Evaluation Guidelines with Indicative Exhibits/Context to be Observed/Assessed for the SAR (UG Engineering Programs (Tier- I)

Criterion 1: Outcome-based Curriculum (120)

Sub-Criteria	Marks	Evaluation Guidelines
1.1. Vision, Mission and Program Educational Objectives (PEOs)	**35**	
1.1.1. State the Vision and Mission of the Institute and the Department	05	A. Availability of the vision and mission statements of the Department (01) B. Appropriateness and relevance of the statements (02) C. Consistency of the Department vision and mission statements with the Institute Vision and Mission (02)
Exhibits/Context to be Observed/Assessed: A. Vision and Mission Statements of both the Department and the Institute B. Correctness from definition perspective C. Consistency between Institute and Department statements		
1.1.2. State PEOs of the Program	05	Listing of the Program Educational Objectives (3 to 5) of the program under consideration and their appropriateness
Exhibits/Context to be Observed/Assessed: ❖ Availability & correctness of the PEOs statements		
1.1.3. Process of Defining Vision, Mission and PEOs	10	A. Description of the process involved in defining the Vision, Mission of the Department (06) B. Description of the process involved in defining the PEOs of the program (04)
Exhibits/Context to be Observed/Assessed: ❖ Documentary evidence demonstrating the process ensuring effective participation of internal and external stakeholders, along with effective process implementation.		
1.1.4. Dissemination of Vision, Mission and PEOs	05	A. Adequacy in respect of publication & dissemination (03) B. Process of dissemination among stakeholders (02)
Exhibits/Context to be Observed/Assessed: A. Adequacy: Department vision, mission, and PEOs should be available on the Institute website under the relevant program link. Additionally, they should be posted on department notice boards, HoD's chamber. Furthermore, they should be included in department-level documents and the course of study. B. Process of dissemination: Documentary evidence outlining the process ensuring awareness among internal and external stakeholders, including effective implementation.		

1.1.5. Mapping of PEOs with Mission	10	A. Preparation of a matrix of PEOs and mission statement (05)
		B. Consistency/justification of correlation parameters of the above matrix (05)
Exhibits/Context to be Observed/Assessed: A. Availability of a matrix containing PEOs and Mission. B. Documentary evidence for justification for each statement mapped in the matrix.		
1.2 Curriculum Structure and Features	**30**	
1.2.1. State the Process for Developing/ Revising the Program Curriculum	10	Periodic review through search conferences/curriculum development workshops, identifying job roles etc., taking into account the POs and PSOs. Involvement of the industry in this process.
Exhibits/Context to be Observed/Assessed: ❖ Documentary evidence demonstrating the process by which the program curriculum evolves and undergoes periodic review, taking into consideration POs and PSOs.		
1.2.2. Curriculum Structure	10	Courses required for the degree program and distribution of learning hours assigned in terms of attaining POs and PSOs.
Exhibits/Context to be Observed/Assessed: ❖ Documentary evidence of the courses, including teaching methods and the number of credits, within the program curriculum		
1.2.3. Components of Curriculum	05	Verify curricular components for the attainment of POs and PSOs
Exhibits/Context to be Observed/Assessed: ❖ Documentary evidence of Curriculum components.		
1.2.4. Strategies for Education Reforms	05	Curriculum design in terms of various educational reforms such as multidisciplinary and interdisciplinary approaches, multi-point entry/exit options, academic bank of credits, skill-based courses, and recognition of prior learning, etc.
Exhibits/Context to be Observed/Assessed: ❖ Evidence of the action plan for NEP 2020, state education policy, etc., including their implementations. Additionally, map activities in curriculum design with multidisciplinary and interdisciplinary programs, the establishment of an academic bank of credits system, and APAAR, etc.		
1.3. PO, PSO and their Mapping with Courses	**20**	

1.3.1 POs and PSOs	**05**	Listing of the Program Specific Outcomes (up to 3) of the program under consideration and their appropriateness
1.3.2 Mapping between the Courses and POs/PSOs	**15**	Justification of mapping between courses and POs and PSOs
Exhibits/Context to be Observed/Assessed:		
❖ Availability & correctness of the PSOs statements ❖ Documentary evidence of mapping of all courses with POs/PSOs		
1.4. Course Outcomes and Course Articulation Matrix	**30**	
1.4.1. Course Outcome (Semester Wise)	15	Availability of appropriate COs for every course
Exhibits/Context to be Observed/Assessed:		
❖ Documentary evidence of appropriateness of the CO statements.		
1.4.2. Course Articulation Matrix	15	Availability of Course Articulation Matrix and its appropriateness in terms of level of correlation.
Exhibits/Context to be Observed/Assessed:		
❖ Documentary evidence of justification of appropriateness of mapping of COs and correlation levels with various POs and PSOs		
1.5. Program Articulation Matrix	**05**	Availability of Mapping of Courses and POs/ PSOs
Exhibits/Context to be Observed/Assessed:		
❖ Documentary evidence of Articulation Matrix and relevance		
Total:	**120**	

Criterion 2: Outcome Based Teaching Learning (120)

Sub-Criteria	Marks	Evaluation Guidelines
2.1. Describe Processes Followed to Ensure Quality of Teaching & Learning	**20**	A. Adherence to the Academic Calendar (02) B. Pedagogical Initiatives (05) C. Support students based on their ability (04) D. Quality of Classroom Teaching (04) E. Conduct of Experiments (05)

