



SELF ASSESSMENT REPORT (SAR) FORMAT
DIPLOMA ENGINEERING PROGRAMS
(January, 2019)

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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.	Name of the Department	Name of the Program	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 accreditation for two/ three years for the period(specify period)
- Granted accreditation for 5/ 6 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- Withdrawn (specify visit dates, year)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

7a. Accreditation History

S.No.	Name of the Department	Name of the Program	Year of 1 st Accreditation (if applicable)	Year of 2 nd Accreditation (if applicable)	Year of 3 rd Accreditation (if applicable)
1.					
N.					

7b. Programs to be considered for Accreditation vide this application:

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

8. Total number of Employees:

A. Regular*Faculty and Staff:

Items		CAY		CAYm1		CAYm2		CAYm3	
		Min	Max	Min	Max	Min	Max	Min	Max
Faculty in Engineering & Technology	M								
	F								
Faculty in Sciences & Humanities	M								
	F								
Non-teaching staff	M								
	F								

Note:

All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Faculty Student Ratio. However, following will be ensured in case of contractual faculty:

1. Shall have the AICTE prescribed qualifications and experience.
2. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.
3. 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

CAY – Current Academic Year

CAYm1 - Current Academic Year minus1= Current Assessment Year

CAYm2 - Current Academic Year minus2=Current Assessment Year minus 1

CAYm3 - Current Academic Year minus3=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		CAYm3	
		Min	Max	Min	Max	Min	Max	Min	Max
Faculty in Engineering & Technology	M								
	F								
Faculty in Sciences & Humanities	M								
	F								
Non-teaching staff	M								
	F								

9. Total number of students:

Items	CAY	CAYm1	CAYm2	CAYm3
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.

10. 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

CRITERION 1	Vision, Mission and Program Educational Objectives	50
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1.1. State the Vision and Mission of the Department & Institution (05)

(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) (05)

(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.*

CRITERION 2	Program Curriculum and Teaching –Learning Processes	200
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2.1. Program Curriculum (40)

2.1.1. State the process used to identify extent of compliance of the 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 (25)

- A. Process used to identify extent of compliance of curriculum for attaining POs & PSOs (15)
- B. List the curricular gaps for the attainment of POs & PSOs (10)

Note: In case all POs and PSOs are being demonstrably met through Curriculum then 2.1.2 will not be applicable and the weightage of 2.1.1 will be 40.

2.1.2. Contents beyond the Syllabus (15)

(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)

- A. Steps taken to get identified gaps included in the curriculum (eg. letters to Board) (2)
- B. Delivery details of content beyond syllabus (10)
- C. Mapping of content beyond syllabus with the POs & PSOs (3)

CAY

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

CAYm1

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

CAYm2

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

CAYm3

S.No.	Gap	Action taken	Date-Month-Year	Resource Person with designation	Mode	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. **(Institutions are also allowed to use MOOCs over SWAYAM portal)**

2.2 Teaching Learning Process (160)**2.2.1. Describe Processes followed to ensure/improve quality of Teaching & Learning based on following points (25)**

- A. Adherence to Academic Calendar (3)
- B. Use of various instructional planning and delivery methods (3)
- C. Methodologies to support weak students and encourage bright students (4)
- D. Quality of classroom teaching (3)
- E. Conduct of experiments (3)
- F. Continuous Assessment in the laboratory (3)
- G. Student feedback of teaching learning process and action taken (6)

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

Initiatives to improve the quality of semester tests and assignments in terms of the following:

- A. Process for Internal semester question paper setting and evaluation and effective process implementation (5)
- B. Question paper setting taking into account outcomes/learning levels (5)
- C. COs coverage in class test / mid-term tests and assignments (5)

2.2.3. Quality of Experiments (15)

- A. Experimental methodologies (05)
- B. Innovative experiments including industry attached practices, virtual labs (05)
- C. Relevance to outcomes (05)

2.2.4. Quality of Students Projects and Report Writing (35)

- A. Identification of projects and allocation methodology (3)
- B. Types and relevance of the projects and their contribution towards attainment of POs and PSOs (5)
- C. Process for monitoring and evaluation (5)
- D. Process to assess individual and team performance (5)
- E. Quality of deliverable, working prototypes (12)
- F. Papers published /Awards/ Recognition received by projects at State/ National level (5)

