

NATIONAL BOARD OF ACCREDITATION

FORMAT FOR SELF ASSESSMENT REPORT (SAR) FOR ACCREDITATION OF UG ENGINEERING PROGRAMMES (TIER-II)



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Self Assessment Report (SAR)

Part A

I. Institutional Information

I.1. Name and address of the institution and affiliating university:

(Instruction: The name, address of the institution, and the name of the university which has given affiliation to this institution, are to be listed here.)

I.2. Name, designation, telephone number, and e-mail address of the contact person for the NBA:

(Instruction: The name of the contact person, with other details, has to be listed here.)

I.3. History of the institution (including the date of introduction and number of seats of various programmes of study alongwith the NBA accreditation, if any) in tabular form:

Year	Description
.....	Institution started with the following programmes (intake strength)
.....	NBA accreditation visits and accreditation granted, if any
.....	Addition of new programmes, increase in intake strength of the existing programmes and/or accreditation status

(Instruction: History of the institution and its chronological development along with the records of past accreditation need to be listed here.)

I.4. Ownership status: Govt. (central/state) / trust / society (Govt./NGO/Private) / private/ other:

(Instruction: Ownership status of the institute has to be listed here.)

I.5. Mission and Vision of the Institution:

(The institution needs to specify its Mission and Vision).

I.6. Organisational Structure:

(Organisational chart showing the hierarchy of academia and administration to be included)

I.7. Financial status: Govt. (central/state) / grants-in-aid / not-for-profit / private self-financing / other:

(Instruction: Financial status of the institute has to be mentioned here.)

I.8. Nature of the trust/society:

Also, list other institutions/colleges run by the trust/society

(Instruction: Way of functioning and activities of the trust/society have to be listed here.)

Name of the Institution	Year of Establishment	Location

I.9. External sources of funds:

Name of the external source	CFY	CFY _{m1}	CFY _{m2}	CFY _{m3}

(Instruction: The different sources of the external funds over the last three financial years are to be listed here.)

I.10 Internally acquired funds:

Name of the internal source	CFY	CFY _{m1}	CFY _{m2}	CFY _{m3}
Students' fee				

(Instruction: The different sources of the internal funds over the last three financial years are to be listed here.)

I.11 Were scholarships or any other financial assistance provided to students?

(Instruction: If any scholarship or financial assistance has been provided to the students, then the details of such assistance, over the last three financial years, has to be listed here. Also, mention the basis for the award of such scholarship).

Details	CFY	CFYm1	CFYm2	CFYm3
Category				
Scholarship Assistance				
Amount				

I.12 Basis/criterion for admission to the institution:

All India entrance / state-level entrance / university entrance / 12th standard mark sheet / others:

(Instruction: The basis/criterion for student intake has to be listed here.)

I.13 Total number of engineering students:

	CAY	CAYm1	CAYm2	CAYm3
Total no. of boys:				
Total no. of girls:				
Total no. of students:				

Total number of other students, if any

(Instruction: Total number of engineering students, both boys and girls, has to be listed here. The data may be categorised in tabular form under graduate or post graduate engineering, or other programme, if applicable.)

I.14 Total number of employees

(Instruction: Total number of employees, both men and women, has to be listed here. The data may be categorised in tabular form as teaching and supporting staff.)

Minimum and maximum number of staff on roll in the engineering institution, during the CAY and the previous CAYs (1st July to 30th June):

A. Regular Staff

Items		CAY		CAY _{m1}		CAY _{m2}		CAY _{m3}	
		Min	Max	Min	Max	Min	Max	Min	Max
Teaching staff in engineering	M								
	F								
Teaching staff in science & humanities	M								
	F								
Non-teaching staff	M								
	F								

(Instruction: Staff strength, both teaching and non-teaching, over the last three academic years has to be listed here.)

B. Contractual Staff

Items		CAY		CAY _{m1}		CAY _{m2}		CAY _{m3}	
		Min	Max	Min	Ma	Min	Max	Min	Max
Teaching staff in engineering	M								
	F								
Teaching staff in science & humanities	M								
	F								
Non-teaching staff	M								
	F								

II. Departmental Information

II.1. *Name and address of the department:*

II.2. *Name, designation, telephone number, and e-mail address of the contact person for the NBA:*

II.3. *History of the department including date of introduction and number of seats of various programmes of study along with the NBA accreditation, if any:*

Program	Description
UG in.....	Started with.....seats in..... Intake increased to.....in..... Intake increased to.....in.....
PG in.....
MCA.....	

II.4. *Mission and Vision of the department*

(The department is required to specify its Mission and Vision).

II.5. *List of the programmes/ departments which share human resources and/or the facilities of this department/programme (in %):*

(Instruction: The institution needs to mention the different programmes which share the human resources and facilities with the department/programme being accredited.)

II.6. *Total number of students:*

UG:

II.7. Minimum and maximum number of staff on roll during the current and three previous academic years (1st July to 30th June) in the department:

Items	CAY		CAY _{m1}		CAY _{m2}		CAY _{m3}	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Teaching staff in the department								
Non-teaching staff								
Total								

II.7.1. Summary of budget for the CFY and the actual expenditure incurred in the CFY_{m1}, CFY_{m2} and CFY_{m3} (for the department):

Items	Budgeted in CFY	Actual expenses in CFY (till ...)	Budgeted in CFY _{m1}	Actual Expenses in CFY _{m1}	Budgeted in CFY _{m2}	Actual Expenses in CFY _{m2}	Budgeted in CFY _{m3}	Actual Expenses in CFY _{m3}
Laboratory equipment								
Software								
Laboratory consumable								
Maintenance and spares								
Training and Travel								
Miscellaneous expenses for academic activities								
Total								

III. Programme Specific information

III.1. Name of the Programme

UG in _____

(List name of the programme, as it appears on the graduate's certificate and transcript, and abbreviation used for the programme.)

