objectives are broad statements that describe the career and professional accomplishments that the programme is preparing graduates to achieve.

(c) Programme Outcomes (POs) – Programme Outcomes are narrower statements that describe what students are expected to know and be able to do upon graduation. These

relate to the skills, knowledge, and behaviour that students acquire in their matriculation through the programme.

(d) Course Outcomes (COs) -- Course Outcomes are narrower statements that describe what students are expected to know, and be able to do at the end of each course. These relate to the skills, knowledge, and behaviour that students acquire in their matriculation through the course.

(e) Assessment – Assessment is one or more processes carried out by the institution that identify, collect, and prepare data to evaluate the achievement of programme educational objectives and programme outcomes.

(f) Evaluation – Evaluation is one or more processes done by the evaluation team, for interpreting the data and evidence accumulated through assessment practices. Evaluation determines the extent to which programme educational objectives or programme outcomes are being achieved, and results in decisions and actions to improve the programme.

(g) Mapping – Mapping is the process of representing, preferably in matrix form, the correlation among the parameters. It may be done for one to many, many to one, and many to many parameters.

5.2 Accreditation Criteria

Criterion 1- Vision, Mission and Programme Educational Objectives (PEOs)

For an MCA programme to be accredited or re-accredited, it should have:

i) published department vision and mission, and programme educational objectives that are consistent with the mission of the educational institution as well as criteria 2 to 9 listed below, and

ii) the PEOs should be assessable and realistic within the context of the committed resources. The comprehensive list of various stakeholders of the programme, who have been involved in the process of defining and redefining the PEOs, is to be provided.While framing the PEOs, the following factors are to be considered:

- The PEOs should be consistent with the mission of the institution.

- All the stakeholders should participate in the process of framing the PEOs.

- The number of PEOs should be manageable.

- It should be based on the needs of the stakeholders.

- It should be achievable by the programme.

- It should be specific to the programme and not too broad.

- It should not be too narrow and similar to the POs.

For example, the PEOs of an academic programme might read like this:

- Statement of areas or fields in which the graduates find employment

- Preparedness of graduates to take up higher studies

The programme shall provide how and where the department vision and mission and the PEOs have been published and disseminated. It should also describe the process that periodically documents and demonstrates that the PEOs are based on the needs of the

stakeholders of the programme. The programme shall demonstrate how the PEOs are aligned with the mission of the department /institution.

The PEOs are reviewed periodically based on feedback of the programme's various stakeholders. For this purpose, there should be in place a process to identify and document relationships with stakeholders (including students) and their needs, which have to be adequately addressed when reviewing the programme curriculum and processes. Justifications shall be provided as to how the composition of programme curriculum contributes towards attainment of the PEOs defined for the programme. Also, it is expected to expound how the administrative system helps the programme in ensuring the attainment of the PEOs. There should be enough evidence and documentation to show the achievement of the PEOs set by the institution with the help of the assessment (indicate tools and how they are used) and evaluation process that have been developed. Also, show that this continuous process leads to the revision or refinement of the PEOs. The institute shall provide the required information for assessment, evaluation and review methods to evaluate the attainment of the PEOs as per the format given in the SAR. If the institute wishes to provide additional information, it will include that information in a suitable format wherever necessary.

Criterion 2- Programme Outcomes

Graduates Attributes (GAs) form a set of individually assessable outcomes that are the components indicative of the graduate's potential to acquire competence to practice at the appropriate level. The GAs are examples of the attributes expected of a graduate from an accredited programme. The computing professional Graduate Attributes of the NBA are as following:

1. **Computational Knowledge:**

Apply knowledge of computing fundamentals, computing specialisation, mathematics, and domain knowledge appropriate for the computing specialisation to the abstraction and conceptualisation of computing models from defined problems and requirements.

2. **Problem Analysis:**

Identify, formulate, research literature, and solve *complex* computing problems reaching substantiated conclusions using fundamental principles of mathematics, computing sciences, and relevant domain disciplines.

3. **Design /Development of Solutions:**

Design and evaluate solutions for *complex* computing problems, and design and evaluate systems, components, or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.

4. **Conduct Investigations of Complex Computing Problems:**

Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5. **Modern Tool Usage:**

Create, select, adapt and apply appropriate techniques, resources, and modern computing tools to *complex* computing activities, with an understanding of the limitations.