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Exhibits/Context to be Observed/Assessed: A. Academic Calendar and its effective implementation. B. Documentary evidence of supporting the implementation of pedagogical initiatives, such as real-life examples, collaborative learning, ICT-supported learning, and interactive classrooms. C. Documentary evidence of tailored resources, differentiated instruction, and individualized attention to meet their unique learning needs D. Classroom ambience and efforts to keep students engaged (also to be verified during interaction with the students). E. Quality of laboratory experience concerning conducting experiments, recording observations, analysis, etc. (also to be verified during interaction with the students).			
2.2. Quality of Student Capstone Project	25	A. Identification of capstone/major project and allocation of guides (05) B. Types and relevance of the capstone/major project and their contribution towards the attainment of POs and PSOs (06) C. Continuous monitoring process (04) D. Quality of completed projects/working models/prototypes in relation to environment, sustainability, safety, ethics and cost (10)	
Exhibits/Context to be Observed/Assessed: A. Capstone/major project identification and guide/ supervisor allocation process B. Projects classification (application, product, research, review, etc.), incorporating factors such as environment, safety, ethics, cost, standards, and mapping with POs and PSOs. C. Process for continuous monitoring (Meeting records with guide and its frequency etc.,) D. Quality of projects, working models, or prototypes incorporating factors such as environment, safety, ethics, cost, standards, and mapping with POs and PSOs.			
2.3. Internship/Industrial Training	10	A. Process of Internship/Industrial training for students (03) B. Mapping of Industrial training/internships with POs and PSOs (04) C. Student feedback on training/internships and its analysis (03)	
Exhibits/Context to be Observed/Assessed: A. Documentary evidence of process of internship/ industrial training for students, number of students participated, relevant training areas, documented visit report, with a duration of not less than 2 weeks for the industrial training/internship. B. Documentary evidence of mapping of internship and training programs for students to POs and PSOs C. Documentary evidence of student feedback on industrial training and its analysis and actions taken.			
2.4. Seminar and Mini/Micro Projects	10	A. Mapping of Seminars presented by the students with POs and PSOs (05) B. Mapping of the mini/micro project and their contribution with POs and PSOs (05)	

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Exhibits/Context to be Observed/Assessed: A. Documentary evidence of seminars presented by the students B. Documentary evidence of Mini/micro projects and their mapping with POs and PSOs.			
2.5. Case Studies and Real-Life Examples	10	Use of case studies and real-life examples in teaching and their mapping with POs and PSOs.	
Exhibits/Context to be Observed/Assessed: ❖ Documentary evidences of case studies and real-life examples and its mapping with POs and PSOs.			
2.6. SWAYAM/NPTEL/MOOC/Self Learning	10	A. Number of students obtained MOOCs certification through platforms like SWAYAM/NPTEL, etc and their mapping with POs and PSOs (07). B. Scope for self-learning & facilities and its use. (03)	
Exhibits/Context to be Observed/Assessed: A. Documentary evidence of number of students cleared MOOCs B. Evidence for Self-learning.			
2.7. Solving Complex Engineering Problems Incorporating Sustainability Goals	20	List of complex engineering problems from different courses/activities/mini projects, etc. along with the targeted SDGs.	
Exhibits/Context to be Observed/Assessed: ❖ Documentary evidences of solving complex engineering problems targeting SDGs			
2.8. Steps Taken for Enhancing Industry Institute Partnerships	15	A. Industry involvement in the partial delivery of any regular courses for students (05) B. Industry offered courses/training (04) C. Industry-supported laboratories (03) D. Impact analysis and actions taken thereof (03)	
Exhibits/Context to be Observed/Assessed: A. Documentary evidence of industry involvement in the partial delivery of any regular courses. B. Documentary evidence of industry offered courses/training C. Types of industries, types of labs, objectives, utilization, and effectiveness. D. Analysis and actions taken as a result.			
Total	120		

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Criterion 3: Outcome-Based Assessment (120)

Sub-Criteria	Marks	Evaluation Guidelines
3.1. Evaluation of Continuous Assessment: Assignments, Unit Tests, Mid-Term, etc	**10**	A. Process for setting and evaluation of internal semester question paper (02) B. Quality of questions, appropriateness of mapping with the COs (03) C. Assessment of COs coverage in unit tests/class tests/mid-term tests/assignments (03) D. Sharing of post evaluation feedback with students for performance improvement (02)
Exhibits/Context to be Observed/Assessed: A. Process for setting internal semester question papers, creating model answers, evaluating them, and ensuring compliance. B. Assessment of the quality of unit tests/class tests/mid-term tests/assignments C. Documentary evidence of mapping questions with COs. D. Evidence of sharing of post evaluation feedback with students for performance improvement		
3.2. Evaluation of Semester End Exam (SEE) Question Paper	**10**	A. Process for setting and evaluation of semester-end exam question paper (03) B. Quality of questions, appropriateness of mapping with the COs (05) C. Transparency of post evaluation process (02)
Exhibits/Context to be Observed/Assessed: A. Process for setting semester-end exam question paper evaluating and ensuring compliance. B. Assessment of the quality of semester end exam question paper C. Evidence of transparency of post evaluation process		

Sub-Criteria	Marks	Evaluation Guidelines
3.3. Evaluation of Laboratory Work and Workshop (Continuous and SEE)	**10**	A. Evaluation of experiments conducted in workshops/laboratories (05) B. Use of Rubrics for assessing student performance with relevance to COs/POs (05)
Exhibits/Context to be Observed/Assessed: A. Evidence of evaluation of the laboratory experiments B. Evidence of Rubrics developed and used for assessing student performance during workshops/laboratories.		