III.2. Title of the Degree

(List name of the degree title, as it appears on the graduate's certificate and transcript, and abbreviation used for the degree.)

III.3. Name, designation, telephone number, and e-mail address of the Programme Coordinator for the NBA:

III.4. History of the programme along with the NBA accreditation, if any:

Programme	Description
UG in.....	Started withseats in Intake increased to in Intake increased to in Accredited in

III.5. Deficiencies, weaknesses/concerns from previous accreditations:

III.6. Total number of students in the programme:

III.7. Minimum and maximum number of staff for the current and the three previous academic years (1st July to 30th June) in the programme:

Items	CAY		CAY _{m1}		CAY _{m2}		CAY _{m3}	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Teaching staff in the department								
Non-teaching staff								
Total								

III.8. Summary of budget for the CFY and the actual expenditure incurred in CFY_{m1}, CFY_{m2} and CFY_{m3} (for this programme in the department exclusively):

Items	Budgeted in CFY	Actual expenses in CFY (till ...)	Budgeted in CFY _{m1}	Actual Expenses in CFY _{m1}	Budgeted in CFY _{m2}	Actual Expenses in CFY _{m2}	Budgeted in CFY _{m3}	Actual Expenses in CFY _{m3}
Laboratory equipment								
Software								
Laboratory consumables								
Maintenance and spares								
Travel								
Miscellaneous expenses for academic activities								
Total								

PART B

1. Vision, Mission and Programme Educational Objectives (75)

1.1. Vision and Mission (5)

1.1.1. State the Mission and Vision of the institute and department (1)

(List and articulate the mission and vision statement of the institute and department)

1.1.2. Indicate how and where the Mission and Vision are published and disseminated (2)

(Describe in which media, e.g. websites, curricula, books, etc. the mission and vision are published and how the same is disseminated among stakeholders)

1.1.3. Mention the process for defining the Mission and Vision of the department (2)

(Articulate the process involved in defining the mission and vision of the department from the mission and vision of the institute.)

1.2. Programme Educational Objectives(15)

1.2.1. Describe the Programme Educational Objectives (PEOs) (2)

(List and articulate the programme educational objectives of the programme under accreditation)

1.2.2. State how and where the PEOs are published and disseminated (2)

(Describe in which media, e.g. websites, curricula, books, etc., the PEOs are published and how the same is disseminated among stakeholders)

1.2.3. List the stakeholders of the programme (1)

(List the stakeholders of the programme under consideration for accreditation and articulate their relevance)

1.2.4. State the process for establishing the PEOs (5)

(Describe the process that periodically documents and demonstrates that the PEOs are based on the needs of the various stakeholders of the programme.)

1.2.5. Establish consistency of PEOs with Mission of the institute (5)

(Describe how the Programme Educational Objectives are consistent with the Mission of the department.)

1.3. Achievement of Programme Educational Objectives (20)

1.3.1. Justify the academic factors involved in achievement of the PEOs (5)

(Describe the broad curricular components that contribute towards the attainment of the Programme Educational Objectives.)

1.3.2. Explain how the administrative system helps in ensuring the achievement of the PEOs (5)

(Describe the committees and their functions, working processes and related regulations.)

1.3.3. Indicate the additional co-curricular activities undertaken towards the attainment of the PEOs (10)

1.4. Assessment of the achievement of the Programme Educational Objectives (25)

1.4.1. Indicate the tools and processes used in assessment of the achievement of the PEOs (15)

Describe the assessment process that periodically documents and demonstrates the degree to which the Programme Educational Objectives have been attained. Also include information on:

- a) Listing and description of the assessment processes used to gather data upon which the evaluation of each Programme Educational Objective is based. Examples of data collection processes may include, but are not limited to, employer surveys, graduate surveys, focus groups, industrial advisory committee meetings, or other processes that are relevant and appropriate to the programme;
- b) The frequency with which these assessment processes are carried out.

1.4.2. Provide the evidence of the achievement of the PEOs (10)

- a) The expected level of attainment for each of the programme educational objectives;
- b) Summaries of the results of the evaluation processes and an analysis illustrating the extent to which each of the Programme Educational Objectives is being attained; and
- c) How the results are documented and maintained.

1.5. Indicate how the PEOs have been redefining in the past (10)

(Articulate, with rationale, how the results of the evaluation of the PEOs have been used to review/redefine the PEOs)

2. Programme Outcomes (150)

2.1. Definition and Validation of Course Outcomes and Programme Outcomes (25)

2.1.1. List the Course Outcomes(COs) and Programme Outcomes (POs) (2)

(List the course outcomes of the courses in programme curriculum and programme outcomes of the programme under accreditation)

2.1.2. State how and where the POs are published and disseminated (3)

(Describe in which media (e.g. websites, curricula, books, etc.) the POs are published and how the same is disseminated among stakeholders)

2.1.3. Indicate the processes employed for defining of the POs (5)

(Describe the process that periodically documents and demonstrates that the POs are defined in alignment with the Graduate Attributes prescribed by the NBA.)

2.1.4. Indicate how defined POs aligned to Graduate Attributes prescribed by the NBA (10)

(Indicate how the POs defined for the programme are aligned with the Graduate Attributes of the NBA as articulated in accreditation manual.)

2.1.5. Establish the correlation between the POs and the PEOs (5)

(Explain how the defined POs of the programme correlate with the PEOs)

2.2. Attainment of Programme Outcomes (40)

2.2.1. Illustrate how course outcomes contribute to the POs (10)

(Provide the correlation between the course outcomes and the programme outcomes. The strength of the correlation may also be indicated.)

