



**SELF ASSESSMENT REPORT (SAR) FORMAT**  
**DIPLOMA ENGINEERING PROGRAMS**  
**FIRST TIME ACCREDITATION**

*(Applicable for all the programs except those granted full accreditation for 5 years as per January 2013 Manual)*

NBCC Place, 4th Floor East Tower, Bhasham Pitamah Marg,  
Pragati Vihar New Delhi 110003  
P: +91(11)24360620-22, 24360654  
Fax: +91(11) 24360682  
E-mail: membersecretarynba1@gmail.com  
Website: [www.nbaind.org](http://www.nbaind.org)  
(October, 2015)

## SAR Contents

Serial Code & Link to the Item	Item	Page No.
<b>PART A</b>	<b>Institutional Information</b>	
<b>PART B</b>	<b>Criteria Summary</b>	
	<b>Program Level Criteria</b>	
1.	Vision, Mission, Program Educational Objectives	
2.	Program Curriculum and Teaching – Learning Processes	
3.	Course Outcomes and Program Outcomes	
4.	Students’ Performance	
5.	Faculty Information and Contributions	
6.	Facilities and Technical Support	
7.	Continuous Improvement	
	<b>Institute Level Criteria</b>	
8.	Student Support Systems	
9.	Governance, Institutional Support and Financial Resources	
<b>PART C</b>	<b>Declaration by the Institution</b>	
<b>Annexure-1</b>	<b>Program Outcomes and Program Specific Outcomes</b>	

**PART A: Institutional Information**

**1. Name and Address of the Institution:**

**2. Name and Address of the Directorate of Technical Education:**

**3. Year of Establishment:**

**4. Type of the Institution:**

- University
- Deemed University
- Autonomous
- Affiliated
- Any Other (Please Specify)

**5. Ownership Status:**

- Central Government
- State Government
- Government Aided
- Self financing
- Trust
- Society
- Section 25 Company
- Any Other (Please specify)

**Provide Details:**

**6. Other Academic Institutions of the Trust/Society/etc., if any:**

Name of the Institution	Year of Establishment	Programs of Study	Location

**Note:** Add rows as required.

**7. Details of all the programs being offered by the institution under consideration:**

S.No.	Program Name	Year of Commencement	Intake Capacity	Increase in intake, if any	Year of increase	AICTE Approval	Accreditation Status*
1.							
N.							

**Note:** Add rows as required.

**\* Write appropriate option from the list:**

- Applying first time
- Granted provisional accreditation for two years for the period(specify period)
- Granted accreditation for 5 years for the period (specify period)
- Not accredited (specify visit dates, year)
- Withdrawn (specify visit dates, year)
- Not eligible for accreditation
- Eligible but not applied

**8. Programs to be considered for Accreditation vide this application:**

S. No.	Program Name
1.	
2.	
N.	

**9. Total number of Employees:**

**A. Regular\*Faculty and Staff:**

Items		CAY		CAYm1		CAYm2	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering& Technology	M						
	F						
Faculty in Sciences & Humanities	M						
	F						
Non-teaching staff	M						
	F						

**\* Means –**

- Full time on roll with prescribed pay scale. An employee on contract for a period of not less than two years AND drawing consolidated salary equal or more than applicable gross salary shall only be counted as a regular employee.
- Prescribed pay scales mean pay scales notified by the AICTE/Central Govt. and implementation as prescribed by the State Govt. In case State Govt. prescribes lesser consolidated salary for a particular cadre then same will be considered as reference while counting faculty as a regular faculty.

CAY (Current Assessment Year)

CAYm1 (Current Assessment Year minus 1)

CAYm2 (Current Assessment Year minus 2)

**Note:** In case Institution is running AICTE approved courses in Second shift, separate tables with the relevant heading shall be prepared.

**B. Contractual Staff** (Not covered in Table 9.A):

Items		CAY		CAYm1		CAYm2	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering & Technology	M						
	F						
Faculty in Science & Humanities	M						
	F						
Non-teaching staff	M						
	F						

**10. Total number of students:**

Items	CAY	CAYm1	CAYm2
Total no. of boys			
Total no. of girls			
Total no. of students			

**Note:** In case Institution is running AICTE approved courses in Second shift, separate tables with the relevant heading shall be prepared.

**11. Contact Information of the Head of the Institution and NBA coordinator:**

i. Head of the Institution:

Name:

Designation:

Mobile No:

Email id:

ii. NBA coordinator, if designated:

Name:

Designation:

Mobile No:

Email id:

## PART B: Criteria Summary

Name of the program: \_\_\_\_\_

<b>Criterion No.</b>	<b>Criterion</b>	<b>Marks/Weightage</b>
<b>Program Level Criteria</b>		
1.	Vision, Mission and Program Educational Objectives	50
2.	Program Curriculum and Teaching –Learning Processes	200
3.	Course Outcomes and Program Outcomes	100
4.	Students' Performance	200
5.	Faculty Information and Contributions	150
6.	Facilities and Technical Support	100
7.	Continuous Improvement	75
<b>Institute Level Criteria</b>		
8.	Student Support Systems	50
9.	Governance, Institutional Support and Financial Resources	75
<b>Total</b>		<b>1000</b>

## Self-Assessment Report (SAR)

<b>CRITERION 1</b>	<b>Vision, Mission and Program Educational Objectives</b>	<b>50</b>
--------------------	---	-----------

### 1.1. State the Vision and Mission of the Department & Institution (5)

*(Vision statement typically indicates aspirations and Mission statement states the broad approach to achieve aspirations)*