6. **Professionl Ethics:**

Understand and commit to professional ethics and cyber regulations, responsibilities, and norms of professional computing practice.

7. **Life-long Learning:**

Recognise the need, and have the ability, to engage in independent learning for continual development as a computing professional.

8. **Project management and finance:**

Demonstrate knowledge and understanding of the computing and management principles and apply these to one's own work, as a member and leader in a team, to

manage projects and in multidisciplinary environments.

9. Communication Efficacy:

Communicate effectively with the computing community, and with society at large, about *complex* computing activities by being able to comprehend and write effective reports, design documentation, make effective presentations, and give and understand clear instructions.

10. Societal and Environmental Concern:

Understand and assess societal, environmental, health, safety, legal, and cultural issues within local and global contexts, and the consequential responsibilities relevant to professional computing practice.

11. Individual and Team Work:

Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary environments.

12. Innovation and Entrepreneurship

Identify a timely opportunity and using innovation to pursue that opportunity to create value and wealth for the betterment of the individual and society at large.

The POs formulated for MCA programme by the institute must be consistent with the NBA's Graduate Attributes of a computing professional. The POs must foster the attainment of the PEOs.

The programme shall indicate the process involved in defining and redefining the POs. It shall also provide how and where the POs are published and disseminated. It should also describe the process that periodically documents and demonstrates that the POs are based on the needs of the stakeholders of the programme. The extent to which and how the POs are aligned with the Graduate Attributes of computing professional prescribed by the NBA shall be provided. The correlation between the POs and the PEOs is to be provided as per the format given in the SAR in order to establish the contribution of the POs towards the attainment of the PEOs.

Precise illustrations of how course outcomes, modes of delivery of the courses, assessment tools are used to assess the impact of course delivery/course content, and laboratory and project course work are contributing towards the attainment of the POs shall be given by the programme.

The attainment of POs may be assessed by direct and indirect methods. Direct methods of assessment are essentially accomplished by the direct examination or observation of students' knowledge or skills against measurable performance indicators. On the other hand, indirect methods of assessment are based on ascertaining opinion or self-report. Rubric is a useful tool for indirect assessment. A rubric basically articulates the expectations for students' performance. It is a set of criteria for assessing students' work or performance. Rubric is particularly suited to programme outcomes that are complex or not easily quantifiable for which there are no clear "right" or "wrong" answers or which are not evaluated with the standardised tests or surveys. For example, assessment of writing, oral communication, or critical thinking often require rubrics. The development of different rubrics and the achievement of the outcomes need to be clearly stated in the SAR.

The results of assessment of each PO shall be indicated as they play a vital role in implementing the Continuous Improvement process of the programme. The institute shall provide ways and means of how the results of assessment of the POs improve the programme in terms of curriculum, course delivery and assessment methods and processes of revising/redefining the POs.

Criterion 3- Programme Curriculum

Programme curriculum that leads to the attainment of the PEOs and the POs must be designed. The programme shall provide how its curriculum is designed, published, and disseminated. The structure of the curriculum, which comprises course code, course title, total number of contact hours (lecture, tutorial and practical) and credits is to be provided. Flow diagram that shows the prerequisites for the courses shall also be provided. The MCA programme should cover general and specialised professional content of adequate breadth and depth, and should include appropriate components in Mathematics and Management. The relevance of curriculum components, including core computer courses to the POs, shall

be given. The institute shall describe how the core computer subjects in the curriculum lend a learning experience with the complex computing problems. In addition to the General Criteria, each programme must satisfy a set of criteria specific to it, known as Programme Specific Criteria which deal with the requirements for computing practice particular to the related sub-discipline. The stipulations in the Programme Specific Criteria chiefly concern curricular issues and qualifications of faculty. The programme curriculum in correlation with programme specific criteria is to be provided. The institution shall provide evidence that the programme curriculum satisfies the programme specific criteria, and industry interactions/internship.

The institution must ensure that the programme curriculum that was developed at the time of inception of the programme has been refined in the subsequent years to make it consistent with the PEOs and the POs. The institute shall provide the required information for assessment, evaluation and review methods to evaluate the attainment of the COs.

Criterion 4 - Students' Performance

(i)   Students admitted to the programme must be of a quality that will enable them to achieve the programme outcomes. The policies and procedures for student admission and transfer should be transparent and spelt out clearly.

(ii)   The educational institution should monitor the academic performance of its students carefully. The requirements of the programme should be made known to every student.