2.2.5. Industry interaction and Community Services (30)

- A. Industry supported Labs (02)
- B. Delivery of appropriate Course work by Industry experts (05)
- C. Industrial visits/tours for students (03)
- D. Industrial training/ internship (5) (*Marks to be given proportionately i.e. 100% student attended =05 Marks; 90% students attended = 04, Marks and so on...*)
- E. Post training/ internship Assessment (10)
- F. Contribution to Community related projects/activities (05)

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

- A. Availability of facilities & Effective Utilization; *specify the facilities, materials and scope for self-learning, Webinars, NPTEL Podcast, MOOCs etc.* (10)
- B. Student Centric Learning Initiatives & Effective Implementation (05)

2.2.7. New Initiatives for embedding Professional Skills (15)

- A. Employability skill enhancement Initiatives and effective implementation (08)
- B. Personality development related Initiatives & effective implementation (07)

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

Type of activities and relevance

(The institution may specify the co-curricular and extra-curricular activities- Quantify activities such as NCC, NSS, and participation in various state/national missions etc.)

CRITERION 3	Course Outcomes and Program Outcomes	100
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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)

3.1.2. Note: Number of Outcomes for a Course is expected to be 3 to 5.

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

C202.1	<Statement>
C202..	<Statement>
C202.N	<Statement>

Table – 3.1.1

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

3.1.3. CO-PO/PSO matrices of courses selected in 3.1.1 (six matrices to be mentioned; one course per semester from 1st to 6th semester) (05)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO..
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 “-”

3.1.4. Program level Course-PO/PSO matrix of all courses INCLUDING first year courses (10)

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO..
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.

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)

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 setting of the targets: (The examples indicated are for reference only. Program may appropriately define levels)

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

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

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

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)

For Example:

If 75% students have scored more than board average percentage marks for CO C202.1 in the final examination (average for last 3 years), then the set target level for that CO C202.1 will be 2.5 based on the attainment level. Similarly, if the average marks for the CO C202.2 in the final examination (average for last 3 years) is 69%, then the target level will be 1.9

Course Outcome (CO)	Target Level to be set higher than
C202.1	2.5
C202.2	1.9

Table 3.2.2

Note: If the CO wise data is not available for the final examination then, target level will be the same for all the COs of that course based on the total marks obtained in the final examination of that course.

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:

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

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

Level 3: **80%** students scoring more than 60% marks out of the relevant maximum marks is considered

to be attainment of Level "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 midterm 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 60% weightage to Board examination and 40% weightage to Internal assessment, the attainment calculations will be (60% of Board level) + (40% of Internal level) i.e. 60% of 3 + 40% of 2 = 1.8 + 0.80 = 2.6

Note: Weightage of 60% 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 /PSO Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO..
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, employers, co-curricular activities, extracurricular activities etc.
5. Program may have different weightages with appropriate justification.
6. 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
- Level 4 – High
- Level 3 – Medium
- Level 2 – Low
- Level 1 – Very Low

CRITERION 4	Students' Performance	200
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Intake Information:

Item	CAY	CAYm1	CAYm2	CAYm3	CAYm4	CAYm5
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>)						

CAY – Current Academic Year

CAYm1- Current Academic Year minus1= Current Assessment Year

CAYm2 - Current Academic Year minus2=Current Assessment Year minus 1

CAYm3 - Current Academic Year minus3=Current Assessment Year minus 2

CAYm4 - Current Academic Year minus4=Current Assessment Year minus 3

CAYm5 - Current Academic Year minus5=Current Assessment Year minus 4

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully graduated without backlogs in any semester/year of study (Without Backlog means no compartment or failures in any semester/year of study)		
		I Year	II Year	III Year
CAY				
CAYm1				
CAYm2				
CAYm3 (LYG)				
CAYm4 (LYGm1)				
CAYm5 (LYGm2)				

LYG – Last Year Graduate

LYGm1 – Last Year Graduate minus 1

LYGm2 – Last Year Graduate minus 2

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully graduated (Students with backlog in stipulated period of study)		
		I Year	II Year	III Year
CAY				
CAYm1				
CAYm2				
CAYm3 (LYG)				
CAYm4 (LYGm1)				
CAYm5 (LYGm2)				

4.1. Enrolment Ratio (20)

Enrolment Ratio= (N1+N2)/N

Item (Students enrolled at the First Year Level on average basis during the previous three academic years including the current academic year)	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= (Number of students who have passed from the program without backlog)/ (Number of students admitted in the first year of that batch plus actually 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