3.4. Evaluation of Industrial Training/ Internship (Continuous and SEE)	10	A. Relevance of internships/industrial training (04) B. Rubrics used for assessing student industrial training/internships and appropriateness of mapping with POs (06)
Exhibits/Context to be Observed/Assessed: A. Documentary evidence of internships/ industrial training and its relevance in terms of POs. B. Evidence of Rubrics developed and used for assessing student performance during internships/ industrial training.		
3.5. Evaluation of Projects	20	A. Rubrics used for assessing complexity, cost, relevance to the environment, and sustainability (10) B. Rubrics used for assessing team work, communication, and use of project management concepts (10)
Exhibits/Context to be Observed/Assessed: A & B. Rubrics are used to assess complexity, cost, relevance to the environment and sustainability, individual student performance, and team performance.		
3.6. Evidence of Addressing Sustainable Development Goals (SDG)	10	Evidence of Addressing Sustainable Development Goals relevant to the program
Exhibits/Context to be Observed/Assessed: ❖ Student project activities through course work, research work and projects.		
3.7. Attainment of Course Outcomes	25	
3.7.1. Describe the Assessment Tools and Processes Used to Gather the Data for the Evaluation of Course Outcome	05	A. List of assessment tools and processes (02) B. The quality/relevance of assessment tools/processes used (03)
Exhibits/Context to be Observed/Assessed: A.& B. Documentary evidence for assessment tools and assessment processes used to measure COs including data collection, verification, analysis, and decision-making.		
3.7.2. Record the Attainment of Course Outcomes of all Courses with Respect to Set Attainment Levels	20	Verification of the attainment levels as per the benchmark set for COs of all courses

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Exhibits/Context to be Observed/Assessed: ❖ Methodology to define set levels and its compliance; data collection, verification, analysis and decision making; details for one course per year of study to be verified			
3.8. Attainment of Program Outcomes and Program Specific Outcomes	**25**		
3.8.1. Provide Results of Evaluation of Each PO & PSO	25	A. Verification of documents, results, and the level of attainment of each PO/PSO (10) B. Assessment of overall levels of attainment (15)	
Exhibits/Context to be Observed/Assessed: A.& B. Documentary evidence towards appropriate attainment levels for attainment of POs and PSOs from core courses to be verified. Additionally, at least two levels of POs and two levels of PSOs attainment shall be verified.			
Total	**120**		

Criterion 4: Students' Performance (120)

Sub- Criteria	Marks	Evaluation Guidelines
4.1. Enrolment Ratio in the First Year (20)	**20**	A. >= 90% students enrolled in the First Year on average over 3 academic years (CAY, CAYm1 and CAYm2) (20) B. >= 80% students enrolled in the First Year on average over 3 academic years (CAY, CAYm1 and CAYm2) (17) C. >= 70% students enrolled in the First Year on average over 3 academic years (CAY, CAYm1 and CAYm2) (14) D. >= 60% students enrolled in the First Year on average over 3 academic years (CAY, CAYm1 and CAYm2) (11) E. >= 50% students enrolled in the First Year on average over 3 academic years (CAY, CAYm1 and CAYm2) (08) F. >= 40% students enrolled in the First Year on average of current academic year (CAY), CAYm1 and CAYm2 (05) G. Otherwise '0'.

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Exhibits/Context to be Observed/Assessed: ❖ A, B, C, D, E, F and G: Data to be verified for each of the assessment years.			
4.2. Success Rate of the Students in the Stipulated Period of the Program	**15**	Success Rate (**SR**)= B/A* A= No. of students admitted in the 1st year of that batch and those actually admitted in the 2nd year via lateral entry, plus the number of students admitted through multiple entry (if any) and separate division if applicable, minus the number of students who exited through multiple entry (if any). B=No. of students who graduated from the program in the stipulated course duration) **Note** *: If the value of A is less than the sum of the sanctioned intake (N) and the lateral entry including leftover seats (N2), then the value of A should be the sum of the sanctioned intake (N) and the lateral entry including leftover seats (N2). Average SR = Mean of SR for the past three batches. **SR Points** = 1.5 * (Average SR/10).	
Exhibits/Context to be Observed/Assessed: ❖ Data to be verified for each of the assessment years.			
4.3. Academic Performance of the First-Year Students of the Program	**10**	**Academic Performance** = Average Academic Performance Index (API), where 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 1st year/10)) * (Number of successful students/number of students appeared in the examination). Successful students are those who have proceeded to the 2nd year.	
Exhibits/Context to be Observed/Assessed: ❖ Data to be verified for each of the assessment years.			

4.4.	Academic Performance of the Second Year Students of the Program	10	**Academic Performance** = Average Academic Performance Index (API), where API = ((Mean of 2nd 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 2nd Year/10)) *(Number of successful students/number of students appeared in the examination. Successful students are those who have proceeded to the 3rd year.
Exhibits/Context to be Observed/Assessed: ❖ Data to be verified for each of the assessment years.			
4.5.	Academic Performance of the Third Year Students of the Program	10	**Academic Performance** = Average Academic Performance Index (API), where API = ((Mean of 3rd 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 3rd Year/10)) * (Number of successful students/number of students appeared in the examination). Successful students are those who have proceeded to the 4th year.
Exhibits/Context to be Observed/Assessed: ❖ Data to be verified for each of the assessment years.			
4.6.	Placement, Higher Studies and Entrepreneurship	30	Assessment Points = 0.3 * Average of placement index (P). Placement index (P) = [(X + Y + Z)/FS] *100 where, ❖ X = No. of students placed ❖ Y = No. of students admitted to higher studies ❖ Z = No. of students taking up entrepreneurship ❖ FS = Total no. of final year students. **Note:** If the value of FS is less than the sum of the sanctioned intake (N) and the lateral entry including leftover seats (N2), then the value of FS should be the sum of the sanctioned intake (N) and the lateral entry including leftover seats (N2).
Exhibits/Context to be Observed/Assessed: ❖ Data to be verified for each of the assessment years.			
4.7.	**Professional Activities**	**25**	