*(Here Institute Vision and Mission statements have been asked to ensure consistency with the department Vision and Mission statements; the assessment of the Institute Vision and Mission will be done in the Criterion 9)*

### 1.2. State the Program Educational Objectives (PEOs) (5)

*(State the Program Educational Objectives (3 to 5 statements/objectives) of the program seeking accreditation)*

### 1.3. Indicate where and how the Vision, Mission and PEOs are published and disseminated among stakeholders (10)

*(Describe where (websites, curricula, posters etc.) the Vision, Mission and PEOs are published and detail the process which ensures awareness among internal and external stakeholders with effective process implementation)*

*(Internal Stakeholders may include Management, Governing Board Members, Faculty, Support Staff, Students etc. and External Stakeholders may include Employers Industry, Alumni, Funding Agencies, etc.)*

### 1.4. State the process for defining the Vision and Mission of the Department, and PEOs of the program (15)

*(Articulate the process involved in defining the Vision and Mission of the department and PEOs of the program)*

### 1.5. Establish consistency of PEOs with Mission of the Department (15)

***(Generate a "Mission of the Department – PEOs matrix" with justification/ rationale of the mapping)***

PEO Statements	M1	M2	....	Mn
PEO1:				
PEO2:				
PEO5:				

M1, M2..Mn are distinct elements of Mission statement. Enter correlation levels 1, 2 or 3as defined below:

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)

*If there is no correlation, put "-"*

**Note:** *In this document wherever the term „Process“ has been used its meaning is process formulation, notification and effective implementation.*



<b>CRITERION 2</b>	<b>Program Curriculum and Teaching –Learning Processes</b>	<b>200</b>
--------------------	--	------------

**2.1. Program Curriculum (50)**

**2.1.1. State the process used to identify extent of compliance of the Board curriculum for attaining the Program Outcomes (POs) and Program Specific Outcomes (PSOs) as mentioned in Annexure I. Also mention the identified curricula gaps, if any (30)**

*(State the process details to identify gaps and mention identified curricula gaps. It will include typically relevance of curriculum, frequency and process of revision, weightages to theory-lab-tutorial and coverage of curriculum)*

**Note:** In case all POs and PSOs are being demonstrably met through Board Curriculum then 2.1.2 will not be applicable and the weightage of 2.1.1 will be 50.

**2.1.2. Contents beyond the Syllabus (20)**

*(Provide details of the additional course/learning material/content/laboratory experiments/projects etc., arising from the gaps identified in 2.1.1. the delivery details and relevance to POs and PSOs for each of the assessment year in the format given below)*

**CAY**

S.No.	Gap	Action taken	Date-Month-Year	Resource Person with designation	No. of students present	Relevance to POs & PSOs

**CAYm1**

S.No.	Gap	Action taken	Date-Month-Year	Resource Person with designation	No. of students present	Relevance to POs & PSOs

**CAYm2**

S.No.	Gap	Action taken	Date-Month-Year	Resource Person with designation	No. of students present	Relevance to POs & PSOs

**Note:** Please mention *in detail* whether the Institution has given such inputs and suggestions to the Affiliating Board regarding curricular gaps and possible addition of new content/add-on courses in the curriculum, to bridge the gap and to improve/attain certain POs & PSOs.

## **2.2 Teaching Learning Process (150)**

### **2.2.1. Describe Processes followed to ensure/improve quality of Teaching & Learning (25)**

*(Processes may include adherence to academic calendar and improving instruction methods using pedagogical initiatives such as real world examples, encouraging bright students, assisting weak students, use of ICT, collaborative learning, quality of laboratory experience with regard to conduct of experiments, recording observations, analysis of data etc. The implementation details and effectiveness observed need to be documented)*

### **2.2.2. Initiatives to improve the quality of semester tests and assignments (15)**

*(Mention the initiatives, implementation details related to quality assurance of semester tests and assignments that encourage and empower the students to develop skills and higher orders of learning)*

### **2.2.3. Quality of Experiments (15)**

*(Aim/Type of experiment, Relevance to Outcomes)*

### **2.2.4. Quality of Students Projects and Report Writing (25)**

*(Quality of the project is measured in terms of factors including, but not limited to type (application, product, review, live Industry problems, Hardware/Software based, group size etc.), environment, safety, ethics, cost effectiveness and standards. Processes related to project identification, allotment, continuous monitoring, evaluation including demonstration of working prototypes, Quality of Project Report and enhancing the relevance of projects. Mention Implementation details including details of POs & PSOs addressed through the projects with justification)*

### **2.2.5. Industry Interaction and Industry Internship/Training (30)**

*(Give details of the industry involvement in the program such as industry-supported laboratories, partial delivery of appropriate courses/lectures by industry experts etc. Mention implementation details)*

*(Give details of Industry Internship/Training support provided to the students with implementation details)*

### **2.2.6. Information Access Facilities and Student Centric Learning Initiatives (15)**

*(Availability of ICT facilities, e-learning facilities, utilization; initiatives to ensure students learning through ICT)*

*(The Program needs to specify the facilities, materials and scope for self-learning, Webinars, NPTEL Podcast, MOOCs etc. and evaluate their effectiveness)*

### **2.2.7. New Initiatives for embedding Professional Skills (15)**

*(Initiatives for developing specialized skill development programs including communication, professional and core employability skills to enhance employability)*

### **2.2.8. Co-curricular & Extra Curricular Activities (10)**

*(The institution may specify the co-curricular and extra-curricular activities) (Quantify activities such as NCC, NSS etc.)*

<b>CRITERION 3</b>	<b>Course Outcomes and Program Outcomes</b>	<b>100</b>
--------------------	---	------------

**3.1. Establish the correlation between the courses and the POs & PSOs (20)**

*(POs as mentioned in Annexure I and PSOs as defined by the Program)*

**3.1.1. Course Outcomes (SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses) (05)**

**Note:** Number of Outcomes for a Course is expected to be around 6.

**Course Name: Ciii Year of Study: YYYY – YY; For ex. C202 Year of study 2013-14**

<b>C202.1</b>	<Statement>
<b>C202..</b>	<Statement>
<b>C202.N</b>	<Statement>

**Table – 3.1.1**

C202 is the second course in second year and „.1“ to „.n“ are the outcomes of this course.