2.2.2. Explain how modes of delivery of courses help in the attainment of the POs(10)

(Describe the different course delivery methods/modes, e.g. lectures interspersed with discussion, asynchronous mode of interaction, group discussion, project etc., used to deliver the courses and justify the effectiveness of these methods for the attainment of the POs. This may be further justified using the indirect assessment methods such as course-end surveys.)

2.2.3. Indicate the extent to which the laboratory and project course work are contributing towards the attainment of the POs (20)

(Justify the balance between theory and practical for the attainment of POs . Justify how the various project works (a sample of 20% best and average projects from total projects) carried as part of the programme curriculum contribute towards the attainment of the POs.)

2.3. Evaluation of the attainment of Programme Outcomes (75)

2.3.1. Describe assessment tools and processes used for assessing the attainment of each PO (50)

Describe the assessment process that periodically documents and demonstrates the degree to which the Programme Outcomes are attained. Also include information on:

- a) Listing and description of the assessment processes used to gather the data upon which the evaluation of each the Programme Outcome is based. Examples of data collection processes may include, but are not limited to, specific exam questions, student portfolios, internally developed assessment exams, project presentations, nationally-normed exams, oral exams, focus groups, industrial advisory committee;
- b) The frequency with which these assessment processes are carried out.

2.3.2. Indicate results of evaluation of each PO (25)

- c) The expected level of attainment for each of the Program Outcomes;
- d) Summaries of the results of the evaluation processes and an analysis illustrating the extent to which each of the programme outcomes are attained; and
- e) How the results are documented and maintained.

2.4. Indicate how the results of evaluation of achievement of the POs have been used for redefining the POs (10)

(Articulate, with rationale, how the results of the evaluation of the POs have been used to review/redefine the POs)

3. Programme Curriculum (125)

3.1. Curriculum (15)

3.1.1. Describe the structure of the curriculum (5)

Course Code	Course Title	Total Number of contact hours				Credits
		Lecture (L)	Tutorial (T)	Practical [#] (P)	Total Hours	
.....					
Total						

[#]Seminars, project works may be considered as practical

3.1.2. Give the Prerequisite flow chart of courses (5)

(Draw the schematic of the prerequisites of the courses in the curriculum)

3.1.3. Justify how the programme curriculum satisfies the programme specific criteria (5)

(Justify how the programme curriculum satisfies the programme specific criteria specified by the American professional societies relevant to the programme under accreditation)

3.2. State the components of the curriculum and their relevance to the POs and the PEOs (15)

Programme curriculum grouping based on different components

Course Component	Curriculum Content (% of total number of credits of the programme)	Total number of contact hours	Total number of credits	POs	PEOs
Mathematics					
Science					
Computing					
Humanities					
Professional core					
.....					
.....					

3.3. State core engineering subjects and their relevance to Programme Outcomes including design experience (30)

(Describe how the core engineering subjects in the curriculum provide the learning experience with the complex engineering problems)

3.4. Industry interaction/internship (10)

(Give the details of industry involvement in the programme such as industry-attached laboratories and partial delivery of courses and internship opportunities for students)

3.5. Illustrate the measures and processes used to identify the curricular gaps to the attainment of the COs/POs (15)

(Details of the processes used to curricular gaps to the attainment of defined course outcomes and programme)

3.6. *Indicate the content beyond syllabus imparted for the attainment of the COs/POs(35)*

(Details of the content beyond syllabus imparted for the attainment of the COs/POs. This information may be provided course wise or module wise)

3.7. *Course Syllabi (5)*

(Include, in appendix, a syllabus for each course used. Syllabi format should be consistent and shouldn't exceed two pages.)

The syllabi format may include:

- Department, course number, and title of course
- Designation as a required or elective course
- Pre-requisites
- Contact hours and type of course (lecture, tutorial, seminar, project etc.)
- Course Assessment methods (both continuous and semester-end assessment)
- Course Outcomes
- Topics covered
- Text books, and/or reference material

4. Students' Performance (100)

Admission intake in the programme

Item	CAY	CAY _{m1}	CAY _{m2}	CAY _{m3}
Sanctioned intake strength of the programme (<i>N</i>)				
Total number of students admitted in first year <i>minus</i> number of students migrated to other programmes at the end of 1st year (<i>N1</i>)				
Number of students admitted in 2nd year in the same batch via lateral entry (<i>N2</i>)				
Total number of students admitted in the programme (<i>N1</i> + <i>N2</i>)				

4.1. Success Rate (30)

Provide data for the past seven batches of students

Year of entry (in reverse chronological order)	Number of students admitted in 1st year + admitted via lateral entry in 2nd year (<i>N1</i> + <i>N2</i>)	Incomplete Number of students who have successfully completed*			
		1st year	2nd year	3rd year	4th year
CAY					
CAY _{m1}					
CAY _{m2}					
CAY _{m3}					
CAY _{m4} (LYG)					
CAY _{m5} (LYG _{m1})					
CAY _{m6} (LYG _{m2})					

* *successfully completed implies zero backlogs*

Success rate = $30 \times$ mean of success index (SI) for past three batches

SI = (Number of students who graduated from the programme 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)

Item	LYG (CAYm4)	LYGm1 (CAYm5)	LYGm2 (CAYm6)
Number of students admitted in the corresponding First Year + admitted via lateral entry in 2nd year			
Number of students who have graduated in the stipulated period			
Success index (SI)			

Average SI =

Success rate = $30 \times$ Average SI =

4.2. Academic Performance (20)

Academic Performance = $2 \times$ API

Where API = Academic Performance Index

= Mean of Cumulative Grade Point Average of all successful Students on a 10 point CGPA System

