



# **Orientation Workshop on Outcome Based Education & Accreditation 20<sup>th</sup> January, 2025**

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# ABOUT NBA

- Established in the year 1994 under Section 10 (u) of AICTE Act.
- NBA became Autonomous in January 2010 and in April 2013 the Memorandum of Association and Rules of NBA were amended to make it completely independent of AICTE, administratively as well as financially.
- NBA now independent in its functioning: decision making as well as financially.
- Does not receive any grant either from the government or from any regulatory body of technical and higher education.

# NATIONAL BOARD OF ACCREDITATION

NBA is committed to provide:

1. Credible System of Accreditation
2. Transparent & Accountable System

# Credible System of Accreditation

- **Strength** and **credibility** of accreditation process largely lies in the integrity, honesty, expertise and professionalism.
- **Evaluators** – face of NBA.
- **Transparency-**
  - Report discussed in the meetings of EAC in presence of all team chair
  - Recommendations of EAC are considered in Sub-committee of AAC
  - Copy of the report is sent to the Institution
  - Change in decision communicated to the institution with reasons
  - 360 degree feedback

# WHAT IS NOT THE PURPOSE OF ACCREDITATION

- ❑ **Not to** find faults with the institution but to assess the status-ante of the performance.
- ❑ **Not to** denigrate the working style of the institution and its programs but to provide a feed back on their strengths and weaknesses.
- ❑ **Not to** demarcate the boundaries of quality but to offer a sensitizing process for continuous improvement in quality provisions.
- ❑ **Not to** select only institutions of national excellence but to provide benchmarks of excellence and identification of good practices.

# General Policy on Accreditation

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

1. Programs, and not Educational Institutions, are considered for accreditation.
2. Programs from which at least two batches of students have graduated are considered for accreditation.

# Outcome-Based Program Accreditation

- ❖ **Knowledge** and **competencies** profiles
- ❖ Graduate Attributes(GAs)/Program Outcomes(POs) which form the student learning outcomes:
  - PO1: Engineering Knowledge
  - PO2: Problem Analysis
  - PO3: Design/Development of Solutions
  - PO4: Conduct Investigations of Complex Problems
  - PO5: Engineering Tool Usage
  - PO6: The Engineer and The World
  - PO7: Ethics
  - PO8: Individual and Collaborative Team work
  - PO9: Communication
  - PO10: Project Management and Finance
  - PO11: Life-Long Learning:

# NBA Outcome Based Accreditation

## Two Tier System

- ❖ Introduction of **Two-Tier System** based on Types of Institutions.
- **The Tier-I documents:** Applicable to the engineering/technology programs offered by academically **autonomous institutions** and by university departments and constituent colleges of the Universities.
- **Tier-II documents:** Applicable to **non-autonomous** Institutions, i.e., those Colleges and technical Institutions which are affiliated to a University.
- **For both** (Tier-I & Tier-II): Same set of criteria have been prescribed for accreditation.

## Marks Comparison of SAR of UG Engineering Tier-I & Tier II - (GAPC V4.0)

S.No.	Criteria	UG Engineering	
		Tier-I	Tier-II
1.	Outcome-Based Curriculum	120	120
2.	Outcome-Based Teaching Learning	120	120
3.	Outcome-Based Assessment	120	120
4.	Students' Performance	120	120
5.	Faculty Information	100	100
6.	Faculty Contributions	120	120
7.	Facilities and Technical Support	100	100
8.	Continuous Improvement	80	80
9.	Student Support and Governance	120	120
TOTAL		1000	1000

## Program Outcomes (POs)

- 1. Engineering knowledge:** Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop to the solution of complex engineering problems.
- 2. Problem Analysis:** Identify, formulate, review research literature and analyse complex engineering problems reaching substantiated conclusions with consideration for **Sustainable Development** (WK1 to WK4).
- 3. Design/Development of Solutions:** Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required (WK5).
- 4. Conduct investigations of Complex Problems:** Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions (WK8).
- 5. Engineering Tool usage:** Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems. (WK2 and WK6).