Item	Last Year Graduate, (LYG)	Last Year Graduate Minus 1 Batch, (LYGm1)	Last Year Graduate Minus 2 Batch, (LYGm2)
Total number of students (admitted through state level counseling + admitted through Institute on level quota+ actually 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 in stipulated period of study (20)

$SI = (\text{Number of students who have passed from the program in the stipulated period of course duration}) / (\text{Number of students admitted in the first year of that batch plus actually admitted in 2nd year via lateral entry})$

$\text{Average SI} = \text{mean of success index (SI) for past three batches}$

$\text{Success rate} = 20 \times \text{Average SI}$

Item	Last Year Graduate, (LYG)	Last Year Graduate Minus 1 Batch, (LYGm1)	Last Year Graduate Minus 2 Batch, (LYGm2)
Total number of students (admitted through state level counseling + admitted through Institute on level quota+ actually 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 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.

Academic Performance	CAYm1	CAYm2	CAYm3
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 2ndYear 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

Academic Performance	CAYm2	CAYm3	CAYm4
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 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

Academic Performance	Last Year Graduate, (LYG)	Last Year Graduate Minus 1 Batch, (LYGm1)	Last Year Graduate Minus 2 Batch, (LYGm2)
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, Higher Studies and Entrepreneurship (40)

Assessment Points = 40 X Average placement

Item	Last Year Graduate, (LYG)	Last Year Graduate Minus 1 Batch, (LYGm1)	Last Year Graduate Minus 2 Batch, (LYGm2)
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)			
No. of students turned entrepreneur in the respective field of engineering/technology (Z)			
1.25X + Y + Z			
Placement Index (P) : (1.25X + Y + Z)/N	P1	P2	P3
Average placement= (P1 + P2 + P3)/3			

4.6. a. Provide the placement data in the below mentioned format with the name of the program and the assessment year (separately for CAYm1, CAYm2 and CAYm3):

Programs Name and Assessment Year			
S.no.	Name of the student placed	Enrollment no.	Name of the Employer

Table B.4.6a

4.7 Professional Activities (20)

4.7.1 Professional societies / student chapters and organizing technical events (10)

(The Department shall provide relevant details w.r.t following points)

- A. Availability of Professional Societies/Chapters & Relevant activities (05)
- B. Number, quality of engineering events (05)

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.)

- A. Quality & Relevance of the contents and Print Material (3)
- B. Participation of Students from the program (2)

4.7.3 Participation in inter-institute / state/national events by students of the program of study (05)

(The Department shall provide a table indicating participation, award, and recognition.)

CRITERION 5	Faculty Information and Contributions	150
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Faculty Information:

Name of the Faculty Member	Qualification	University and Year of Graduation	Designation and date of Joining the institution	Distribution of Teaching Load (%)			Academic Research		Years of experience	Nature of Association (Regular/Contract)	Date of leaving
				a	b	c	Research Paper Publications	Faculty Receiving M.Tech/Ph.D. during the Assessment Year			
Total											

Note: Please provide the above table for the CAY, CAYm1, CAYm2 and CAYm3 where,

CAY – Current Academic Year

CAYm1- Current Academic Year minus1= Current Assessment Year

CAYm2 - Current Academic Year minus2=Current Assessment Year minus 1

CAYm3- Current Academic Year minus3=Current Assessment Year minus 2

5.1. Student-Faculty Ratio (SFR) (25)

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

a: Faculty of the specific program/ department considering fractional load

b: Faculty serving this program from other Program / department considering fractional load

c: Faculty of this program serving other program/ department considering fractional load

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.**

Consideration of Contractual Faculty means:

All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Faculty Student Ratio. However, following will be ensured in case of contractual faculty:

1. Shall have the AICTE prescribed qualifications and experience.
2. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.
3. 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

$N = \text{No. of students} = \text{Sanctioned Intake} + \text{Actually admitted lateral entry students}$

Year	N	F	SFR=N/F
CAY			
CAYm1			
CAYm2			
Average SFR			

Marks to be given proportionally from a maximum of 25 to a minimum of 10 for average SFR between 25:1 to 30:1, and zero for average SFR higher than 30:1. Marks distribution is given as below:

< = 25 - 25 Marks

< = 26 - 22 Marks

< = 27 - 20 Marks

< = 28 - 15 Marks

< = 29 - 12 Marks

< = 30 - 10 Marks

> 30 - 0 Marks

5.1.1. Provide the information about the regular and contractual faculty as per the format mentioned below:

	Total number of regular faculty in the department	Total number of contractual faculty in the department
CAY		
CAYm1		
CAYm2		

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Table 5.1.1

5.2. Faculty Qualification (25)

5.2.1 Faculty Qualification Index (20)

FQ = $2.0 * (10x + 7y) / F$ where x is no. of faculty with M.Tech. (in case of humanities and science M.Phil./Ph.D.) and y is no. of faculty with B.Tech. (In case of humanities and science MA/M.sc), F is no. of faculty required to comply 1:25 Faculty Student Ratio.

Years	X	Y	F	FQ=2.0* (10x +7y)/F
CAY				
CAYm1				
CAYm2				
Average Assessment				

5.2.2 Availability of Faculty/principal of that discipline with PhD. Qualification (05)

5.3. Faculty Retention (20)

No. of regular faculty members in CAYm1= CAY=

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

5.4. Faculty as participants in Faculty development/training activities (42)

5.4.1. Faculty as participants in Faculty development/training activities conducted by other organizations (30)

- A Faculty scores maximum five points for participation
- Participant in 1 to 2 days Faculty/faculty development program: 1 Points
- Participant in 3 to 5 days Faculty/faculty development program: 2 Points
- Participant >5 days Faculty/faculty development program: 5 points

Name of the Faculty	Max. 5 per Faculty		
	CAYm3	CAYm2	CAYm1
Sum			
RF= Number of Faculty required to comply with 25:1 Student-Faculty ratio as per 5.1			
Assessment = $6 \times \text{Sum} / 0.5\text{RF}$ (Marks limited to 30)			
Average assessment over three years (Marks limited to 30) =			

5.4.2. Organized/ Conducted FDPs and STTP by this department at State / National Level (12)

- Minimum 2 days program
- 2 points per program (max. upto 12 marks)

5.5 Product development, Consultancy, Manufacturing contracts, testing contracts (8)

Product development, Consultancy, Manufacturing contracts, Testing Contracts resulting into revenue generation

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

- A well-defined FPADS instituted for all the assessment years (05)
- Its implementation and effectiveness (15)
- Details of qualification up-gradation of faculty (10)

CRITERION 6	Facilities And Technical Support	100
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6.1. Availability of adequate, well-equipped classrooms to meet the curriculum requirements (10)

6.2. Availability of adequate and well-equipped workshops, Laboratories and Technical manpower to meet the curriculum requirements (40)

- A. Adequacy (10)
- B. Quality of Labs/workshop (20)
- C. Technical Manpower support –Eligible and Adequate (10)

Sr. No.	Name of the Laboratory	No. of students per setup (Batch Size)	Name of the Important equipment (costing more than Rs. 30,000)	Weekly utilization status (all the courses for which the lab is utilized)	Technical Manpower support		
					Name of the technical staff	Designation	Qualification
1.							
N.							

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

- A. Facilities (10)
- B. Effective Utilization (05)
- C. Relevance to POs/PSOs (05)

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.						

6.4. Laboratories: Maintenance and overall ambiance (10)

6.5. 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.

6.6. Language lab (10)

(Availability and Utilization)

CRITERION 7	Continuous Improvement	75
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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.

A. Documentary evidence of POs and PSOs attainment levels (10)

B. Gaps identified /shortfalls/improvement from continuous improvement perspective (5)

C. Plan of action to bridge the gap and its Implementation (10)

POs & PSOs Attainment Levels and Actions for improvement – CAYm1

POs	Target Level	Attainment Level	Observations
PO1: Statement as mentioned in Annexure I			
PO1			
Action 1:			
Action N:			
PO2:Statement as mentioned in Annexure I			
PO2			

Action 1:			
Action N:			
PO3: Statement as mentioned in Annexure I			
PO3			
Action 1:			
Action N:			
PO4: Statement as mentioned in Annexure I			
PO4			
Action 1:			
Action N:			
PO5: Statement as mentioned in Annexure I			
PO5			
Action 1:			
Action N:			
PO6 :Statement as mentioned in Annexure I			
PO6			
Action 1:			
Action N:			
PO7:Statement as mentioned in Annexure I			
PO7			
Action 1:			
Action N:			
Similar information is to be provided for PSOs			