OR

= Mean of the percentage of marks of all successful students / 10

Item	LYG (CAYm4)	LYGm1 (CAYm5)	LYGm2 (CAYm6)
Approximating the API by the following mid-point analysis			
9 < Number of students with CGPA < 10.0	0	0	0
8 < Number of students with CGPA < 9.0	18	29	7
7 <= 8	42	63	28
6 <= 7	36	28	17
5 <= 6	5	1	3
Total	101	121	55
Approximating API by Mid-CGPA			
Mean of CGPA/Percentage of all the students (API)	7.72	7.4	7.17

Av. API = 7.43

Academic Performance = $2 \times$ Av. API = 14.86

4.3. Placement and Higher Studies (30)

$$\text{Assessment Points} = 30 \times (x + 1.25y)/N$$

where, x = Number of students placed

y = Number of students admitted for higher studies with valid qualifying scores/ranks, and

N = Total number of students who were admitted in the batch including lateral entry subject to maximum assessment points = 20

Item	LYG	LYGm1	LYGm2
Number of students admitted corresponding to LYG including lateral entry (N)			
Number of students who obtained jobs as per the record of placement office (x_1)			
Number of students who found employment otherwise at the end of the final year (x_2)			
$x = x_1 + x_2$			
Number of students who opted for higher studies with valid qualifying scores/ranks (y)			
Assessment points			

Average assessment points = _____

4.4. Professional Activities (20)

4.4.1. Professional societies / chapters and organising engineering events (4)

(Instruction: The institution may provide data of the past three years).

4.4.2. Organisation of paper contests, design contests, etc., and achievements (4)

(Instruction: The institution may provide data of the past three years).

4.4.3. Publication of technical magazines, newsletters, etc. (4)

(Instruction: The institution may list the publications mentioned earlier along with the names of the editors, publishers, etc.).

(Instruction: The institution may specify the efforts and achievements.)

4.4.4. Entrepreneurship initiatives, product designs and innovations (4)

(Instruction: The institution may provide data of the past three years).

4.4.5. Publications and awards in inter-institute events by students of the programme of study (4)

(Instruction: The institution may provide a table indicating those publications, which received awards in the events/conferences organised by other institutes. A tabulated list of all other student publications may be included in the appendix.)

5. Faculty Contributions (175)

List of Faculty Members: For the programme exclusively / Shared with other programmes

Name of the faculty member	Qualification, university, and year of graduation	Designation and date of joining the institution	Distribution of teaching load (%)			Number of research publications in journals and conferences since joining	IPRs	R&D and consultancy work with amount	Holding an incubation unit	Interaction with outside world
			1st Year	UG	PG					

(Instruction: The institution may complete this table for the calculation of the student-teacher ratio (STR). Teaching loads of the faculty member contributing to the undergraduate programme only (2nd, 3rd, and 4th year) are considered to calculate the STR.)

5.1. Student-Teacher Ratio (STR) (20)

STR is desired to be 15 or superior

$$\text{Assessment} = 20 \times 15/\text{STR}; \text{ subject to maximum assessment of } 20$$

$$\text{STR} = (x + y + z)/N1$$

where, x = Number of students in 2nd year of the programme

y = Number of students in 3rd year of the programme

z = Number of students in 4th year of the programme

$N1$ = Total number of faculty members in the programme (by considering fractional load)

Year	x	y	Z	$x + y + z$	$N1$	STR	Assessment (max. = 20)
CAY _{m2}							
CAY _{m1}							
CAY							
Average assessment							

For item nos. 5.2 to 5.8, the denominator term (N) is computed as follows:

$$N = \text{Maximum } \{N1, N2\}$$

$N1$ = Total number of faculty members in the programme (considering the fractional load)

$N2$ = Number of faculty positions needed for student-teacher ratio of 15

Year	$N1$	$N2$	$N = \text{Max. } (N1, N2)$
CAY $m2$			
CAY $m1$			
CAY			

5.2. Faculty Cadre Ratio (20)

$$\text{Assessment} = 20 \times \text{CRI}$$

where, CRI = Cadre ratio index

$$= 2.25 \times (2x + y)/N; \text{ subject to max. CRI} = 1.0$$

where, x = Number of professors in the programme

y = Number of associate professors in the

Year	x	y	N	CRI	Assessment
CAY $m2$					
CAY $m1$					
CAY					
Average assessment					

5.3. Faculty Qualifications (30)

Assessment	=	$3 \times \text{FQI}$
where, FQI	=	Faculty qualification index
	=	$(10x + 6y + 2z_0)/N2$ such that, $x + y + z_0 \leq N2$; and $z_0 \leq z$
where, x	=	Number of faculty members with PhD
y	=	Number of faculty members with ME/ M Tech
Z	=	Number of faculty members with B.E/B.Tech

	x	y	z	N	FQI	Assessment
CAY _{m2}						
CAY _{m1}						
CAY						
	Average assessment					

5.4. Faculty competencies in correlation to Programme Specific Criteria (15)

(Provide evidence that programme curriculum satisfies the applicable programme criteria specified by the appropriate American professional associations such as ASME, IEEE and ACM. You may list the programme specific criteria and the competencies (specialisation, research publications, course developments etc..) of faculty to correlate the programme specific criteria and competencies.)

5.5. Faculty as participants/resource persons in faculty development/training activities(15)

(Instruction: A faculty member scores maximum five points for a participation/resource person.)