**3.1.2. CO-PO matrices of courses selected in 3.1.1 (six matrices to be mentioned; one per semester from 1<sup>st</sup> to 6<sup>th</sup> semester) (5)**

<b>CO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>
C202.1										
C202..										
C202..N										
C202										

**Table 3.1.2**

**Note:**

1. Enter correlation levels 1, 2 or 3 as defined below:

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)

*If there is no correlation, put “-”*

**2. Similar table is to be prepared for PSOs**

### 3.1.3. Program level Course-PO matrix of all courses INCLUDING first year courses (10)

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
C101										
C202										
C303										
....										
....										

**Table 3.1.3\***

**Note:**

1. Enter correlation levels 1, 2 or 3 as defined below:

1: Slight (Low)                      2: Moderate (Medium)                      3: Substantial (High)

*If there is no correlation, put "-"*

\* It may be noted that contents of Table 3.1.2 must be consistent with information available in Table 3.1.3 for all the courses.

2. **Similar table is to be prepared for PSOs**

### 3.2. Attainment of Course Outcomes (40)

#### 3.2.1. Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based (10)

*(Examples of data collection processes may include, but are not limited to, specific exam/tutorial questions, assignments, laboratory tests, project evaluation, internally developed assessment exams, project presentations, oral exams etc.)*

#### 3.2.2. Record the attainment of Course Outcomes of all courses with respect to set attainment levels (30)

*Program shall have set Course Outcome attainment levels for all courses.*

*(The attainment levels shall be set considering average performance levels in the board examination for the assessment years. Attainment level is to be measured in terms of student performance in internal assessments with respect the COs of a course plus the performance in the Board examination)*

#### **Measuring Course Outcomes attained through board examinations**

*Target may be stated in terms of percentage of students getting more than the Board average marks or more as selected by the Program in the final examination. For cases where the Board does not provide useful indicators like average or median marks etc., the program may choose an attainment level on its own with justification.*

**Example related to attainment levels vs targets: (The examples indicated are for reference only. Program may appropriately define levels)**

Attainment Level 1: **60%** students scoring more than board average percentage marks in the final examination is considered to be attainment of "1"

Attainment Level 2: **70%** students scoring more than board average percentage marks in the final examination is considered to be attainment of "2"

Attainment Level 3: **80%** students scoring more than board average percentage marks in the final examination is considered to be attainment of "3"

- Attainment is measured in terms of actual percentage of students getting set percentage of marks.
- If targets are achieved then all the course outcomes are attained for that year. Program is expected to set higher targets for the following years as a part of continuous improvement.
- If targets are not achieved the program should put in place an action plan to attain the target in subsequent years.

**Measuring CO attainment through Internal Assessments: (The examples indicated are for reference only. Program may appropriately define level)**

Target may be stated in terms of percentage of students getting more than class average marks or set by the program in each of the associated COs in the assessment instruments (midterm tests, assignments, mini projects, reports and presentations etc. as mapped with the COs)

**Example**

Mid-term test 1 addresses C202.1 and C202.2. Out of the maximum 20 marks for this test 12 marks are associated with C202.1 and 8 marks are associated with C202.2.

Examples related to attainment levels vs targets:

Attainment Level 1: **60%** students scoring more than 60% marks out of the relevant maximum marks is considered to be attainment of "1"

Attainment Level 2: **70%** students scoring more than 60% marks out of the relevant maximum marks is considered to be attainment of "2"

Attainment Level 3: **80%** students scoring more than 60% marks out of the relevant maximum marks is considered to be attainment of "3"

- Attainment is measured in terms of actual percentage of students getting set percentage of marks.
- If targets are achieved then the C202.1 and C202.2 are attained for that year. Program is expected to set higher targets for the following years as a part of continuous improvement.
- If targets are not achieved the program should put in place an action plan to attain the target in subsequent years.

Similar targets and achievement are to be stated for the other mid term tests/internal assessment instruments

**Course Outcome Attainment:**

For example:

Attainment through Board Examination: Substantial i.e. 3

Attainment through Internal Assessment: Moderate i.e. 2

Assuming 80% weightage to Board examination and 20% weightage to Internal assessment, the attainment calculations will be (80% of Board level) + (20% of Internal level ) i.e. 80% of 3 + 20% of 2 = 2.4 + 0.4 = 2.8

**Note:** Weightage of 80% to Board exams is only an example. Programs may decide their weightages for Board exams and internal assessment with due justification.