(iii)   The educational institution must provide student support services including counselling /tutoring/mentoring.

(iv)   The institute shall provide the required information for three complete academic years for admission intake in the programme, success rate, academic performance, placement and higher studies and professional activities as per the format given in the SAR. However, it shall provide the information in a suitable format, wherever necessary, in case the format is not provided in the SAR.

Criterion 5 - Faculty Contributions

(i) The faculty members should possess adequate knowledge / expertise to deliver all the curricular contents of the programme.

(ii) The number of faculty members must be adequate so as to enable them to engage in activities outside their teaching duties, especially for the purposes of professional development, curriculum development, student mentoring/counselling, administrative work, training, and placement of students, interaction with industrial and professional practitioners.

(iii) The number of faculty members must be sufficiently large in proportion to the number of students, so as to provide adequate levels of faculty-student interaction. In any educational programme, it is essential to have adequate levels of teacher-student interaction, which is possible only if there are enough teachers, or in this case, faculty members.

(iv) The faculty must be actively involved in research and development. The programme must support, encourage and maintain such R&D activities. A vibrant research and development culture is important to any academic programme. It provides new knowledge to the curriculum. The student's education is enriched by being part of such a culture, for it cultivates skills and habits for life-long learning and knowledge on contemporary issues.

(v) The academic freedom to steer and run the programme will be in the hands of members of the faculty. This includes the rights over evaluation and assessment processes and decisions on programme involvement. They should also engage themselves in the process of accreditation for the continuous improvement of the PEOs and the POs.

(vi) The faculty must have sound educational qualifications, and must be actively updating knowledge in their respective areas of interest. It is desirable that the members of the faculty possess adequate industrial experience and be from diverse backgrounds. In terms of teaching, the faculty must possess experience, be able to communicate effectively, and

be enthusiastic about programme improvement. For courses relating to design, the faculty members in charge of the course must have good design experience and participate in professional societies.

(vii) The institute shall provide the required information for three complete academic years for Student-Teacher Ratio (STR), Faculty Cadre Ratio, faculty qualifications, faculty retention, Faculty Research Publications (FRP), Faculty Intellectual Property Rights (FIPR), Funded R&D Projects and Consultancy (FRDC), faculty interaction with outside world, faculty competence correlation with programme specific criteria and faculty as participants/resource persons in training and development activities as per the format given in the SAR. However, it shall provide the information in a suitable format, wherever necessary, in case the format has not been provided in the SAR.

Criterion 6 - Facilities and Technical Support

(i) The institution must provide adequate infrastructural facilities to support the achievement of the programme outcomes. Classrooms, tutorial rooms, meeting rooms, seminar halls, conference hall, faculty rooms, and laboratories must be adequately furnished to provide an environment conducive to learning. Modern teaching aids such as digital interactive boards, multimedia projectors etc., should be in place to facilitate the teaching-learning process so that programme outcomes of the programme can be achieved.

(ii) The laboratories must be equipped with computing resources, equipments, and tools relevant to the programme. The equipments of the laboratories should be properly maintained, upgraded and utilised so that the students can attain the programme outcomes. There should be an adequate number of qualified technical supporting staff to provide appropriate guidance for the students for using the equipment, tools, computers, and laboratories. The institution must provide scope for the technical staff for upgrading their skills and professional advancement.

(iii) The institute shall provide the required information for class rooms in the department, faculty rooms in the department, laboratories in the department to meet the curriculum

requirements as well as the POs, and technical manpower in the department as per the format given in the SAR. However, it shall provide the information in a suitable format wherever necessary in case the format has not been provided in the SAR.

Criterion 7- Academic Support Units and Teaching - Learning Process

(i) The programme must employ effective teaching-learning processes. The modes of teaching used, such as lecture, tutorial, seminar, teacher-student interaction outside class, peer-group discussion, or a combination of two or more of these, must be designed and implemented so as to facilitate and encourage learning. Practical skills, such as the ability to operate computers and other technologically advanced machinery, must be developed through hands-on laboratory work.

(ii) The effectiveness of the teaching-learning processes must be evaluated on a regular basis. The evaluation, besides reviewing the abovementioned factors, must also look at whether the academic calendar, the number of instructional days and contact hours per week, are maximally conducive to teaching and learning. Student feedback on various aspects of the process must be carefully considered as well. Internal reviews of quality assurance procedures should be carried out periodically.