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4.7.1. **Professional Societies/Bodies, Chapters, Clubs, and Professional Engineering Events Organized**	05	A. Availability and number of activities organized through professional societies/chapters/clubs (02) B. Number and quality of engineering events organized at the Institute, categorized by level (National/International) (03).
Exhibits/Context to be Observed/Assessed: ❖ A & B: Supporting documentary evidences		
4.7.2. **Student's Participations in Professional Events (at other institutions)**	10	A. No. of students participated in the state level events (03) B. No. of students participated in the national level/ international events (03) C. No. of students received prizes/awards in such events (04)
Exhibits/Context to be Observed/Assessed: ❖ A, B & C: Documentary evidence		
4.7.3. **Publication of Journals, Magazines, Newsletters, etc in the Department**	05	A. Quality and relevance of the contents and print material/ e-format (03) B. Student involvement in publication of journals, magazines, newsletters (02)
Exhibits/Context to be Observed/Assessed: A. Documentary evidence B. Documentary evidence of student involvement in publication of journals, magazines, and newsletter, etc.		
4.7.4. **Student Publications**	05	A. No. of journal papers published by students during the assessment period (02) B. No. of conference papers published by students during the assessment period (02) C. Number of student publications that received prizes/awards during the assessment period (01)
Exhibits/Context to be Observed/Assessed: A. Documentary evidence of papers published by students in academic journals during the assessment period. B. Documentary evidence of papers published by students in conference events during the assessment period. C. Documentary evidence of student publications that received prizes/awards during the assessment period.		
Total	**120**	

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Criterion 5: Faculty Information (100)

Sub-Criteria	Marks	Evaluation Guidelines
5.1. Student-Faculty Ratio (SFR)	**30**	Marks to be given proportionally from a maximum of 30 to a minimum of 10 for average SFR between 15:1 to 25:1, and zero for average SFR higher than 25:1. Marks distribution is given as below: SFR $\leq$ 15 - 30 Marks $\leq$ 17 - 26 Marks $\leq$ 19 - 22 Marks $\leq$ 21 - 18 Marks $\leq$ 23 - 14 Marks $\leq$ 25 - 10 Marks > 25 - 00 Mark

Exhibits/Context to be Observed/Assessed:

- ❖ SFR to be calculated at Department level considering all UG and PG engineering programs in the Department; include allied department programs/clusters as well. The programs, such as MCA, BCA, and other non-engineering programs running in the Department or allied Departments, need to have sufficient faculty members to support those programs. These faculty members should not be included in the Table 5A of the SAR.
- ❖ For consideration of Faculty, Faculty appointment letters, time table/subject allocation file.
- ❖ Calculation of students and faculty as mentioned in the SAR (please refer table under criterion 5.1 of SAR).

*Faculty Definition: All the faculty whether regular or contractual (except part-time or hourly based), will be considered. All regular faculty members shall meet the AICTE qualifications and experience requirements. The contractual faculty appointed with any terminology whatsoever, who have taught for 2 consecutive semesters with or without break between the 2 semesters in corresponding academic year on full-time basis shall be considered for the purpose of calculation in the faculty student ratio. 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 with or without break between the 2 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.
A. Faculty members in the Department who do not have teaching, or practical loads, will not be counted.
B. Director/ Principal/ Dean/ other academic/administrative posts, who has teaching/ practical load in the Department will be counted.
C. Visiting faculty/adjunct faculty, who are working on hourly based faculty will not be counted.

5.2. Faculty Qualification	25	Faculty qualification index (FQI) = 2.5 * [(10X +4Y)/RF)], where
		$\triangleright$ X=No. of faculty members with Ph.D. degree or equivalent as per AICTE/UGC norms.
		$\triangleright$ Y=No. of faculty members with M. Tech. or ME degree or equivalent as per AICTE/UGC norms.
		$\triangleright$ RF=No. of required faculty to adhere to the 20:1 Student-Faculty ratio, with calculations based on both student numbers and faculty requirements as per section 5.1 of SAR (RF=S/20).
		$\triangleright$ To determine the RF value (No. of required faculty in the Department, including allied Departments to adhere to the 20:1 Student-Faculty ratio), all students (S as defined in section 5.1 of SAR) in the department, as well as those in allied departments, need to be considered. (RF=S/20)
		$\triangleright$ The programs, such as MCA, BCA, and other non-engineering programs running in the Department or allied Departments, need to have sufficient faculty members to support those programs and exclude the faculty members and students listed in Table 5.2.1 (X, Y, and RF) of SAR.