### 3.3. Attainment of Program Outcomes & Program Specific Outcomes (40)

#### 3.3.1. Describe assessment tools and processes used for assessing the attainment of each POs and PSOs as mentioned in Annexure 1 (10)

*(Describe the assessment tools and processes used to gather the data upon which the evaluation of each of the Program Outcome and Program Specific Outcome is based, indicating the frequency with which these processes are carried out. Describe the assessment processes that demonstrate the degree to which the Program Outcomes and Program Specific Outcomes are attained and document the attainment levels)*

#### 3.3.2. Provide results of evaluation of each PO & PSO (30)

Program shall set Program Outcome attainment levels for all POs & PSOs.

(The attainment levels by direct (student performance) and indirect (surveys) are to be presented through Program level Course-PO matrix and course- PSO Matrix as indicated)

#### PO Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
C101										
C102										
...										
....										
....										
C309										
Direct Attainment										
Indirect Attainment										

Table 3.3.2

C101, C102 are indicative courses in the first year. Similarly, C309 is final year course. First numeric digit indicates year of study and remaining two digits indicate course nos. in the respective year of study.

- Direct attainment level of a PO is determined by taking average across all courses addressing that PO. Fractional numbers may be used for example 1.55.
- Indirect attainment level of a PO is determined based on the student exit surveys, employer surveys, co-curricular activities, extracurricular activities etc.

**Example:**

1. It is assumed that a particular PO has been mapped to four courses C201, C302, C303, C304
2. The attainment level for each of the four courses will be as per the examples shown in 3.2.2
3. PO attainment level will be based on attainment levels of direct assessment and indirect assessment
4. From polytechnic perspective, it is assumed that while deciding on overall attainment level 80% weightage may be given to direct assessment and 20% weightage to indirect assessment through surveys from students (largely), employers (to some extent). Program may have different weightages with appropriate justification.
5. Assuming following actual attainment levels:

**Direct Assessment**

C201 – High (3)

C302 – Medium (2)

C303 – Low (1)

C304 – High (3)

Attainment level will be summation of levels divided by no. of courses  $(3+2+1+3)/4 = 9/4 = 2.25$

**Indirect Assessment**

Surveys, Analysis, customized to an average value as per levels 1, 2 & 3.

Assumed level - 2

PO Attainment level will be 80% of direct assessment + 20% of indirect assessment i.e.  $1.8 + 0.4 = 2.2$ .

Program may decide five attainment levels instead of three;

For ex. - Attainment levels:

- Level 5 – Very High - Score from 2.5 to 3
- Level 4 – High - Score from 2 to <2.5
- Level 3 – Medium - Score from 1.5 to <2
- Level 2 – Low - Score from 1 to <1.5
- Level 1 – Very Low- Score from 0.5 to <1

<b>CRITERION 4</b>	<b>Students' Performance</b>	<b>200</b>
--------------------	------------------------------	------------

**Intake Information:**

Item	CAY	CAYm1	CAYm2
Sanctioned intake strength of the program ( <i>N</i> )			
Total number of students, admitted through state level counseling( <i>N1</i> )			
Number of students, admitted through Institute level quota ( <i>N2</i> )			
Number of students, admitted through lateral entry ( <i>N3</i> )			
Total number of students admitted in the Program ( <i>N1</i> + <i>N2</i> + <i>N3</i> )			

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully passed without backlogs in any year of study		
		I Year	II Year	III Year
CAY				
CAYm1				
CAYm2 (LYB) *				
CAYm3 (LYBm1)				
CAYm4 (LYBm2)				

**\*Latest Year Batch and m1 & m2 indicate Minus one year and Minus 2 years respectively**



Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully passed (Students with backlog in stipulated period of study)		
		I Year	II Year	III Year
CAY				
CAYm1				
CAYm2 (LYB)				
CAYm3 (LYBm1)				
CAYm4 (LYBm2)				

#### 4.1. Enrolment Ratio (20)

$$\text{Enrolment Ratio} = (N1+N2)/N$$

Item (Students enrolled at the First Year Level on average basis during the period of assessment)	Marks
>=90% Students	20
>=80% Students	18
>=70% Students	16
>=60% Students	12
>=50% Students	08
<50% Students	0

#### 4.2. Success Rate in the stipulated period of the program (60)

##### 4.2.1. Success rate without backlogs in any year of study (40)

$SI = (\text{Number of students who have passed from the program without backlog}) / (\text{Number of students admitted in the first year of that batch and admitted in 2nd year via lateral entry})$

*Average SI = Mean of success index (SI) for past three batches*

*Success rate without backlogs in any year of study = 40 × Average SI*

<b>Item</b>	<b>Latest Passed Batch</b>	<b>Latest Passed Batch Minus 1 Batch</b>	<b>Latest Passed Batch Minus 2 Batch</b>
Total number of students (admitted through state level counseling + admitted through Institute on level quota+ admitted through lateral entry) (N1 + N2 + N3)			
Number of students who have passed without backlogs in the stipulated period			
Success index (SI)			
Average SI			

#### **4.2.2. Success rate with backlog in stipulated period of study (20)**

*SI= (Number of students who have passed from the program in the stipulated period of course duration)/ (Number of students admitted in the first year of that batch and admitted in 2nd year via lateral entry)*

*Average SI = mean of success index (SI) for past three batches*

*Success rate = 20 × Average SI*

<b>Item</b>	<b>Latest Passed Batch</b>	<b>Latest Passed Batch Minus 1</b>	<b>Latest Passed Batch Minus 2</b>
Total number of students (admitted through state level counseling + admitted through Institute on level quota+ admitted through lateral entry) (N1 + N2 + N3)			
Number of students who have passed with backlog in the stipulated period			
Success index (SI)			
Average SI			

**Note:** If 100% students clear without any backlog then also total marks scored will be 60 as both 4.2.1 & 4.2.2 will be applicable simultaneously.