Participant/resource person in two week faculty development programme : 5 points

Participant/resource person in one week faculty development programme : 3 Points

Name of the faculty	max. 5 per faculty		
	CAY _{m2}	CAY _{m1}	CAY
Sum			
N (Number of faculty positions required for an STR)			
Assessment = $3 \times \text{Sum}/N$			
Average assessment			

5.6. *Faculty Retention (15)*

Assessment = $3 \times \text{RPI}/N$
 where RPI = Retention point index
 = Points assigned to all
 faculty members

where points assigned to a faculty member = 1 point for each year of experience at the institute but not exceeding 5.

Item	CAY _{m2}	CAY _{m1}	CAY
Number of faculty members with experience of less than 1 year (x_0)			
Number of faculty members with 1 to 2 years of			
Number of faculty members with 2 to 3 years of			
Number of faculty members with 3 to 4 years of			
Number of faculty members with 4 to 5 years of			
Number of faculty members with more than 5 years of experience (x_5)			
N			
$\text{RPI} = x_1 + 2x_2 + 3x_3 + 4x_4 + 5x_5$			
Assessment			
Average assessment			

5.7. *Faculty Research Publications (FRP) (20)*

Assessment of FRP = $4 \times (\text{Sum of the research publication points scored by each faculty member})/N$

(Instruction: A faculty member scores maximum five research publication points depending upon the *quality* of the research papers and books published in the past three years.)

The research papers considered are those (i) which can be located on the internet and/or are included in hard-copy volumes/proceedings, published by reputed publishers, and (ii) whether the faculty member’s affiliation, in the published papers/books, is of the current institution.

Include a list of all such publications and IPRs along with details of DOI, publisher, month/year, etc.

Name of the faculty (contributing to FRP)	FRP points (max. 5 per faculty)		
	CAY _{m2}	CAY _{m1}	CAY
Sum			
<i>N</i> (Number of faculty positions required for an STR of 15)			
Assessment of FRP = $4 \times \text{Sum}/N$			
Average assessment			

5.8. Faculty Intellectual Property Rights (FIPR) (10)

Assessment of FIPR = $2 \times (\text{Sum of the FIPR points scored by each faculty member})/N$

(Instruction: A faculty member scores maximum five FIPR points year???. FIPR includes awarded national/international patents, design, and copyrights.)

Name of faculty member (contributing to FIPR)	FIPR points (max. 5 per faculty member)		
	CAY _{m2}	CAY _{m1}	CAY
.....			
.....			
.....			
Sum			
<i>N</i>			
Assessment of FIPR = $2 \times \text{Sum}/N$			
Average assessment			

5.9. *Funded R&D Projects and Consultancy (FRDC) Work (20)*

Assessment of R&D and Consultancy projects = $4 \times (\text{Sum of FRDC by each faculty member})/N$

(Instruction: A faculty member scores maximum 5 points, depending upon the amount.)

A suggested scheme is given below, for a minimum amount of Rs. 1 lakh:

Five points for funding by national agency,

Four points for funding by state agency/ private sector,

Two points for funding by the sponsoring trust/society.

Name of faculty member (contributing to FRDC)	FRDC points (max. 5 per faculty)		
	CAY _{m2}	CAY _{m1}	CAY
.....			
.....			
Sum			
<i>N</i>			
Assessment of FRDC = $4 \times \text{Sum}/N$	Average assessment		

5.10. *Faculty interaction with outside world (10)*

FIP = Faculty interaction points

Assessment = $2 \times (\text{Sum of FIP by each faculty member})/N$

(Instruction: A faculty member gets maximum five interaction points, depending upon the type of institution or R&D laboratory or industry, as follows)

Five points for interaction with a reputed institution abroad, institution of eminence in India, national research laboratories.

Three points for interaction with institution/industry (not covered earlier).

Points to be awarded, for those activities, which result in joint efforts in publication of books/research paper, pursuing externally funded R&D / consultancy projects and/or development of semester-long course / teaching modules.

Name of faculty member (contributing to FIP)	FIP		
	CAY_{m2}	CAY_{m1}	CAY
.....			
.....			
Sum			
N			
Assessment of FIP = $2 \times \text{Sum}/N$			
Average assessment			

6. Facilities and Technical Support (125)

Description of classrooms, faculty rooms, seminar, and conference halls: (Entries in the following table are sampler entries)

Room description	Usage	Shared/ exclusive	Capacity	Rooms equipped with PC, internet, book rack, meeting space, etc.
No. of classrooms	Classroom for 2nd year			
No. of tutorial rooms				
No. of seminar rooms				
No. of meeting rooms				
No. of faculty rooms				

6.1. Classrooms in the department (30)

6.1.1. Adequate number of rooms for lectures (core/electives), seminars, tutorials, etc., for the programme (10)

(Instruction: Assessment based on the information provided in the preceding table.)

6.1.2. Teaching aids---multimedia projectors, etc. (15)

(Instruction: List the various teaching aids available)

6.1.3. Acoustics, classroom size, conditions of chairs/benches, air circulation, lighting, exits, ambience, and other such amenities/facilities (5)

(Instruction: Assessment based on the information provided in the preceding table and the inspection thereof.)

6.2. Faculty rooms in the department (20)

6.2.1. Availability of individual faculty rooms (5)

(Instruction: Assessment based on the information provided in the preceding table.)

6.2.2. Room equipped with white/black board, computer, internet, and other such amenities/facilities (10)

(Instruction: Assessment based on the information provided in the preceding table)

6.2.3. Usage of room for discussion/counselling with students (5)

(Instruction: Assessment based on the information provided in the preceding table and the inspection thereof.)

The following table is required for the subsequent criteria.

Laboratory description in the curriculum	Exclusive use / shared	Space, number of students	Number of experiments	Quality of instruments	Laboratory manuals

6.3. *Laboratories in the department to meet the Curriculum Requirements and the POs (60)*

6.3.1. Adequate, well-equipped laboratories to meet the curriculum requirements and the POs (20)

(Instruction: Assessment based on the information provided in the preceding table.)