(iii) The institute shall provide the required information for students' admission, assessment of faculty qualification, tutorial/remedial classes/mentoring, teaching and evaluation process, feedback system, self-learning, career guidance, training, placement and entrepreneurship cell and co-curricular and extra-curricular activities as per the format given in the SAR. However, it shall provide the information in a suitable format, wherever necessary, in case the format has not been provided in the SAR.

Criterion 8 - Governance, Institutional Support and Financial Resources

(i) The governance structure of the programme must clearly assign authority and responsibility for the formulation and implementation of policies that enable the programme to fulfill its mission. The programme must possess the financial resources necessary to fulfill its mission and the PEOs. In particular, there must be sufficient

resources to attract and retain well-qualified staff, and to provide them with opportunities for continuous development and career growth. The programme's budgetary planning process must also provide for the acquisition, repair, maintenance and replacement of physical facilities and equipment.

(ii) The educational institution must have a comprehensive and up-to-date library and extensive educational, technological facilities.

(iii) The institute shall provide the required information for campus infrastructure and facility, organisation , governance and transparency, budget allocation and public accounting (for both institutions and programme), library, internet, safety norms and checks, and counselling and emergency medical care and first-aid as per the format given in the SAR. However, it shall provide the information in a suitable format, wherever necessary, in case the format has not been provided in the SAR.

Criterion 9 - Continuous Improvement

Modifications in the programme curriculum, course delivery and assessment brought in from the review of the attainment of the PEOs and the POs, will be helpful to the institutions for continuous improvement. The programme must develop a documented process for the periodic review of the PEOs, the POs and the COs. The continuous improvement in the PEOs and the POs need to be validated with proper documentation.

The institute shall provide the required information for improvement in success index of students, improvement in academic performance index of students,   improvement in student-teacher ratio, enhancement of faculty qualifications index, improvement in faculty research publications, R&D and consultancy work, continuing education, curricular improvement based on the review of attainment of the PEOs, and the POs, course delivery and assessment improvement based on the review of the attainment of the PEOs, and the POs, new facility created, and overall improvement since last accreditation, if any, otherwise, since the commencement of the programme as per the format given in the SAR. However, it shall provide the information in a suitable format, wherever necessary, in case the format has not been provided in the SAR.

5.3 Awarding Accreditation

Programmes of the institutions scoring a minimum of 750 points in aggregate out of 1000 points with minimum score of 60% in each criteria shall be eligible for accreditation for 5 years under TIER-I system.

Whereas, the programme with the score of minimum 600 points in aggregate shall be eligible for provisional accreditation for 2 years under Tier-I system.

6. STEPS INVOLVED IN ACCREDITATION PROCEDURE

The accreditation process, whether for a first accreditation or re-accreditation, broadly involves the following activities. The institute shall submit the Self Assessment Report (SAR) which contains the required information in the prescribed format. The NBA shall appoint an Evaluation Team to assess the SAR. The Evaluation Team shall make an onsite accreditation visit and it shall prepare an evaluation report based on its findings. The Evaluation Team shall share the strengths and weaknesses of the programme/institute with the members of the institution vis-à-vis accreditation process during the exit meeting. The evaluation report will be placed before the EAC for its recommendations. The recommendations of the EAC will be submitted to the EC for its final decision vis-à-vis granting accreditation. The NBA shall inform the outcome of accreditation to the institution.

6.1 Basic Steps for Online Accreditation Process

Step 1: Online Registration Process (for institutions not registered with the NBA)

An institute may apply for registration online with the institute's basic information and receive temporary login credentials. The institute shall login with temporary login credentials to complete the institute's profile, and then submit to the NBA for review. The registration details shall be reviewed by the NBA officials, and the feedback review (Approval, Refer Back or Rejection) shall be communicated to the institute. The institute shall make the online payment of the registration fee. Once the intitute has paid the registration fee, the institute will be registered with eNBA by receiving a permanent User ID and Password for further correspondence. Upon the request of the institute, a registered institute can get more than one

ID, but not exceeding 5 IDs. The registered institute will be able to view its online repository.