#### **4.3. Academic Performance in Final Year (15)**

*Academic Performance Level = 1.5 \* Average API (Academic Performance Index)*

*API = (Mean of Final Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Final Year/10) x (successful students/number of students appeared in the examination)*

*Successful students are those who passed in all the final year courses*

<b>Academic Performance</b>	<b>CAY</b>	<b>CAYm1</b>	<b>CAYm2</b>
Mean of CGPA or Mean Percentage of all successful students (X)			
Total no. of successful students (Y)			
Total no. of students appeared in the examination (Z)			
API = $x * (Y/Z)$	AP1	AP2	AP3
Average API = $(AP1 + AP2 + AP3)/3$			

#### **4.4. Academic Performance in Second Year (20)**

*Academic Performance Level = 2.0 \* Average API*

*API = ((Mean of 2<sup>nd</sup>Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Second Year/ 10)) x (successful students/number of students appeared in the examination)*

*Successful students are those who are permitted to proceed to the final year*

<b>Academic Performance</b>	<b>CAY</b>	<b>CAYm1</b>	<b>CAYm2</b>
Mean of CGPA or Mean Percentage of all successful students (X)			
Total no. of successful students (Y)			
Total no. of students appeared in the examination (Z)			
API = $x * (Y/Z)$	AP1	AP2	AP3
Average API = $(AP1 + AP2 + AP3)/3$			

#### **4.5. Academic Performance in First Year (25)**

*Academic Performance Level = 2.5 \* Average API*

*API = ((Mean of 1st Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in First Year/ 10)) x (successful students/number of students appeared in the examination)*

*Successful students are those who are permitted to proceed to the second year*

<b>Academic Performance</b>	<b>CAY</b>	<b>CAYm1</b>	<b>CAYm2</b>
Mean of CGPA or Mean Percentage of all successful students (X)			
Total no. of successful students (Y)			
Total no. of students appeared in the examination (Z)			
API = $X * (Y/Z)$	AP1	AP2	AP3
Average API = $(AP1 + AP2 + AP3)/3$			

#### **4.6. Placement and Higher Studies (40)**

Assessment Points =  $40 \times (1.25X + Y)/N$  where, X = Number of students placed in companies or Government sector through on/off campus recruitment

Y = Number of students admitted to higher studies

N = Total number of final year students

<b>Item</b>	<b>Latest Passed Batch</b>	<b>Latest Passed Batch Minus 1</b>	<b>Latest Passed Batch Minus 2</b>
Total No. of Final Year Students (N)			
No. of students placed in companies or Government Sector (X)			
No. of students admitted to higher studies (Y)			
$1.25X + Y$			
Placement Index : $(1.25X + Y)/N$			
T = Average of $(1.25X + Y)/N$			
Assessment = $40 \times T$ (To be limited to 40)			

#### **4.7. Professional Activities (20)**

##### **4.7.1. Professional societies / student chapters and organizing technical events (15)**

(The Department shall provide relevant details)

##### **4.7.2. Publication of technical magazines, newsletters, etc. (05)**

(The Department shall list the publications mentioned earlier along with the names of the editors, publishers, etc.)

<b>CRITERION 5</b>	<b>Faculty Information and Contributions</b>	<b>150</b>
--------------------	--	------------

**Faculty Information:**

Name of the Faculty Member	Qualification, Board and Year of Graduation	Designation and date of Joining the institution	Distribution of Teaching Load (%)			Academic Research		Years of experience
			1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Research Paper Publications	Faculty Receiving M.Tech/ Ph.D. during the Assessment Year	

**Note: Please provide the above table for the current and previous three assessment years i.e. for Current year and CAY, CAYm1 and CAYm2.**

**\*Data in the above table is used for evaluation in the sub-sections that follows.**

**5.1. Student-Faculty Ratio (SFR) (15) + Availability of HoD (5); (20)**

S:F ratio = N/F; F = No. of faculty = (a + b - c) for every assessment year

a: Total number of full-time regular Faculty serving fully to All Years of this program

b: Total number of full-time equivalent regular Faculty (considering fractional load) serving this program from other Program(s)

c: Total number of full time equivalent regular Faculty (considering fractional load) of this program serving other program(s)

**Note: Fractional load calculation**

- 1. Faculty taking physics course is having 50% of allocated load of first year civil engineering students, 25% load of first year mechanical engineering and 25% load of electrical engineering then the fractional load contribution will be 0.50 for civil engineering, 0.25 each for mechanical and electrical engineering.**
- 2. Similarly fractional load to be calculated for inter department/program work load distribution.**

**Regular Faculty means:**

- Full time on roll with prescribed pay scale. An employee on contract for a period of not less than two years AND drawing consolidated salary equal or more than applicable gross salary shall only be counted as a regular employee.
- Prescribed pay scales mean pay scales notified by the AICTE/Central Govt. and implementation as prescribed by the State Govt. In case State Govt. prescribes lesser consolidated salary for a particular cadre then same will be considered as reference while counting faculty as a regular faculty.

N=No. of students = First year approved intake + 2x(first year approved intake + 20% lateral entry)

Year	N	F	SFR=N/F
CAY			
CAYm1			
CAYm2			
Average SFR for three assessment years			

Marks to be given proportionally from a maximum of 15 to minimum of 10 for average SFR of 20:1 to 25:1, and zero for average SFR higher than 25:1.