6.3.2. Availability of computing facilities in the department (15)

(Instruction: Assessment based on the information provided in the preceding table.)

6.3.3. Availability of laboratories with technical support within and beyond working hours (15)

(Instruction: Assessment based on the information provided in the preceding table.)

6.3.4. Equipment to run experiments and their maintenance, number of students per experimental setup, size of the laboratories, overall ambience, etc. (10)

(Instruction: Assessment based on the information provided in the preceding table.)

6.4. *Technical Manpower Support in the Department (15)*

Name of the technical staff	Designation	Pay-scale	Exclusive / shared work	Date of joining	Qualification		Other technical skills gained	Responsibility
					At Joining	Now		

6.4.1. Availability of adequate and qualified technical supporting staff for programme-specific laboratories (10)

(Instruction: Assessment based on the information provided in the preceding table.)

6.4.2. Incentives, skill upgrade, and professional advancement (5)

(Instruction: Assessment based on the information provided in the preceding table.)

7. Academic Support Units and Teaching-Learning Process (75)

Students' Admission

Admission intake (for information only)

Item	CAY	CAY _{m1}	CAY _{m2}	CAY _{m3}
Sanctioned intake strength in the institute (<i>N</i>)				
Number of students admitted on merit basis (<i>N1</i>)				
Number of students admitted on management quota/otherwise (<i>N2</i>)				
Total number of students admitted in the institute (<i>N1 + N2</i>)				

(Instruction: The intake of students during the last three years against the sanctioned capacity may be reported here.)

Admission quality (for information only)

Divide the total admitted ranks (or percentage marks) into five or a few more meaningful ranges

Rank range	CAY	CAY _{m1}	CAY _{m2}	CAY _{m3}
More than 98 percentile				
95--98 percentile				
90--95 percentile				
80--90 percentile				
.....				
.....				
Admitted without rank				

(Instruction: The admission quality of the students in terms of their ranks in the entrance examination may be presented here.)

Tabular data for estimating student-teacher ratio and faculty qualification for first year common courses

List of faculty members teaching first year courses:

Name of faculty member	Qualification	Designation	Date of joining the institution	Department with which associated	Distribution of teaching load (%)		
					1st year	UG	PG

(Instruction: The institution may list the faculty members engaged in first year teaching along with other relevant data here.)

7.1. Academic Support Units (35)

7.1.1. Assessment of First Year Student Teacher Ratio (FYSTR) (10)

Data for first year courses to calculate the FYSTR:

Year	Number of students (approved intake strength)	Number of faculty members (considering fractional load)	FYSTR	Assessment = $(10 \times 15)/\text{FYSTR}$ (Max. is 10)
CAY _{m2}				
CAY _{m1}				
CAY				
Average				

7.1.2. Assessment of Faculty Qualification Teaching First Year Common Courses (15)

Assessment of qualification = $3 \times (5x + 3y + 2z_0)/N$, where $x + y + z_0 \leq N$ and $z_0 \leq Z$

- x = Number of faculty members with PhD
- y = Number of faculty members with ME/MTech/NET-Qualified/MPhil
- z = Number of faculty members with BE/BTech/MSc/MCA/MA
- N = Number of faculty members needed for FYSTR of 25

Year	x	Y	z	N	Assessment of faculty qualification
CAY _{m2}					
CAY _{m1}					
CAY					
Average assessment of faculty qualification					

7.1.3. Basic science/engineering laboratories (adequacy of space, number of students per batch, quality and availability of measuring instruments, laboratory manuals, list of experiments) (8)

Laboratory description	Space, number of students	Software used	Type of experiments	Quality of instruments	Laboratory manuals

(Instruction: The institution needs to mention the details for the basic science/engineering laboratories for the first year courses. The descriptors as listed here are only suggestive in nature, not exhaustive.)

7.1.4. Language laboratory (2)

Language laboratory	Space, number of students	Software used	Type of experiments	Quality of instruments	Guidance

(Instruction: The institution may provide the details of the language laboratory. The descriptors listed here are suggestive in nature, not exhaustive.)

7.2. Teaching – Learning Process(40)

7.2.1. Tutorial classes to address student questions: size of tutorial classes, hours per subject given in timetable (5)

Provision of tutorial classes in timetable: YES/NO

Tutorial sheets provided: YES/NO

Tutorial classes taken by faculty / teaching assistants / senior students / others.....

Number of tutorial classes per subject per week:

Number of students per tutorial class:

Number of subjects with tutorials: 1st year..... 2nd year..... 3rd year..... 4th year.....

(Instruction: The institution may report the details of the tutorial classes that are being conducted on various subjects and state the impact of such tutorial classes here.)

7.2.2. Mentoring system to help at individual levels (5)

Type of mentoring: Professional guidance / career advancement / course work specific / laboratory specific / total development

Number of faculty mentors:

Number of students per mentor:

Frequency of meeting:

(Instruction: 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 here.)

7.2.3. Feedback analysis and reward / corrective measures taken, if any (5)

Feedback collected for all courses: YES/NO

Specify the feedback collection process:

Percentage of students who participated:

Specify the feedback analysis process:

Basis of reward / corrective measures, if any:

Number of corrective actions taken in the last three years:

(Instruction: The institution needs to design an effective feedback questionnaire. It needs to justify that the feedback mechanism developed by the institution really helps to evaluate teaching, and finally, contributes to the quality of teaching).

7.2.4. Scope for self-learning (5)

(Instruction: The institution needs to specify the scope for self-learning / learning beyond syllabus and creation of facilities for self-learning / learning beyond syllabus.)