Exhibits/Context to be Observed/Assessed:

❖ Documentary evidence – Faculty Qualification

5.3. Faculty Cadre Proportion	25	
		Faculty Cadre Proportion Marks $= \left[\left[\dfrac{AF1}{RF1} \right] + \left[\dfrac{AF2*0.6}{RF2} \right] + \left[\dfrac{AF3*0.4}{RF3} \right] \right] * 12.5$
		$\triangleright$ If AF1 = AF2= 0, then zero mark
		$\triangleright$ Maximum marks to be limited if it exceeds 25.
		$\triangleright$ Faculty cadre and qualification and experience should be as per AICTE/UGC norms
		$\triangleright$ RF1= No. of Professors required = 1/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section 5.1 of SAR.
		$\triangleright$ RF2= No. of Associate Professors required = 2/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section 5.1 of SAR.
		$\triangleright$ RF3= No. of Assistant Professors required = 6/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section 5.1 of SAR.
		$\triangleright$ All Professors (RF1, AF1), all Associate Professors (RF2, AF2), and all Assistant Professors (RF3, AF3) in the department, as well as those in allied departments, should be considered for the calculation of faculty cadre proportion marks.
		$\triangleright$ To determine the RF1, RF2, and RF3 values, all students (S as defined in section 5.1 of SAR) in the department, as well as those in allied departments, need to be considered.

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		➢ The programs, such as MCA, BCA, and other non-engineering programs running in the Department or allied Departments, need to have sufficient faculty members to support them and exclude the faculty members listed in Table No. 5.3.1 (AF1, AF2, AF3) of SAR.
Exhibits/Context to be Observed/Assessed: ❖ Faculty qualification and experience required for cadre posts shall only be considered in accordance with AICTE norms/guidelines. ❖ Cadre-wise number of available faculty; Faculty qualifications, experience, and eligibility; Appointment/Promotion orders. ❖ Cadre-wise number of faculty required as per AICTE guidelines (refer to calculations in SAR).		
5.4. Visiting/Adjunct Faculty/ Professor of Practice	**10**	A. Provision of visiting or adjunct faculty/emeritus professor/ professor of practice, etc (01) B. Minimum 50 hours per year interaction (09) (per year to obtain three marks: 3 * 3 = 09)
Exhibits/Context to be Observed/Assessed: ❖ Documentary evidence.		
5.5. Faculty Retention	**10**	$FR=(((A*0) +(B*1) +(C*2) +(D*3) + (E*4))/RF) *2.50$ (points limited to 10) ❖ RF=No. of required faculty in the Department including allied Departments to adhere to the 20:1 Student-Faculty ratio, with calculations based on both student numbers and faculty requirements as per section 5.1 of SAR; (RF=S/20). ❖ AF= The no. of available faculty members in the Department including allied Departments. ❖ The programs, such as MCA, BCA, and other non-engineering programs running in the Department or allied Departments, need to have sufficient faculty members to support them and exclude the faculty members listed in Table No. 5.5.1 (AF). ❖ A= The no. of faculty members at the current institute with less than 1 year of experience (A in AF) ❖ B= The no. of faculty members at the current institute with more than 1 year and less than 2 years of experience (B in AF) ❖ C= The no. of faculty members at the current institute with more than 2 years and less than 3 years of experience (C in AF) ❖ D= The no. of faculty members at the current institute with more than 3 years and less than 4 years of experience (D in AF) ❖ E= The no. of faculty members at the current institute with more than 4 years of experience (E in AF)

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Exhibits/Context to be Observed/Assessed:		
❖ Documentary evidence.		
Total	**100**	

Criterion 6: Faculty Contributions (120)

Sub-Criteria	Marks	Evaluation Guidelines
6.1. Professional Development Activities	**60**	
6.1.1. Memberships in Professional Societies at National/ International Levels	05	Memberships in Professional Societies at National/International Levels. ❖ Faculty members who have active recognized professional memberships and their positions and contributions to professional societies during the assessment period
Exhibits/Context to be Observed/Assessed: ❖ Documentary evidence of professional memberships		
6.1.2. Faculty as Resource Persons or Participants in STTPs/FDPs	10	
6.1.2.1. Faculty as Resource Persons in STTPs/FDPs	05	❖ An average of more than 3 faculty members from the Department served as resource persons in STTPs/FDPs during the assessment period (05) ❖ An average of more than 2 and less than 3 faculty members from the Department served as resource persons in STTPs/FDPs during the assessment period (02)
Exhibits/Context to be Observed/Assessed: A & B: Documentary evidence of resource persons in the relevant STTP/FDP program		
6.1.2.2. Faculty Members' Participation in STTPs/ FDPs	05	A faculty scores maximum five points for participation ❖ Participation in 2 to 5 days Faculty/ Faculty development program: 3 Points ❖ Participation in >5 days Faculty/ Faculty development program: 5 points ❖ RDF= Number of faculty required to comply with the 20:1 student-faculty ratio in the Department alone, as per section 5.1 (RDF= DS/20). ❖ For each year, Assessment Points (AP) = Sum of faculty participation score / 0.5 * RDF ❖ Average assessment over last three years starting from CAYm1 (Marks limited to 05)
Exhibits/Context to be Observed/Assessed:		

