Evaluation Guidelines with indicative exhibits/context to be Observed/Assessed - SAR (PG Engineering)

Criterion 1: Program Curriculum and Teaching–Learning Processes (125)

Sub Criteria	Marks	Evaluation Guidelines
1.1. Program Curriculum	**35**	
1.1.1. State the process for designing the program curriculum	10	Process used to demonstrate how the program curriculum is evolved or gap analysis is done and periodically reviewed considering the POs.
Exhibits/Context to be Observed/Assessed: *Documentary evidence to indicate the process which demonstrate how the program curriculum is evolved and periodically reviewed considering the POs.*		
1.1.2. Structure of the Curriculum	05	Refer to SAR: Expectation in 1.1.2 & 1.1.3 is that the curriculum is well balanced structure & appropriate for a PG program
Exhibits/Context to be Observed/Assessed: *In 1.1.2 look at the entire curriculum in detail. It shall allow an evaluator to identify oddities (if any) at the individual course level.*		
1.1.3.State the components of the curriculum	10	Refer to SAR: Expectation in 1.1.2 & 1.1.3 is that the curriculum is well balanced structure & appropriate for a PG program
Exhibits/Context to be Observed/Assessed: *In 1.1.3 the evaluator can see the distribution of credits amongst different components. It allows him to decide if the curriculum is balanced*		
1.1.4. Overall quality and level of program curriculum	10	Overall judgement of the experts.
Exhibits/Context to be Observed/Assessed: *The intent of this section is to arrive at a judgment on whether or the program can allow attainment of Program Outcomes. As such it relies heavily on the domain* *expertise of the Evaluator. He alone can decide if the program, as given, is capable of leading to PO attainment. Were the POs actually attained is to be* *determined in a later section.*		

Evaluation Guidelines with indicative exhibits/context to be Observed/Assessed - SAR (PG Engineering)

Note: In case of affiliated institutions, the marks will be awarded as below: (i) Process used to identify extent of compliance of the University curriculum for attaining the Program Outcomes – 10 Marks (ii) Appropriateness of the gaps identified – 5 Marks (iii) Actions taken to bridge the gap – 10 Marks (iv) Overall quality and level of program curriculum – 10 Marks In case program is able to demonstrate the compliance of university curriculum in attaining the program outcomes, then the marks distribution will be as indicated in 1.1.1 to 1.1.4.		
1.2. Teaching-Learning Processes	**90**	
1.2.1. Quality of end semester examination, internal semester Question papers, Assignments and Evaluation	20	A. Process for end semester examination, internal semester question paper setting and evaluation and effective process implementation (3) B. Process to ensure questions from outcomes/learning levels perspective (3) C. Evidence of COs coverage in class test / mid-term tests (7) D. Quality of Assignment and its relevance to COs (7)
Exhibits/Context to be Observed/Assessed: *A. Process of end semester examination, internal semester question paper setting, model answers, evaluation and its compliance* *B. Question paper validation to ensure desired standard from outcome attainment perspective as well as learning levels perspective* *C. Mapping of questions with the Course outcomes* *D. Assignments to promote self-learning, survey of contents from multiple sources, assignment evaluation and feedback to the students, mapping with the COs*		
1.2.2. Quality of student projects	30	A. Very clear and concise objectives (5) B. Very clear methodology, articulated using technical terms indicating all steps and tools(5) C. Cites substantial current and good quality literature (4) D. Clarity in design/setting up of experiment (4)