Step 2: Apply for Accreditation

The institute registered with the NBA can apply for accreditation by logging on to its account and filling in the online application form. The NBA official shall review (Approval, Refer Back or Reject) the application, and once the accreditation application has been approved, then the institute will be asked to submit the prescribed fee as well as three sets (each set should consist of three consecutive days) of dates for onsite visit. While giving dates for the visit of the evaluation team to eNBA, the institution shall undertake that the classes and academic activities would be on during the visit. After the approval of the online payment for accreditation by the NBA, the institute shall receive the dates for the onsite visit. The institute can download the SAR, and submit the filled SAR along with the required Annexure and Appendices. The SAR submitted by the institute will, then, be forwarded to the Evaluation Team for an onsite visit. The NBA will schedule the Expert visit, and communicate the dates for the same to the institute 5 days prior to the commencement of the onsite visit. The application for accreditation received in an academic year (1st April to 31st March) will be considered in the next academic year.

DO's and DON'Ts for preparing the SAR

DO's:

The SAR must

- be concise, pointed, and adequate in length and breadth for the purpose of accreditation.
- provide relevant information as per the format specified for the individual programme.
- be printed on one side of paper with double spacing, using font 12 Times New Roman, with at least one inch (2.54 cm) margin on all sides.
- contain carefully compiled and authentic data.
- proper presentation of data in appendices with charts, graphics, and visuals wherever applicable.
- provide relevant data for the past three years, unless specified otherwise in the respective programme manual.

The documents should be submitted as hard copy in a soft bound form and mailed to the NBA, New Delhi. T h e soft copy should be uploaded on the NBA website.

DON'Ts:
Don't send the following objects with the SAR:
- Original documents.

- Publications such as books, journals, newsletters, thesis, etc.

Step3: Onsite Visit of Evaluation Team to the Institute

eNBA will form an Evaluation Team automatically to conduct an onsite visit to the institute which has applied for accreditation of its programme. The team will consist of a Chairperson and one (1) or two (2) Evaluator(s). If the accreditation of a programme is about to expire, then the institute has to apply for accreditation by submitting an online application at least 5 months before the expiry of the current accreditation. The evaluation team members may receive the copy of the SAR from the NBA approximately 15 days before the scheduled onsite visit. The evaluators shall conduct a thorough study (all possible mappings of Mission, PEOs, POs and COs) of the SAR and prepare a list of questions on their own in order to evaluate the programme effectively. This shall be done after discussion and consultation with fellow evaluators and chairperson. In case, the institution fails to provide desired information sought by the NBA, as per the manual and format during the visit or after fixing the dates of the visit, the reports shall be prepared on the basis of the given information and the NBA shall take its decision accordingly. An onsite visit could take up to three days. The Evaluation Team will meet, prepare and submit its report to eNBA on the third-day of the onsite visit. The Chairperson of the evaluation team has to consolidate the Evaluators' report and submit it to eNBA within a week from the last date of the visit.

Step 4: Consideration of Evaluation Report by Evaluation Accreditation Committee (EAC)

The Evaluation Report submitted by the Evaluation Team will be reviewed by the respective EAC which has been constituted for each discipline, and the EAC will give its recommendations to the Executive Committee (EC) of the NBA for consideration.

Step 5: Issuance of Accreditation Status

Based on the decision taken by the EC, the accreditation status will be notified to the institute by the NBA. An accreditation certificate for an accredited programme may also be issued.

Step 6: Appeal against the Accreditation Status

The institute can make an appeal against the accreditation status conveyed by the NBA by submitting an online appeal within 30 days, if the institution is not satisfied with the accreditation status of the programme.

7. PROVISIONAL ACCREDITATION OF NEW PROGRAMME

Provisional accreditation may be considered for new MCA programmes offered by a new/existing educational institution.

It is mandatory that an onsite evaluation visit be carried out only after completion of the first two years of delivery of the programme. The programme curriculum of the full programme, quality of the academic staff and other resources such as library, laboratories etc., should be made available during the visit of the evaluation team.

Provisional accreditation may be granted for a period of two years. The educational institution may request the NBA for provisional re-accreditation till it becomes eligible for full accreditation. If the educational institution does not request a follow-up accreditation within the two years, the provisional accreditation will lapse.

After provisional accreditation, the institutions are expected to submit their annual self assessment report to eNBA online. If any aspect of the programme is found to be sufficiently unsatisfactory and/or does not comply with norms, the NBA reserves the right to revoke the provisional accreditation. If necessary, the NBA, at the request of the institute, may appoint a mentor to the institute. The mentor may visit the educational institution at the request of the institution. The mentor shall provide a report for each visit to the NBA on his/her findings. The educational institution shall bear the expenses of the visit and honorarium to the mentors as prescribed by the NBA.