**HOD is to be over and above 1:20 ratio; as per AICTE guidelines. 5 marks to be awarded for availability of HOD as per AICTE guidelines for all the assessment years, otherwise 0 marks.**

### 5.2. Faculty Qualification (20)

$FQ = 2 * (10x + 7y) / F$  where x is no. of faculty with M.Tech. and y is no. of faculty with B.Tech. F is no. of faculty required to comply 1:20 Faculty Student Ratio (no. of faculty and no. of students required to be calculated as per 5.1)

### 5.3. Faculty Retention (20)

Item	Marks
>= 90% of required Faculties retained during the period of assessment keeping CAYm2 as base year	20
>= 75% of required Faculties retained during the period of assessment keeping CAYm2 as base year	15
>= 60% of required Faculties retained during the period of assessment keeping CAYm2 as base year	10
>= 50% of required Faculties retained during the period of assessment keeping CAYm2 as base year	5
<50% of required Faculties retained during the period of assessment keeping CAYm2 as base year	0

### 5.4. Faculty as participants in Faculty development/training activities (30)

- A Faculty scores maximum five points for participation
- Participant in 2 to 5 days Faculty/faculty development program: 3 Points
- Participant >5 days Faculty/faculty development program: 5 points

Name of the Faculty	Max. 5 per Faculty		
	CAYm2	CAYm1	CAY

<b>Sum</b>			
<b>RF= Number of Faculty required to comply with 20:1 Student-Faculty ratio as per 5.1</b>			
<b>Assessment = <math>6 \times \text{Sum} / 0.5\text{RF}</math> (Marks limited to 30)</b>			
<b>Average assessment over three years (Marks limited to 30) =</b>			

**5.5. Product development, Consultancy, Manufacturing contracts, Testing contracts (20)**

**5.6. Faculty Performance Appraisal and Development System (FPADS) (30)**

An effective performance appraisal system for Faculty is vital for optimizing the contribution of individual Faculty to institutional performance

The assessment is based on

- A well defined system instituted for all the assessment years
- Its implementation and effectiveness
- Qualification up-gradation of faculty

**5.7. Implementation of Career advancement Scheme (10)**

(Documented evidence of implementation)

<b>CRITERION 6</b>	<b>Facilities And Technical Support</b>	<b>100</b>
--------------------	---	------------

**6.1. Availability of adequate, well-equipped classrooms to meet the curriculum requirements (10)**

**6.2. Availability of adequate, well-equipped workshops to meet the curriculum requirements (10)**

**6.3. Adequate and well equipped laboratories, and technical manpower (30)**

Sr. No.	Name of the Laboratory	No. of students per setup (Batch Size)	Name of the Important equipment	Weekly utilization status (all the courses for which the lab is utilized)	Technical Manpower support		
					Name of the technical staff	Designation	Qualification
1.							
N.							

**6.4. Additional facilities created for improving the quality of learning experience in laboratories (20)**

Sr. No.	Facility Name	Details	Reason(s) for creating facility	Utilization	Areas in which students' are expected to have enhanced learning	Relevance to POs/PSOs
1.						
N.						

**6.5. Laboratories: Maintenance and overall ambiance (10)**

(Self-Explanatory)

**6.6. Availability of computing facility in the department (10)**

No. of Computer terminals	Students Computer Ratio	Details of Legal Software	Details of Networking	Details of Printers, Scanners etc.

**6.7. Language lab (10)**

(Availability and Utilization)



<b>CRITERION 7</b>	<b>Continuous Improvement</b>	<b>75</b>
--------------------	-------------------------------	-----------

**7.1. Actions taken based on the results of evaluation of each of the POs & PSOs (25)**

Identify the areas of weaknesses in the program based on the analysis of evaluation of POs & PSOs attainment levels. Measures identified and implemented to improve POs & PSOs attainment levels for the assessment years.

Actions to be written as per table in 3.3.2.

**Examples of analysis and proposed action**

**Sample 1**-Course outcomes for a laboratory course did not measure up, as some of the lab equipment did not have the capability to do the needful (e.g., single trace oscilloscopes available where dual trace would have been better, or, non-availability of some important support software etc.). Action taken-Equipment up-gradation was carried out (with details of up-gradation)

**Sample 2**-In a course on EM theory student performance has been consistently low with respect to some COs. Analysis of answer scripts and discussions with the students revealed that this could be attributed to a weaker course on vector calculus.

Action taken-revision of the course syllabus was carried out (instructor/text book changed too has been changed, when deemed appropriate).

**Sample 3**-In a course that had group projects it was determined that the expectations from this course about PO3 (like: "to meet the specifications with consideration for the public health and safety, and the cultural, societal, and environmental considerations") were not realized as there were no discussions about these aspects while planning and execution of the project. Action taken-Project planning, monitoring and evaluation included in rubrics related to these aspects.