# **Program Outcomes (POs)-Proposed**

6. **The Engineer and The World:** Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on **Sustainability** with reference to economy, health, safety, legal framework, culture and environment (WK1, WK5, and WK7).
7. **Ethics:** Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws (WK9).
8. **Individual and Collaborative Team work:** Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.
9. **Communication:** Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences.
10. **Project Management and Finance:** Apply 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, and to manage projects and in multidisciplinary environments.
11. **Life-Long Learning:** Recognize the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change (WK8).

# Pre-Qualifiers: TIER-I UG (Engg.,) Program

S.N.	Pre Visit Qualifiers	Current Status	Compliance Status Complied/Not Complied
<b>Essential qualifiers</b>			
1	Whether <b>approval</b> of the competent authority (Approval of AICTE/UGC/BoG of Universities/ Deemed Universities etc.) for the <b>program</b> under consideration has been obtained for all the years including current academic year		
2	Whether the Student Faculty Ratio ( <b>SFR</b> ) in the Department and allied Departments is less than or equal to <b>25:1</b> , <b>averaged</b> over three academic years: CAY, CAYm1, and CAYm2	SFR	
3	Whether the number of faculty having <b>Ph.D</b> degree available in the Department & allied Departments is greater than or equal to <b>20%</b> of the required number of faculty <b>averaged</b> over two academic years i.e. CAY and CAYm1.		
4	Whether <b>two batches</b> have passed out in the program under consideration		
5	Whether <b>HoD</b> possesses <b>Ph.D.</b> degree		

# Pre-Qualifiers: TIER-I UG (Engg.,) Program

S.N.	Pre Visit Qualifiers	Current Status	Compliance Status Complied/Not Complied
<b>Essential qualifiers</b>			
6	<p><b>Case 1:</b> If the Department/School is <b>not running</b> multiple UG (Engineering) programs and does not have allied departments, which are running undergraduate engineering programs, then the <b>program</b> under consideration needs either <b>2 Professors</b> or <b>1 Professor</b> and <b>1 Associate</b> Professor on a regular basis with Ph.D. degree in the current academic year (CAY) and the previous academic year (CAYm1).</p> <p><b>Case 2:</b> If the Department/School, including allied departments, is <b>running multiple UG</b> (Engineering) programs, the program under consideration needs either 2 Professors or <b>1 Professor</b> and <b>1 Associate</b> Professor on a regular basis with Ph.D. degree in CAY and CAYm1. <b>Additionally</b>, the remaining <b>UG</b> (Engineering) programs (N*) need N <b>Professors</b> or N <b>Associate</b> Professors in the Department/ School/ Allied departments on a regular basis with Ph.D. degree in CAY and CAYm1 in total.</p>		

# Tier – I Grades

<b>% of Marks</b>	<b>Grade</b>
❖ $\approx 75\%$ & Above	<b>‘Y’</b>
❖ $\approx 60\%$ and $<75\%$	<b>‘C’</b>
❖ $\approx 40\%$ and $<60\%$	<b>‘W’</b>
❖ $<40\%$	<b>‘D’</b>

# Award of Accreditation UG (Engg.): Tier-I

## Accreditation for Six Years:

1. There should not be any Deficiency (D) or Weakness (W) in any of the criteria and at least six criteria must be fully compliant (Y), with only 'Concerns (C)' in the remaining criteria ( $Y \geq 6$ ,  $W \& D=0$ ).
2. The no. of faculty having Ph. D degree available in the Department & allied Departments is greater than or equal to 20% of the required no. of faculty averaged over two academic years i.e. CAY and CAYm1.
3. Student Faculty Ratio (SFR) in the Department and allied Departments should be less than or equal to 20:1, averaged over 3 academic years i.e. CAY, CAYm1 and CAYm2.
4. HoD should be on regular basis and possess Ph.D. degree for the programs under consideration in the CAY.