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❖ Relevance of the STTP/FDP program ❖ Number of days attended ❖ Number of faculty member attended		
6.1.3. Faculty Contribution in Development of SWAYAM MOOCs and other E-Content	05	A. Faculty member (s) involvement in developing SWAYAM MOOCs (3) B. Involvement of faculty members in developing E-Content (2)
Exhibits/Context to be Observed/Assessed: A. Documentary evidence for developing SWAYAM MOOCs B. Documentary evidence for developing E-Content		
6.1.4. Faculty Certification of MOOCs through SWAYAM, etc	10	Percentage of faculty members in the Department obtained MOOCs certification through platforms like SWAYAM/NPTEL and marks distribution as follows: ❖ $\geq$ 30% of available faculty members in the Department obtained MOOCs certification through platforms like SWAYAM/NPTEL averaged during the assessment period (07-10) ❖ $\geq$ 20% and <30% of available faculty members in the Department obtained MOOCs certification through platforms like SWAYAM/NPTEL averaged during the assessment period (04-06) ❖ < 20% of available faculty members in the Department obtained MOOCs certification through platforms like SWAYAM/NPTEL averaged during the assessment period (00-03)
Exhibits/Context to be Observed/Assessed: ❖ Documentary evidence of the relevance of the course and other aspects.		
6.1.5. FDP/ STTP Organized by Department	10	❖ The minimum duration of FDP/STTP is 5 days. ❖ 2 points per FDP/STTP, with a maximum of 4 marks per assessment year and a total maximum of 10 marks
Exhibits/Context to be Observed/Assessed: ❖ Documentary evidence: Participation and resource person and duration.		
6.1.6. Faculty Support in Student Innovative Projects	10	Percentage of faculty members in the Department supporting as a mentor, facilitator, etc. in student innovation projects in various events like hackathons, codeathons, ideathons, open research, etc. & marks distribution as follows: ❖ $\geq$ 30% of available faculty members in the Department support as a mentor, facilitator, etc. in student innovation projects in various events during the assessment period (07-10) ❖ $\geq$ 20% and <30% of available faculty members in the Department support as a mentor,

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		facilitator, etc. in student innovation projects in various events in the past 3 years (04-06) ❖ <20% of available faculty members in the Department support as a mentor, facilitator, etc. in student innovation projects in various events in the past 3 years (00-03)
Exhibits/Context to be Observed/Assessed: ❖ Documentary evidence of faculty members' involvement in student innovation projects as mentors or facilitators		
6.1.7. Faculty Internship/ Training/ Collaboration with Industry	10	Percentage of faculty members in the Department, who have undergone faculty internships/trainings/ collaboration with industry & marks distribution as follows: ❖ ≥ 30% of available faculty members in the Department have undergone faculty internships/ trainings/ collaboration with industry averaged during the assessment period (07-10) ❖ ≥ 20% of and <30% available faculty members in the Department have undergone faculty internships/ trainings/ collaboration with industry averaged during the assessment period (04-06) ❖ <20% of available faculty members in the Department have undergone faculty internships/ trainings/collaboration with industry averaged during the assessment period (00-03)
Exhibits/Context to be Observed/Assessed: ❖ Documentary evidence		
6.2. Research and Development Activities	**60**	
6.2.1. Academic Research	10	Publications in Journals, conference papers, books, and book Chapters and marks distribution as follow: A. No. of Publications (04) B. Quality of publications (06)
Exhibits/Context to be Observed/Assessed: ❖ Quality of publications and number of publications & documentary evidence.		
6.2.2. Ph.D. Student Details	05	A. No. of students enrolled for Ph.D. degree in the Department during the assessment period (02) B. No. of Ph.D. graduated in the Department during the assessment period (03)
6.2.3. Development Activities	10	A. Patents granted during the assessment period (04) B. Patents published during the assessment period (03)

		C. Working models and prototypes developed during the assessment period (03)
Exhibits/Context to be Observed/Assessed: A&B: Documentary evidence of patents granted/published C: Documentary evidence of working models and prototypes developed		
6.2.4. Sponsored Research Project	15	Funded research projects from external sources; Cumulative during CAYm1, CAYm2 and CAYm3 ❖ Amount $\geq$20 Lacs – 15 Marks ❖ Amount $\geq$16 Lacs and < 20 lacs– 12 Marks ❖ Amount $\geq$12 Lacs and < 16 lacs –9 Marks ❖ Amount $\geq$ 8 Lacs and < 12 lacs –6 Marks ❖ Amount $\geq$ 4 Lacs and < 8 lacs –3 Marks ❖ Amount $\geq$ 1 Lacs and < 4 lacs –1 Mark ❖ Amount < 1 Lac – 0 Mark.
Exhibits/Context to be Observed/Assessed: ❖ Documentary evidence: Funding agency, Amount, Duration, Research progress.		
6.2.5. Consultancy Work	15	Consultancy work from external sources; Cumulative during CAYm1, CAYm2 and CAYm3 ❖ Amount $\geq$20 Lacs – 15 Marks ❖ Amount $\geq$16 Lacs and < 20 lacs–12 Marks ❖ Amount $\geq$12 Lacs and < 16 lacs –9 Marks ❖ Amount $\geq$ 8 Lacs and < 12 lacs –6 Marks ❖ Amount $\geq$ 4 Lacs and <8 lacs –3 Marks ❖ Amount $\geq$ 1 Lacs and <4 lacs –1 Mark ❖ Amount <1 Lac – 0 Mark.
Exhibits/Context to be Observed/Assessed: ❖ Documentary evidence, funding agency, amount, duration, outcome		
6.2.6. Institution Seed Money or Internal Research Grant to its Faculty for Research Work	05	A. Amount received (3 marks) Institution Seed Money or Internal Research Grants received by faculty members; cumulatively during CAYm1, CAYm2, and CAYm3 ❖ Amount $\geq$ 6 Lacs – 3 Marks ❖ Amount $\geq$ 4 Lacs and < 6 lacs– 2 Marks ❖ Amount $\geq$ 2 Lacs and < 4 lacs – 1 Mark ❖ Amount < 1 Lac – 0 Mark B. Amount utilized (2 marks).