7.2.5. Generation of self-learning facilities, and availability of materials for learning beyond syllabus (5)

(Instruction: The institution needs to specify the facilities for self-learning / learning beyond syllabus.)

7.2.6. Career Guidance, Training, Placement, and Entrepreneurship Cell (5)

(Instruction: The institution may specify the facility and management to facilitate career guidance including counselling for higher studies, industry interaction for training/internship/placement, entrepreneurship cell and incubation facility and impact of such systems.)

7.2.7. Co-curricular and Extra-curricular Activities (5)

(Instruction: The institution may specify the co-curricular and extra-curricular activities, e.g. NCC/NSS, cultural activities, etc.)

7.2.8. Games and Sports, facilities, and qualified sports instructors (5)

(Instruction: The institution may specify the facilities available and the usage of the same in brief.)

8. Governance, Institutional support and Financial Resources (75)

8.1. Campus Infrastructure and Facility (10)

8.1.1. Maintenance of academic infrastructure and facilities (4)

(Instruction: Specify distinct features)

8.1.2. Hostel (boys and girls), transportation facility, and canteen (2)

Hostels	No. of rooms	No. of students accommodated
Hostel for Boys:		
Hostel for Girls:		

8.1.3. Electricity, power backup, telecom facility, drinking water, and security (4)

(Instruction: Specify the details of installed capacity, quality, availability, etc.)

8.2. Organisation, Governance, and Transparency (10)

8.2.1. Governing body, administrative setup, and functions of various bodies (2)

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

8.2.2. Defined rules, procedures, recruitment, and promotional policies, etc. (2)

(Instruction: List the published rules, policies, and procedures; year of publications; and state the extent of awareness among the employees/students. Also comment on its availability on the internet, etc.)

8.2.3. Decentralisation in working, including delegation of financial power and grievance redressal system (3)

(Instruction: List the names of the faculty members who are administrators/decision makers for various responsibilities. Specify the mechanism and composition of grievance redressal system, including faculty association, staff-union, if any.)

8.2.4. Transparency and availability of correct/unambiguous information (3)

(Instruction: Availability and dissemination of information through the internet. Provision of information in accordance with the Right to Information Act, 2005).

8.3. Budget Allocation, Utilisation, and Public Accounting (10)

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

Item	Budgeted in CFY	Expenses in CFY (till ...)	Expenses in CFY _{m1}	Expenses in CFY _{m2}
Infrastructural built-up				
Library				
Laboratory equipment				
Laboratory consumables				
Teaching and non-teaching staff salary				
R&D				
Training and Travel				
Other, specify				
Total				

(Instruction: The preceding list of items is not exhaustive. One may add other relevant items, if applicable.)

8.3.1. Adequacy of budget allocation (4)

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

8.3.2. Utilisation of allocated funds (5)

(Instruction: Here the institution needs to state how the budget was utilised during the last three years.)

8.3.3. Availability of the audited statements on the institute's website (1)

(Instruction: In this section, the institution needs to state whether the audited statements are available on its website.)

8.4. Programme Specific Budget Allocation, Utilisation (10)

Summary of budget for the CFY and the actual expenditure incurred in CFY_{m1} and CFY_{m2}
(for this programme exclusively in the department):

Items	Budgeted in CFY	Actual expenses in CFY (till ...)	Budgeted in CFY _{m1}	Actual Expenses in CFY _{m1}	Budgeted in CFY _{m2}	Actual Expenses in CFY _{m2}
Laboratory equipment						
Software						
R&D						
Laboratory consumables						
Maintenance and spares						
Training and Travel						
Miscellaneous expenses for academic activities						
Total						

8.4.1. Adequacy of budget allocation (5)

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

8.4.2. Utilisation of allocated funds (5)

(Instruction: In this section, the institution needs to state how the budget was utilised during the last three years.)

8.5. Library (20)

8.5.1. Library space and ambience, timings and usage, availability of a qualified librarian and other staff, library automation, online access, networking, etc. (5)

(Instruction: Provide information on the following items.).

Carpet area of library (in m²)

Reading space (in m²)

Number of seats in reading space

Number of users (issue book) per day

Number of users (reading space) per day

Timings: During working day, weekend, and vacation

Number of library staff

Number of library staff with a degree in

Library Management

Computerisation for search, indexing,

issue/return records Bar coding used

Library services on Internet/Intranet INDEST or other similar membership archives

8.5.2. Titles and volumes per title (4)

Number of titles Number of volumes

	Number of new titles added	Number of new editions added	Number of new volumes added
CFY _{m2}			
CFY _{m1}			
CFY			

8.5.3. Scholarly journal subscription (3)

Details		CFY	CFYm1	CFYm2	CFYm3
Science	As soft copy				
	As hard copy				
Engg. and Tech.	As soft copy				
	As hard copy				
Pharmacy	As soft copy				
	As hard copy				
Architecture	As soft copy				
	As hard copy				
Hotel Management	As soft copy				
	As hard copy				

8.5.4. Digital Library (3)

Availability of digital library content:

If available, mention number of courses, number of e-books, etc.

Availability of an exclusive server:

Availability over Intranet/Internet:

Availability of exclusive space/room:

Number of users per day:

8.5.5. Library expenditure on books, magazines/journals, and miscellaneous content (5)

Year	Expenditure				Comments, if any
	Book	Magazines/journals (for hard copy subscription)	Magazines/journals (for soft copy subscription)	Misc. Contents	
CFYm2					
CFYm1					
CFY					

8.6. Internet (5)

Name of the Internet provider:

Available bandwidth:

Access speed:

Availability of internet in an exclusive lab:

Availability in most computing labs:

Availability in departments and other units:

Availability in faculty rooms:

Institute's own e-mail facility to faculty/students:

Security/privacy to e-mail/internet users:

(Instruction: The institute may report the availability of internet in the campus and its quality of service.)