8. ACCREDITATION VISIT

The Evaluation Team will visit the institution seeking accreditation of its programme to evaluate and validate the assessment of the institute / department through the SAR of the programme concerned as per specified accreditation criteria. The evaluators may obtain such further clarifications from the institution as they may deem necessary. Although it may not be possible to adequately describe all the factors to be assessed during the onsite visit, some of the common ones are the following:

(i)   Outcome of the education provided;

(ii) Quality assurance processes, including internal reviews;

(iii) Assessment;

(iv) Activities and work of the students;

(v)   Entry standards and selection for admission of students;

(vi) Motivation and enthusiasm of faculty;

(vii) Qualifications and activities of faculty members;

(viii) Infrastructure facilities;

(ix) Laboratory facilities;

(x)   Library facilities;

(ix) Industry participation;

(x)   Organisation.

In order to assist the Evaluation Team in its assessment, the educational institution should arrange for the following:

(i) discussions with

a) the Head of the institute/Dean/Heads of Department (HoD)/Programme and course coordinators

b) a member of the management (to discuss how the programme fits into the overall strategic direction and focus of the institution, and management support for continued funding and development of the programme)

c) faculty members

d) alumni (sans Alma Maters)

e) students

f) parents

(ii) availability of the following exhibits

a) profile of faculty involved in the programme

b) evidence that the results of assessment of course outcomes and programme   outcomes are being applied to the review and ongoing improvement of programme effectiveness

c) list of publications, consultancy and sponsored/funded research projects by programme faculty

d) sample materials for theory and laboratory courses

e) sample test /semester examination question papers for all courses

f) sample of test/semester examination answer scripts projects, assignments, (including at least one excellent, one good and one marginal pass for each examination) question papers and evidences related to assessment tools for the COs and the POs

g) student records of three immediate batches of graduates

h) sample project and design reports (excellent, good and marginal pass) by students

i) sample student feedback form

j) sample for industry- institute interaction

k) results of quality assurance reviews

l) records of employment/higher studies of graduates

m) records of academic support and other learning activities

n) any other document that the Evaluation Team/NBA may request

(iii) visits to

a) classrooms

b) laboratories pertaining to the programme

c) central and department library

d) computer centre

e) hostel and dispensary

The Evaluation Team should conduct an exit meeting with the Management Representative, the Head of the institute, the Head of Department and other key officials at the end of the onsite visit to present its findings (strengths, weaknesses, and scope for improvement). The institution will be given a chance to withdraw its programme from the process of

accreditation. In this case, the Head of the institution will have to submit the withdrawal in writing to the Chairperson of the Evaluation Team during the exit meeting.

8.1   360° Feedback

The NBA implements the powerful 360° feedback system to bring out transparency and objectivity in the evaluation process which will help in improving the quality of the accreditation process. The Chairperson, Evaluators, Head of institution and Travel Coordinator (who is assigned the task of arranging travel/accommodation for evaluation team by the NBA) involved in the accreditation visit may give one's feedback about other(s) to the NBA using the respective forms (Form A, Form B, Form C and Form D) available in eNBA.

9. REDRESSAL PROCESS

An educational institution may appeal against refusal to accredit; an appeal may include a request for re-consideration of the report of the Evaluation Team.

An appeal involving requests for re-consideration must be made in writing to the NBA within 30 days after receiving notification of refusal to accredit. The appeal should be accompanied by relevant supporting evidence to contradict the findings of the accreditation team and recommendations of the EAC to substantiate the claim.

The GC/subcommittee of GC/NBA will consider the findings of the Appellate Committee and arrive at a final decision within 60 days after receipt of the appeal. If the request is denied, the NBA will provide the educational institution with reasons for the decision.

If Appellate Committee directs for a revisit, the NBA will appoint a Re-evaluation Team, if institution agrees for revisit, to carry out the onsite visit after receipt of requisite payment from the institution. In case, the institution does not agree for a revisit, the appeal shall be considered as deemed to be dismissed.

10. TASKS FOR MEMBERS OF THE EVALUATION TEAM

Members of the Evaluation Team should refer to "Guidelines and Operating Practices for Accreditation Visit and Evaluation" which provides details on the roles of the various Evaluation Team members and procedures during pre-visit and onsite visit. This guide will be obtained by the members of the Evaluation Team from the eNBA web portal.