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Exhibits/Context to be Observed/Assessed:		
❖ Documentary evidence: Amount, duration, outcome		
Total	**120**	

Criterion 7: Facilities and Technical Support (100)

Sub Criteria	Marks	Evaluation Guidelines
7.1. Adequate and Well-Equipped Laboratories, and Technical Manpower	**40**	A. Adequate and well-equipped laboratories/workshops to run the program (15) B. Quality of instruments (05) C. Utilization (10) D. Availability of adequate and qualified technical supporting staff (10)
Exhibits/Context to be Observed/Assessed: A. Adequacy and well-equipped laboratories running the program. B. Quality of instruments C. Utilization of laboratories/workshops D. Adequate and qualified technical supporting staff in the Department		
7.2. Additional Facilities Created for Improving the Quality of Learning Experience in Laboratories	**20**	A. Availability and relevance of additional facilities (10) B. Utilization and effectiveness of facilities (05) C. Relevance to POs/PSOs (05)
7.3. Maintenance of Laboratories and Overall Ambiance	**10**	A. Maintenance policy (02) B. Corrective & preventive maintenance (03) C. Overall ambience (05)
Exhibits/Context to be Observed/Assessed: A, B & C: Documentary evidence of policy, etc and overall ambience		
7.4. Safety Measures in Laboratories	**10**	A. Basic safety measures (04) B. Lab specific safety measure (06)
Exhibits/Context to be Observed/Assessed: A. Basic safety measures: Dos and don'ts, follow the dress code, maintain hygiene, learn emergency protocols, wear appropriate shoes, etc. B. Lab-specific safety measures: gloves, safety mats, Miniature Circuit Breaker (MCB), etc.		

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7.5. Project Laboratory/Research Laboratory /Centre of Excellence	20	A. Availability of project laboratories/research laboratories (05) B. Availability of centre of excellence (05) C. Utilization of project laboratories/research laboratory /Centre of excellence (05) D. Relevance to POs/PSOs (05)
Exhibits/Context to be Observed/Assessed: A & C: Documentary evidence of project laboratories/research laboratories /center of excellence. B: Utilization of project laboratories/research laboratories /center of excellence.		
Total:	**100**	

Criterion 8: Continuous Improvement (80)

Sub-Criteria	Marks	Evaluation Guidelines
8.1. Actions Taken Based on the Results of Evaluation of the COs, POs, and PSOs	**40**	
8.1.1. Actions Taken Based on the Results of Evaluation of the COs Attainment	20	A. Documentary evidences of identification of gaps in COs attainment (05) B. Plan of action to bridge the gaps/ improvement (05) C. Implementation (10)
Exhibits/Context to be Observed/Assessed: A, B & C: A few core course files in CAYm1, CAYm2, CAYm3 need to be scrutinized for the identification of gaps and shortfalls, along with documentary evidence for each CO.		
8.1.2. Actions Taken Based on the Results of Evaluation of the POs/PSOs Attainment	20	A. Documentary evidences of identification of gaps in POs/PSOs attainment (05) B. Plan of action to bridge the gaps/ improvement (05) C. Implementation (10)
Exhibits/Context to be Observed/Assessed: A, B & C: Documentary evidence of PO/PSO attainment files in CAYm1, CAYm2, and CAYm3 needs to be scrutinized for the identification of gaps and shortfalls, along with documentary evidence for each PO/PSO		
8.2. Academic Audit and Actions Taken thereof during the Period of Assessment	**15**	A. Availability of external academic audit process (02) B. Plan of action to address the recommendations (03) C. Record of actions/corrective measures taken during the assessment period (10)

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Exhibits/Context to be Observed/Assessed:		
❖ Documentary evidence of academic audit: Assessment criteria, frequency, conduct mechanism, action plan based on audit, implementation, and effectiveness.		

8.3. Improvement in Faculty Qualification/ Contribution	**15**	Assessment is based on improvement, with CAYm3 considered as the base year, in the following areas:
		A. Improvement in the no. faculty with Ph.D. (06)
		  ❖ The average no. of faculty members with Ph.D. degree over the past 3 years is more than 60% compared to the required no. of faculty members with Ph.D. (06)
		  ❖ The average no. of faculty members with Ph.D. degree over the past 3 years is more than 40% compared to the required no. of faculty members with Ph.D. (04)
		  ❖ The average no. of faculty members with Ph.D. degree over the past 3 years is more than 20% compared to the required no. of faculty members with Ph.D. (02)
		B. Improvement in the no. of publications in peer reviewed journals (06)
		C. Improvement in the no. of publications in conferences (03)

Exhibits/Context to be Observed/Assessed:		
❖ A. B. C & D: Nos. in each year of the assessment; improvement considering CAYm3 as a base year		
8.4. Improvement in Academic Performance	**10**	Assessment is based on improvement of academic performance, with CAYm3 considered as the base year, in the following areas: A. Academic Performance Index (API) of the First-Year Students in the Program (03) B. Academic Performance Index (API) of the Second-Year Students in the Program (03) C. Academic Performance Index (API) of the Third Year Students in the Program (04)
Exhibits/Context to be Observed/Assessed:		
A & B: Document evidence of improvements in classrooms, academic as well as research laboratories and simulation tools, emulator, the use of digital tools, interactive whiteboards, and other devices aim to enhance learning experiences etc.		
Total:	**80**	

Criterion 9: Student Support System and Governance (120)

Sub-Criteria	Marks	Evaluation Guidelines
9.1. First Year Student-Faculty Ratio (FYSFR)	**05**	$\geq$ 90% of faculty members, 05 marks $\geq$ 80% to < 90 of faculty members; 04 marks $\geq$ 70% to < 80 of faculty members; 03 marks