# Award of Accreditation UG (Engg.): Tier-I

## Accreditation for Six Years:

### 5. Required no. of Professors or Associate Professors

- ❖ **Case 1:** If the Department/School is **not running multiple UG** (Engg.) programs and does not have allied departments, which are running UG (Engg., ) programs, then the **program** under consideration **needs** either **2 Professors** or **1 Professor** and **1 Associate** Professor on a regular basis with Ph.D. degree in CAY and CAYm1.
- ❖ **Case 2:** If the Department/School, including allied departments, is **running multiple UG** (Engg.) programs, the **program** under consideration **needs** either **2 Professors** or **1 Professor** and **1 Associate** Professor on a regular basis with Ph.D. degree in CAY and CAYm1. **Additionally**, the **remaining UG** (Engg.) programs ( $N^*$ ) need **N Professors** or **N Associate** Professors in Department/School/ Allied departments on a regular basis with Ph.D. degree in CAY and CAYm1 in total.

**Note\*:** Exclude the no. of Professors/Associate Professors for the UG (Engg.) programs that have been running for less than 3 years (CAY, CAYm1)

# Award of Accreditation for UG (Engg.): Tier-I

## Accreditation for Three Years:

1. There should not be any Deficiency (D) and at least **three criteria** must be fully **compliant** (Y).
2. The no. of **faculty** having Ph. D degree available in the Department & allied Departments is greater than or equal to **20%** of the required no. of faculty **averaged** over two academic years i.e. CAY and CAYm1.
3. Student Faculty Ratio (**SFR**) in the Department and allied Departments should be less than or equal to **25:1**, **averaged** over 3 academic years i.e. CAY, CAYm1 and CAYm2.
4. **HoD** should possess **Ph.D.** degree for the programs under consideration in the CAY.

# Award of Accreditation for UG (Engg.): Tier-I

## Accreditation for Three Years

### 5. Required no. of Professors or Associate Professors

- ❖ **Case 1:** If the Department/School is **not running multiple UG (Engg.)** programs and does not have allied departments, which are running UG (Engg., ) programs, then the **program** under consideration **needs** either **2 Professors** or **1 Professor** and **1 Associate Professor** on a regular basis with Ph.D. degree in CAY and CAYm1.

# Award of Accreditation for UG (Engg.): Tier-I

## No Accreditation of the Program

- ❖ **Case 2:** If the Department/School, including allied departments, is **running multiple UG (Engg.)** programs, the **program** under consideration **needs** either **2 Professors** or **1 Professor** and **1 Associate Professor** on a regular basis with Ph.D. degree in CAY and CAYm1. **Additionally**, the **remaining UG (Engg.)** programs ( $N^*$ ) need **N Professors** or **N Associate Professors** in Department/ School/ Allied departments on a regular basis with Ph.D. degree in CAY and CAYm1 in total.

**Note\*:** Exclude the no. of Professors/Associate Professors for the UG (Engg.) programs that have been running for less than 3 years (CAY, CAYm1)

- ❖ If the program **fails** to **meet criteria** for award of accreditation for **3 years**, the program will not be considered for accreditation.

# Pre-Qualifiers: TIER-II UG (Engg.,) Program

S.N.	Pre-Visit Qualifiers	Current Status	Compliance Status(Complied /Not Complied)
1	Whether the <b>approval</b> of <b>AICTE</b> for the programs under consideration has been obtained for the previous <b>five years</b> , starting from the current academic year		
2	Whether the Student Faculty Ratio ( <b>SFR</b> ) in the Department and allied Departments is less than or equal to <b>25:1</b> , averaged over three academic years: Current Academic Year (CAY), Current Academic Year Minus One (CAYm1), and Current Academic Year Minus Two (CAYm2)		

## Pre-Qualifiers: TIER-II UG (Engg.) Program

S.N.	Pre-Visit Qualifiers	Current Status	Compliance Status(Complied/ Not Complied)
3	<p><b>Case 1:</b></p> <p>If the Department/School is <b>not</b> running <b>multiple UG</b> (Engineering) programs and does not have allied departments, which are running undergraduate engineering programs, then the Department/School under consideration needs either <b>1 Professor</b> or <b>1 Associate</b> Professor on a regular basis with Ph.D. degree in the current academic year (CAY) and the previous academic year (CAYm1).</p>		

## Pre-Qualifiers: TIER-II UG (Engg.) Program

S.N.	Pre-Visit Qualifiers	Current Status	Compliance Status(Complied /Not Complied)
3	<p><b>Case 2:</b></p> <p>If the Department/School, including allied departments, is running <b>multiple UG</b> (Engineering) programs, the Department/ School under consideration needs either <b>1 Professor</b> or <b>1 Associate Professor</b> on a regular basis with Ph.D. degree in CAY and CAYm1. Additionally, the <b>remaining UG</b> (Engineering) programs (N*) need <b>N Professors</b> or <b>N Associate Professors</b> in the Department/ School/ Allied Departments on a regular basis with Ph.D degree in CAY and CAYm1 in total.</p>		

**Note\*:** Exclude the number of Professors/Associate Professors for the UG programs (Engineering) that have been running for less than 3 years (CAY, CAYm1).