**POs & PSOs Attainment Levels and Actions for improvement – CAY**

POs	Target Level	Attainment Level	Observations
<b>PO1: Statement as mentioned in Annexure I</b>			
<b>PO1</b>			
<b>Action 1:</b>			
<b>Action N:</b>			
<b>PO2:Statement as mentioned in Annexure I</b>			
<b>PO2</b>			
<b>Action 1:</b>			
<b>Action N:</b>			
<b>PO3: Statement as mentioned in Annexure I</b>			

<b>PO3</b>			
<b>Action 1:</b>			
<b>Action N:</b>			
<b>PO4: Statement as mentioned in Annexure I</b>			
<b>PO4</b>			
<b>Action 1:</b>			
<b>Action N:</b>			
<b>PO5: Statement as mentioned in Annexure I</b>			
<b>PO5</b>			
<b>Action 1:</b>			
<b>Action N:</b>			
<b>PO6 :Statement as mentioned in Annexure I</b>			
<b>PO6</b>			
<b>Action 1:</b>			
<b>Action N:</b>			
<b>PO7:Statement as mentioned in Annexure I</b>			
<b>PO7</b>			
<b>Action 1:</b>			
<b>Action N:</b>			
<b>PO8:Statement as mentioned in Annexure I</b>			
<b>PO8</b>			
<b>Action 1:</b>			
<b>Action N:</b>			
<b>PO9:Statement as mentioned in Annexure I</b>			
<b>PO9</b>			
<b>Action 1:</b>			
<b>Action N:</b>			
<b>PO10:Statement as mentioned in Annexure I</b>			
<b>PO10</b>			

<b>Action 1:</b>
<b>Action N:</b>
<b>Similar information is to be provided for PSOs</b>

**Note: The above table is to be presented ONLY for CAY (not for CAYm1 & CAYm2).**

**7.2. Improvement in Success Index of Students without the backlog (10)**

Items	LPB*	LPBm1	LPBm2
Success index (from 4.2.1)			

**\*Latest Passed out Batch and m1 & m2 indicate Minus one year and Minus 2 years respectively**

*SI= (Number of students who have passed from the program in the stipulated period of course duration)/(Number of students admitted in the first year of that batch and admitted in 2nd year via lateral entry)*

Assessment shall be based on improvement trends in success indices. Marks are awarded accordingly.

**7.3. Improvement in Placement and Higher Studies (10)**

*Assessment is based on improvement in:*

- *Placement: number, quality placement, core industry, pay packages etc.*
- *Higher studies: admissions in premier institutions*

Items	LPB	LPBm1	LPBm2
Placement index (from criteria 4.6)			

**7.4. Improvement in Academic Performance in Final Year (10)**

*Assessment is based on improvement in:*

Items	LPB	LPBm1	LPBm2
Academic Performance Index (from criteria 4.3)			

**7.5. Internal Academic Audits to Review Complete Academics & to Implement Corrective Actions on Continuous Basis (10)**

Items	CAY	CAYm1	CAYm2
Internal Academic Audits			

**7.6. New Facility created in the program (10)**

*Assessment is based on improvement in:*

<b>Items</b>	CAY	CAYm1	CAYm2
<b>New Facility Created</b>			

## Institute Level Criteria

<b>CRITERION 8</b>	<b>Student Support Systems</b>	<b>50</b>
--------------------	--------------------------------	-----------

### **8.1 Mentoring system to help at individual level (10)**

Type of mentoring: Professional guidance/career advancement/course work specific/laboratory specific/all-round development. Number of faculty mentors: Number of students per mentor: Frequency of meeting:

*(The institution may report the details of the mentoring system that has been developed for the students for various purposes and also state the efficacy of such system)*

### **8.2. Feedback analysis and reward /corrective measures taken, if any (10)**

*Feedback collected for all courses: YES/NO; Specify the feedback collection process; Average Percentage of students who participate; Specify the feedback analysis process; Basis of reward/corrective measures, if any; Indices used for measuring quality of teaching & learning and summary of the index values for all courses/teachers; Number of corrective actions taken.*

### **8.3. Feedback on facilities (5)**

*Assessment is based on student feedback collection, analysis and corrective action(s) taken.*

### **8.4. Career Guidance, Training, Placement (20)**

*(The institution may specify the facility, its management and its effectiveness for career guidance including counseling for higher studies, campus placement support, industry interaction for training/internship/placement, etc.)*

### **8.5. Entrepreneurship Cell/Technology Business Incubator (5)**

*(The institution may describe the facility, its management and its effectiveness in encouraging entrepreneurship and incubation) (Success stories for each of the assessment years are to be mentioned)*

<b>CRITERION 9</b>	<b>Governance, Institutional Support and Financial Resources</b>	<b>75</b>
--------------------	--	-----------

**9.1. Organization, Governance and Transparency (25)**

**9.1.1. State the Vision and Mission of the Institute (5)**

*(Vision statement typically indicates aspirations and Mission statement states action plan to achieve aspirations)*

**9.1.2. Governing body, administrative setup, functions of various bodies, define rules procedures, recruitment and promotional policies (5)**

List the governing, senate, and all other academic and administrative bodies; their memberships, functions, and responsibilities; frequency of the meetings; and attendance therein, especially external members, in a tabular form. A few sample minutes of the meetings and action-taken reports should be annexed.

The published rules including service rules, policies and procedures; year of publication and its implementation shall be listed. Also state the extent of awareness among the employees/students

**9.1.3. Decentralization in working and grievance redressal mechanism (5)**

List the names of the faculty members who are administrators/decision makers for various responsibilities. Mention details in respect of decentralization in working. Specify the mechanism and composition of grievance redressal cell including Anti Ragging Committee & Sexual Harassment Committee.

**9.1.4. Delegation of financial powers (5)**

Institution should explicitly mention financial powers delegated to the Principal, Heads of Departments and relevant in-charges. Demonstrate the utilization of financial powers for each year of the assessment years.

**9.1.5. Transparency and availability of correct/unambiguous information in public domain (5)**

(Information on the policies, rules, processes is to be made available on web site. Provision of information in accordance with the Right to Information Act, 2005)

## 9.2. Budget Allocation, Utilization, and Public Accounting at Institute level (10)

Summary of current financial year's budget and actual expenditure incurred (for the institution exclusively) in the three previous financial years.