		$\geq$ 60% to < 70 of faculty members; 02 marks $\geq$ 50% to < 60 of faculty members; 01 mark < 50% of faculty members; 00 mark
Exhibits/Context to be Observed/Assessed: ❖ No. of faculty calculation considering faculty definition and fractional load; Faculty appointment letters; ❖ No. of student's calculation as mentioned in the SAR (Table 9.1.1.)		
9.2. Mentoring System	**05**	A. Mentoring system-implementation (02) B. Effectiveness (03)
Exhibits/Context to be Observed/Assessed: ❖ Documentary evidence by considering a few relevant activities.		
9.3. Feedback Analysis	**10**	
9.3.1. Feedback on Teaching and Learning Process and Corrective Measures Taken, if any	05	A. Feedback questionnaire used (01) B. Methodology being followed for analysis of feedback and its effectiveness (02) C. Record of corrective measures taken and impact (02)
Exhibits/Context to be Observed/Assessed: ❖ A, B & C. Feedback questionnaire, collection process, analysis, actions taken, effectiveness		
9.3.2. Feedback on Academic Facilities	05	A. Feedback questionnaire used (01) B. Frequency of feedback collection and analysis (02) C. Record of corrective measures taken (02)
Exhibits/Context to be Observed/Assessed: ❖ A, B & C. Feedback on academic facilities questionnaire, collection process, analysis, actions taken, effectiveness		
9.4. Training and Placement Support	**10**	A. Facilities of training and placement cell (02) B. Adequate staff (02) C. Pre-placement training activities (03) D. Support for higher studies (03)
Exhibits/Context to be Observed/Assessed: ❖ A, B, C, & D- Appropriate documentary evidence		
9.5. Start-up and Entrepreneurship Activities	**05**	A. Availability of entrepreneurship cell/ Incubation cell (01) B. No. of awareness programs/incubation activities conducted during the assessment period

		(02) C. No. of students taken up entrepreneurship (02)
Exhibits/Context to be Observed/Assessed: ❖ A, B & C: Appropriate documentary evidence		
9.6. Governance and Transparency	**25**	
9.6.1. Availability of the Institutional Strategic Plan and its Effective Implementation and Monitoring	10	A. Availability of strategic plan/ Institutional development plan (IDP) (03) B. Approval of strategic plan/ IDP by competent authority (02) C. Implementation, monitoring and reporting (05)
Exhibits/Context to be Observed/Assessed: A, B, C: Availability of strategic plan/ Institutional development plan and its approval.		
9.6.2. Governing Body, Administrative Setup, Functions of Various Bodies, Service Rules, Recruitment Procedures and Promotion Policies	10	A. Composition of BoG/GB/Senate, other administrative and academic bodies; functions, and responsibilities; frequency of the meetings; participation details of external members and attendance (04) B. Agenda, minutes of the meetings and action-taken report (ATR) (04) C. The published service rules, policies, and procedures with year of approval by competent authority/Board and publication (02)
Exhibits/Context to be Observed/Assessed: ❖ A, B & C: Appropriate documentary evidence.		
9.6.3. Transparency	05	A. Mandatory disclosure as per AICTE/AISHE/ONOD on the Institute website (03) B. Availability of policies, rules, and processes on the Institute website (02)
Exhibits/Context to be Observed/Assessed: ❖ Institute website.		
9.7. Budget Allocation, Utilization, and Public Accounting at Institute Level	**12**	A. Quantum of budget allocation for three years (04) B. Budget utilization for three years (06) C. Availability of audited statements on the Institute website (02)
Exhibits/Context to be Observed/Assessed: A. Budget formulation, finalization and approval process and utilization B. & C. Audited statements by CA on Institute website		
9.8. Program Specific Budget Allocation, Utilization	**08**	A. Quantum of budget allocation for three years (03) B. Budget utilization for three years (05)
Exhibits/Context to be Observed/Assessed: A. Budget formulation, finalization, approval process and utilization		

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B. Effective utilization; verification for at least two of the three assessment years		
9.9. Quality of Learning Resources (Hard/Soft)	**05**	A. Availability of relevant e-learning resources of the program under consideration (02) B. Accessibility of learning resources to students (03)
Exhibits/Context to be Observed/Assessed: ❖ A & B: Availability of relevant learning resources		
9.10. E-Governance	**05**	E-governance initiatives
Exhibits/Context to be Observed/Assessed: ❖ E-governance initiatives i.e., extent of office automation		
9.11. Initiatives and Implementation of Sustainable Development Goals (SDGs)	**10**	Policy and implementation of SDGs-specific activities conducted during the assessment period
Exhibits/Context to be Observed/Assessed: ❖ Evidence on green energy, waste management, preserving water, net zero, quality education, reuse, recycle, less use to renewables, etc.		
9.12. Innovative Educational Initiatives and Implementation	**05**	Initiatives taken towards Universal human values, Indian knowledge system, multidisciplinary programs, flexible curriculum, mobility of students, academic bank of credits, and support facilities for holistic education, etc.
Exhibits/Context to be Observed/Assessed: ❖ Appropriate documentary evidence		
9.13. Faculty Performance Appraisal and Development System (FPADS)	**10**	A. A well-defined performance appraisal and development system instituted for all the assessment years (04) B. Its implementation and effectiveness (06)
Exhibits/Context to be Observed/Assessed: A. Notified performance appraisal and development system; Appraisal Parameters; Awareness B. Implementation, Transparency and Effectiveness.		
9.14. Outreach Activities	**05**	A. Initiatives taken towards outreach activities, social internships (02) B. Society connect activities undertaken by the students with achievements (03)
Exhibits/Context to be Observed/Assessed: ❖ A & B: Appropriate documentary evidence		
Total:	**120**	