# Pre-Qualifiers: TIER-II UG (Engg.,) Program

S.N.	Pre-Visit Qualifiers	Current Status	Compliance Status( Complied/ Not Complied)
4	Whether the <b>number</b> of faculty having <b>Ph.D</b> degree available in the Department & allied Departments is greater than or equal to <b>10%</b> of the required number of faculty averaged over two academic years i.e. Current Academic Year (CAY) and Current Academic Year Minus One (CAYm1)		
5	Whether <b>two batches</b> have <b>passed out</b> in the program under consideration		

# **Proposed Award of Accreditation: TIER-II UG (Engg.,):**

## **Accreditation for Six Years:**

1. Program should score a **minimum** of **750** points in aggregate out of 1000 points with minimum score of **60%** in **mandatory** fields (i.e. criteria 3 to 6)
2. The **number** of faculty having **Ph.D** degree **available** in the Department & allied Departments is greater than or equal to **20%** of the required number of faculty averaged over two academic years i.e. Current Academic Year (CAY) and Current Academic Year Minus One (CAYm1).

# **Proposed Award of Accreditation: TIER-II UG (Engg.,)**

## **Accreditation for Six Years:**

3. The Student Faculty Ratio (**SFR**) in the Department and allied Departments should be less than or equal to **20:1** averaged over 3 academic years i.e. Current Academic Year (CAY), Current Academic Year Minus One(CAYm1), Current Academic Year MinusTwo (CAYm2).
4. The **HOD** of the department in which the program under consideration is running should be appointed on regular basis and should possess **PhD** degree in the Current Academic Year (CAY).

# **Proposed Award of Accreditation: TIER-II UG (Engg.,):**

## **Accreditation for Six Years:**

### **5. Case 1:**

If the Department/School is **not** running **multiple UG** (Engineering) programs and does not have allied departments, which are running undergraduate engineering programs, then the program under consideration needs either **2 Professors** or **1 Professor and 1 Associate** Professor on a regular basis with Ph.D. degree in the current academic year (CAY) and the previous academic year (CAYm1).

# **Proposed Award of Accreditation: TIER-II UG (Engg.,):**

## **Accreditation for Six Years:**

### **5. Case 2:**

If the Department/School, including allied departments, is running **multiple UG** (Engineering) programs, the program under consideration needs either **2 Professors** or **1 Professor and 1 Associate Professor** on a regular basis with Ph.D. degree in CAY and CAYm1. Additionally, the **remaining UG** (Engineering) programs ( $N^*$ ) need  $N$  Professors or  **$N$  Associate Professors** in the Department/ School/ Allied departments on a regular basis with Ph.D. degree in CAY and CAYm1 in total.

**Note\*:** Exclude the number of Professors/Associate Professors for the UG programs (Engineering) that have been running for less than 3 years (CAY, CAYm1).

# **Proposed Award of Accreditation: TIER-II UG (Engg.,):**

## **Accreditation for Three Years:**

1. Program should score a **minimum** of 600 points in aggregate out of 1000 points with minimum score of **40%** in **mandatory fields** (i.e. criteria 4 to 5)
2. The **number** of faculty having **Ph. D** degree **available** in the Department & allied Departments is greater than or equal to **10%** of the required number of faculty averaged over two academic years i.e. Current Academic Year (CAY) and Current Academic Year Minus One (CAYm1).

# **Proposed Award of Accreditation: TIER-II UG (Engg.,):**

## **Accreditation for Three Years:**

3. The Student Faculty Ratio(**SFR**) in the Department and allied Departments should be less than or equal to **25:1** averaged over 3 academic years i.e. Current Academic Year(CAY), Current Academic Year Minus One (CAYm1), Current Academic Year Minus Two (CAYm2).