### Total Income at Institute level: For CFY, CFYm1, CFYm2 & CFYm3

For CFY

Total Income in CFY:				Actual expenses in CFY (till ...):			Total No. of students in CFY:
Fee	Govt.	Grant(s)	Other Sources (specify)	Recurring including Salaries	Non-recurring	Special Projects/Any other, specify	Expenses per student

#### Note:

#### 1. Non recurring expenditure will include; not limited to; the following:

- Civil/Construction costs
- Equipment (laboratory/workshops/others)
- Capital items

#### 2. Recurring expenditure will include; not limited to; the following:

- Maintenance cost
- Consumable materials
- Salaries & Honorarium
- Expenses on Seminar/Training Programs/Faculty development programs
- Annual Events expenses
- Travel expenses
- Advertisement & Printing expenses
- Annual Registration cost/Taxes
- Water expenses
- Power expenses
- Security expenses

#### 3. Similar tables are to be prepared for CFYm1, CFYm2 & CFYm3.

Items	Budgeted in CFY	Actual expenses in CFY (till ...)	Budgeted in CFYm1	Actual Expenses in CFYm1	Budgeted in CFYm2	Actual Expenses in CFYm2	Budgeted in CFYm3	Actual Expenses in CFYm3
Infrastructure Built-Up								

Library								
Laboratory equipment								
Laboratory consumables								
Teaching and non-teaching staff salary								
Maintenance and spares								
R&D								
Training and Travel								
Miscellaneous expenses *								
Others, specify								
Total								

**\* Items to be mentioned.**

**9.2.1 Adequacy of budget allocation (4)**

(The institution needs to justify that the budget allocated over the years was adequate)

**9.2.2 Utilization of allocated funds (4)**

(The institution needs to state how the budget was utilized during the last three years)

**9.2.3 Availability of the audited statements on the institute's website (2)**

(The institution needs to make audited statements available on its website)

**9.3 Program Specific Budget Allocation, Utilization (15)**

**Total Budget at Institute level: For CFY, CFYm1, CFYm2 & CFYm3**

**For CFY**

<b>Total Budget in CFY:</b>		<b>Actual expenses in CFY (till ...):</b>		<b>Total No. of students in CFY:</b>
<b>Non recurring</b>	<b>Recurring</b>	<b>Non Recurring</b>	<b>Recurring</b>	<b>Expenses per student</b>




**Note: Similar tables are to be prepared for CFYm1, CFYm2 & CFYm3.**

<b>Items</b>	<b>Budgeted in CFY</b>	<b>Actual expenses in CFY (till ...)</b>	<b>Budgeted in CFYm1</b>	<b>Actual Expenses in CFYm1</b>	<b>Budgeted in CFYm2</b>	<b>Actual Expenses in CFYm2</b>	<b>Budgeted in CFYm3</b>	<b>Actual Expenses in CFYm3</b>
Laboratory equipment								
Software								
Laboratory consumable								
Maintenance and spares								
R & D								
Training and Travel								
Miscellaneous expenses *								
Total								

**\* Items to be mentioned.**

**CFY: Current Financial Year – CFYm1 (Current Financial Year minus 1) CFYm2 (Current Financial Year minus 2)**

**9.3.1. Adequacy of budget allocation (07)**

(In this section, the institution needs to justify that the budget allocated over the assessment years was adequate)

**9.3.2. Utilization of allocated funds (08)**

(In this section, the institution needs to state how the budget was utilized during the last three assessment years)

#### **9.4. Library and Internet (20)**

(It is assumed that zero deficiency report was received by the institution, Effective availability and utilization to be demonstrated)

##### **9.4.1. Quality of learning resources (hard/soft) (10)**

- Relevance of available learning resources including e-resources
- Accessibility to students

##### **9.4.2. Internet (10)**

- Name of the Internet provider
- Available bandwidth
- Wi Fi availability
- Internet access in labs, classrooms, library and offices of all Departments:
- Security arrangements

#### **9.5 Institutional Contribution to the Community Development (5)**

## **Declaration**

The head of the institution needs to make a declaration as per the format given below:

I undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines in force as on date and the institute shall fully abide by them.

It is submitted that information provided in this Self Assessment Report is factually correct. I understand and agree that an appropriate disciplinary action against the Institute will be initiated by the NBA in case any false statement/information is observed during pre-visit, visit, post visit and subsequent to grant of accreditation.

**Date:**

**Signature**

**Place:**

**Name:**

**Designation of the Head of the Institution  
with seal**

## ANNEXURE 1

### (A) PROGRAM OUTCOMES (POs)

1. **Basic knowledge:** An ability to apply knowledge of basic mathematics, science and engineering to solve the engineering problems.
2. **Discipline knowledge:** An ability to apply discipline - specific knowledge to solve core and/or applied engineering problems.
3. **Experiments and practice:** An ability to plan and perform experiments and practices and to use the results to solve engineering problems.
4. **Engineering Tools:** Apply appropriate technologies and tools with an understanding of the limitations.
5. **The engineer and society:** Demonstrate knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to engineering practice.
6. **Environment and sustainability:** Understand the impact of the engineering solutions in societal and environmental contexts, and demonstrate the knowledge and need for sustainable development.
7. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
8. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse/multidisciplinary teams.
9. **Communication:** An ability to communicate effectively.
10. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the context of technological changes.

### (B) PROGRAM SPECIFIC OUTCOMES (PSOs)

**Program shall specify 2-4 Program Specific Outcomes**