Note: The above table is to be presented ONLY for CAYm1

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

Items	LYG*	LYG m1	LYG m2
Success index (from 4.2.1)			

***Last year graduate 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	LYG*	LYG m1	LYG m2
Placement index (from criteria 4.6)			

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

Assessment is based on improvement in:

Items	LYG*	LYG m1	LYG m2
Academic Performance Index (from criteria 4.5)			

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

Items	CAYm1	CAYm2	CAYm3
Internal Academic Audits			

7.6. New Facility created in the program (10)

Assessment is based on improvement in:

Items	CAYm1	CAYm2	CAYm3
New Facility Created			

Institute Level Criteria

CRITERION 8	Student Support Systems	50
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8.1 Mentoring system to help at individual level (10)

A. Details of the mentoring system that has been developed for the students for various purposes and also state the efficacy of such system (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)

A. Methodology being followed for feedback collection, analysis and its effectiveness (05)

B. Record of corrective measures taken (05)

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)

A. Student feedback on facilities, analysis and corrective action taken (05)

8.4. Career Guidance, Training, Placement (20)

A. Availability (05)

B. Management (10)

C. Effectiveness (05)

(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)

A. Availability (01)

B. Management (02)

C. Effectiveness (02)

(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)

CRITERION 9	Governance, Institutional Support and Financial Resources	75
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9.1. Organization, Governance and Transparency (25)

9.1.1. State the Vision and Mission of the Institute (05)

- A. Availability of the Vision & Mission statements of the Institute (02)
- B. Appropriateness/Relevance of the Statements (03)

9.1.2. Governing body, administrative setup, functions of various bodies, define rules procedures, recruitment and promotional policies (05)

- A. List the Governing Body Composition; their memberships, functions, and responsibilities (02)
- B. Minutes of the meetings and action-taken reports (01)
- C. The published service rules, policies and procedures with year of publication (01)
- D. Extent of awareness among the employees/students (01)

9.1.3. Decentralization in working and grievance redressal mechanism (05)

- A. List the names of the faculty members who have been delegated powers for taking administrative decisions (02)
- B. Specify the mechanism and composition of grievance redressal cell including Anti Ragging Committee & Sexual Harassment Committee (03)

9.1.4. Delegation of financial powers (05)

- A. Demonstrate the utilization of financial powers for each of the assessment years (05)

Institution should explicitly mention financial powers delegated to the Principal, Heads of Departments and relevant in-charges.

9.1.5. Transparency and availability of correct/unambiguous information in public domain (05)

- A. Information on the policies, rules, processes is to be made available on web site (2)
- B. Dissemination of the information about student, faculty and staff (3)

(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 CFYm1, CFYm2 & CFYm3

For CFYm1

Total Income in CFYm1:				Actual expenses in CFYm1			Total No. of students in CFYm1:
Fee	Govt.	Grant(s)	Other Sources (specify)	Recurring including Salaries	Non-recurring	Special Projects/Any other, specify	Expenses per student

Similar CFYm2 and CFYm3

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

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 Department Specific Budget Allocation, Utilization (05)

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

For CFY

Total Budget in CFY:		Actual expenses in CFY (till ...):	
Non-recurring	Recurring	Non-Recurring	Recurring

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

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

9.3.1. Adequacy of budget allocation (02)

(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 (03)

(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)

- A. Availability of relevant learning resources including e-resources and Digital Library (7)
- B. Accessibility to students (3)

9.4.2. Internet (10)

- A. Available bandwidth (4)
- B. Wi-Fi availability (2)
- C. Internet access in labs, classrooms, library and offices of all Departments (2)
- D. Security Arrangements (2)

9.5 Institutional Contribution to the Community Development/ Go-green (05)

9.6 Alumni Performance and Connect (10)

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 and Discipline specific knowledge:** Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.
2. **Problem analysis:** Identify and analyse well-defined engineering problems using codified standard methods.
3. **Design/ development of solutions:** Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.
4. **Engineering Tools, Experimentation and Testing:** Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.
5. **Engineering practices for society, sustainability and environment:** Apply appropriate technology in context of society, sustainability, environment and ethical practices.
6. **Project Management:** Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.
7. **Life-long learning:** Ability to analyse individual needs and engage in updating in the context of technological changes.

(B) PROGRAM SPECIFIC OUTCOMES (PSOs)

Program shall specify 2-4 Program Specific Outcomes (if any)