### **4. Case 1:**

If the Department/School is **not** running **multiple UG** (Engg.,) programs and does not have allied departments, which are running undergraduate engineering programs, then the program under consideration needs either **1 Professor** or **1 Associate Professor** on a regular basis with Ph.D. degree in the current academic year(CAY) and the previous academic year (CAYm1).

# **Proposed Award of Accreditation: TIER-II UG (Engg.,):**

## **Accreditation for Three Years:**

### **4. Case 2:**

If the Department/School, including allied departments, is running **multiple UG** (Engineering) programs, the program under consideration needs either **1 Professor** or **1 Associate Professor** on a regular basis with Ph.D. degree in CAY and CAYm1. Additionally, the **remaining UG** (Engineering) programs (N\*) need **"N" Professors or "N" Associate Professors** in the Department/ School/ Allied departments on a regular basis with Ph.D. degree in CAY and CAYm1 in total

**Note\*:** Exclude the number of Professors/Associate Professors for the UG programs (Engineering) that have been running for less than 3 years (CAY, CAYm1).

# Guidelines for Faculty and SAR:

- ❖ The **faculty** will be counted in the respective year, if the faculty has **joined before** or on **31st August** of the same year and continued **till 30th April** of the subsequent year.
- ❖ There is **no age limit** to the consideration for the **emeritus faculty** as long as they are physically fit to take classes and engage with students, and are employed on a full time basis.
- ❖ The available and required no. of **PhD.** in the Department shall be **truncated** to its nearest **lower integer**.
- ❖ In the disciplines like MBA or PGDM or **specialized areas** like Biotechnology, all the qualifications relevant and purposeful to those disciplines need to be **considered**, in addition to the M.Tech/MBA/ PGDM degrees.
- ❖ All the **faculty** whether regular or contractual (**except part-time or hourly based**), will be considered.
- ❖ All regular **faculty** members shall meet the **AICTE qualifications and experience** requirements.

# Guidelines for Faculty and SAR:

- ❖ **Contractual faculty** appointed with any terminology whatsoever, who have taught for **2 consecutive semesters** with or without break between the 2 semesters in corresponding academic year on full-time basis shall be considered for the purpose of calculation in the faculty student ratio.
- ❖ **Following** will be **ensured** in case of **contractual faculty**:
  - Shall have the **AICTE** prescribed **qualifications** and experience.
  - Shall be **appointed** on **full time** basis and worked for consecutive **two semesters** with or without break between the 2 semesters during the particular academic year under consideration.
  - Should have gone through an **appropriate process of selection** and the records of the same shall be made available to the visiting team during NBA visit.

# Guidelines for Faculty and SAR

- ❖ Academic year is considered from July to June
- ❖ If the SAR is submitted before 30th September, then the CAY shall be the previous academic year and if the SAR is submitted after 30th September, then the CAY shall be the running academic year for the purpose of data consideration and calculations.
  - **CAY**: Current Academic Year
  - **CAYm1**: Current Academic Year Minus 1
  - **CAYm2**: Current Academic Year Minus 2
  - **CAYm3**: Current Assessment Year Minus 3

# Student Faculty Ratio (SFR) Considered by NBA

**UG** Engineering Programs (Tier I & Tier II):

- ❖ 25:1 for the Accreditation of 3 years
- ❖ 20:1 for the Accreditation of 6 years

**PG** Engineering and MCA Programs:

- ❖ 25:1 for the Accreditation of 3 years
- ❖ 20:1 for the Accreditation of 6 years

**Diploma** Engineering Programs:

- ❖ 30:1 for the Accreditation of 3 years & 6 years

**PG** Management Programs:

- ❖ 25:1 for the Accreditation of 3 years
- ❖ 15:1 for the Accreditation of 6 years.

**UG & PG** Pharmacy Programs:

- ❖ 20:1 for the Accreditation of 3 years
- ❖ 15:1 for the Accreditation of 6 years

**Diploma** Pharmacy Programs:

- ❖ 25:1 for the Accreditation of 3 years & 6 years



**Thank you**