8.7. *Safety Norms and Checks (5)*

8.7.1. Checks for wiring and electrical installations for leakage and earthing (1)

8.7.2. Fire-fighting measurements: Effective safety arrangements with emergency / multiple exits and ventilation/exhausts in auditoriums and large classrooms/laboratories, fire-fighting equipment and training, availability of water, and other such facilities. (1)

8.7.3. Safety of civil structure (1)

8.7.4. Handling of hazardous chemicals and other such activities (2)

(Instruction: The institution may provide evidence that it is taking enough measures for the safety of the civil structures, fire, electrical installations, wiring, and safety of handling and disposal of hazardous substances. Moreover, the institution needs to show the effectiveness of the measures that it has developed to accomplish these tasks.)

8.8. *Counseling and Emergency Medical Care and First-aid (5)*

Availability of counselling facility (1)

Arrangement for emergency medical care (2)

Availability of first-aid unit (2)

(Instruction: The institution needs to report the availability of the facilities discussed here.)

9. Continuous Improvement (100)

This criterion essentially evaluates the improvement of the different indices that have already been discussed in earlier criteria.

From 9.1 to 9.5 the assessment calculation can be done as follows.

a, b and c are the values of variables, which correspond to either LYGm2, LYGm1 and LYG or CAYm2, CAYm1 and CAY respectively, after scaled down each of them to a maximum value of 1.

For 9.1 and 9.2 the assessment can be made as,

$$\text{Assessment} = (b-a) + (c-b) + (a+b+c) \times (5/3)$$

9.1 Improvement in Success Index of Students (5)

From 4.1

a, b and c are the success indices which correspond to LYGm2, LYGm1 and LYG respectively.

Items	LYG (c)	LYGm1 (b)	LYGm2 (a)	Assessment
Success index				

9.2 Improvement in Academic Performance Index of Students (5)

From 4.2

a, b and c are calculated respectively for LYGm2, LYGm1 and LYG by dividing the API values, obtained from the criterion 4.2, by 10. The maximum value of a, b, and c should not exceed one.

Items	LYG (c)	LYGm1 (b)	LYGm2 (a)	Assessment
API				

For 9.3 to 9.5 the assessment can be made as,

$$\text{Assessment} = (b-a) + (c-b) + (a+b+c) \times (10/3)$$

9.3 Improvement in Student-Teacher Ratio (10)

From 5.1

a, b and c are calculated respectively for CAYm2, CAYm1 and CAY by dividing the STR values, obtained from the criterion 5.1, by 15. The maximum value of a, b, and c should not exceed one.

Items	CAY (c)	CAYm1 (b)	CAYm2 (a)	Assessment
STR				

9.4 Enhancement of Faculty Qualification Index (10)

From 5.3

a, b and c are calculated respectively for CAYm2, CAYm1 and CAY by dividing the FQI values, obtained from the criterion 5.3, by 10. The maximum value of a, b, and c should not exceed one.

Items	CAY (c)	CAYm1 (b)	CAYm2 (a)	Assessment
FQI				

9.5 Improvement in Faculty Research Publications, R&D Work and Consultancy Work (20)

From 5.7

a, b and c are calculated respectively for CAYm2, CAYm1 and CAY by dividing the FRP values, obtained from the criterion 5.7, by 20. The maximum value of a, b, and c should not exceed one.

Items	CAY (c)	CAYm1 (b)	CAYm2 (a)	Assessment
FRP				

From 5.9

a, b and c are calculated respectively for CAYm2, CAYm1 and CAY by dividing the FRDC values, obtained from the criterion 5.9, by 20. The maximum value of a, b, and c should not exceed one.

Items	CAY (c)	CAYm1 (b)	CAYm2 (a)	Assessment
FRDC				

9.6 Continuing Education (10)

In this criterion, the institution needs to specify the contributory efforts made by the faculty members by developing course/laboratory modules, conducting short-term courses/workshops, etc., for continuing education during the last three years.

Module description	Any other contributory institute /industry	Developed/or ganised by	Duration	Resource persons	Target audience	Usage and citation, etc.
.....						
.....						

Assessment =

9.7 New Facility Created (20)

Specify new facilities created during the last three years for strengthening the curriculum and/or meeting the POs.

9.8 Overall Improvement since last accreditation, if any, otherwise, since the commencement of the programme (20)

Specify the overall improvement:

Specify the strengths/ weakness	Improvement brought in	Contributed by	List the PO(s), which are strengthened	Comments, if any
CAY				
CAY _{m1}				
CAY _{m2}				
.....				
.....				

Declaration

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

This Self-Assessment Report (SAR) is prepared for the current academic year (_____) and the current financial year (_____) on behalf of the institution.

I certify that the information provided in this SAR is extracted from the records, and to the best of my knowledge, is correct and complete.

I understand that any false statement/information of consequence may lead to rejection of the application for the accreditation for a period of two or more years. I also understand that the National Board of Accreditation (NBA) or its sub-committees will have the right to decide on the basis of the submitted SAR whether the institution should be considered for an accreditation visit.

If the information provided in the SAR is found to be wrong during the visit or subsequent to grant of accreditation, the NBA has the right to withdraw the grant of accreditation and no accreditation will be allowed for a period of next two years or more, and the fee will be forfeited.

I undertake that the institution shall co-operate the visiting accreditation team, shall provide all desired information during the visit and arrange for the meeting as required for accreditation as per the NBA's provision.

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

Place:
Date:

Signature, Name, and Designation of the
Head of the Institution with seal