		E. Benchmarks used / Assumptions made (4) F. Interpretation of results and justification thereof and validity of the results presented (4) G. Overall presentation of the report (4)
Exhibits/Context to be Observed/Assessed: *Self-Explanatory*		
1.2.3. Initiatives related to industry interaction /summer training	10	A. Industry supported laboratories (2) B. Industry involvement in the program design and Curriculum. (1) C. Industry involvement in partial delivery of any regular courses for students (1) D. Impact analysis of industry institute interaction and actions taken thereof (1) E. Industrial training/tours for students (1) F. Industrial /internship /summer training of more than two weeks and post training Assessment (2) G. Impact analysis of industrial training (1) H. Student feedback on initiative
Exhibits/Context to be Observed/Assessed: *A. Type of Industries, Type of Labs, objectives, utilization and effectiveness* *B. & C. Documentary evidence* *C. & D. Analysis and actions taken thereof* *E. & F. Type of Industries, planned or non-planned activity, objectives clearly defined, no. of students participated, relevant area of training, visit report documented* *G.& H. Impact analysis and feedback format, analysis and actions taken (also to be verified during interaction with students)*		
1.2.4. Participation of Industry professionals in curriculum development, as examiners, in major projects	10	
Exhibits/Context to be Observed/Assessed: *Documentary Evidence*		

1.2.5. Quality of laboratory work given	20	Qualitative judgement of the expert.

Exhibits/Context to be Observed/Assessed:
Are the experiments so well structured that these can be done by simply following the given set of instructions?" One may not learn much in that case. Usefulness of laboratory work can be better evaluated by the amount of thought effort a student is required to put in to complete the tasks. In that case learning can happen and POs can be attained.

Total:	**125**	

Criterion 2: Program Outcomes and Course Outcomes (75)

Sub Criteria	Marks	Evaluation Guidelines
2.1. Establish the connect between the courses and the POs	**15**	A. Evidence of COs being defined for every course (3) B. Availability of COs embedded in the syllabi (3) C. Explanation of Course Articulation Matrix table to be ascertained (3) D. Explanation of Program Articulation Matrix tables to be ascertained (6)

Exhibits/Context to be Observed/Assessed:

A. Appropriateness of the statements shall be seen for atleast one course each from 1st and 2nd year ofstudy
B. Mapping to be verified for atleast two matrices
C. & D. Mapping to be verified for atleast one course per year of study; program outcomes getting mapped with the core courses are also to be verified

2.2. Attainment of Program Outcomes	**60**	
2.2.1. Describe the assessment tools and processes used to gather the data upon which the evaluation ofProgram Outcome is based	20	A. List of assessment tools & processes (10) B. The quality/relevance of assessment tools/processes used (10)

Evaluation Guidelines with indicative exhibits/context to be Observed/Assessed - SAR (PG Engineering)

Exhibits/Context to be Observed/Assessed: *A.&B. Direct and indirect assessment tools & processes ; effective compliance; direct assessment methodology, indirect assessment formats- collection- analysis; decision making based on direct and indirect assessment*		
2.2.2.POs attainment levels with observations	40	A. Verification of documents, results and level of attainment of each PO (30) B. Overall levels of attainment (10)
Exhibits/Context to be Observed/Assessed: *A. & B. Appropriate attainment level and documentary evidences; details for POs attainment from core courses to be verified. Also atleast two POs attainment levels shall be verified*		
Total	**75**	

Criterion 3: Students' Performance (75)

Sub Criteria	Marks	Evaluation Guidelines
3.1. Enrolment Ratio through GATE(20)	**20**	A. >= 80% students enrolled through GATE at the First Year Level on average basis during the last three years starting from Current Academic Year. (20) B. >= 60% students enrolled through GATE at the First Year Level on average basis during the last three years starting from Current Academic Year (16) C. >= 50% students enrolled through GATE at the First Year Level on average basis during the last three years starting from Current Academic Year (12) D. >= 40% students enrolled through GATE at the First Year Level on average basis during the last three years starting from Current Academic Year (8) E. >= 20% students enrolled through GATE at the First Year Level on average basis during the last three years starting from Current Academic Year (6) F. < 20% students enrolled through GATE at the First Year Level on average basis during the last three years starting from Current Academic Year (0)

Evaluation Guidelines with indicative exhibits/context to be Observed/Assessed - SAR (PG Engineering)

Exhibits/Context to be Observed/Assessed: *A. B. C. & D. Data to be verified for each of the assessment years*		
3.2. Success Rate in the stipulated period of the program	**20**	S.I. = Number of students completing program in stipulated duration/ Number of students admitted in first year of same batch; Average S.I. = Mean of S.I. for the past 3 batches. Assessment points = 20 × Average S.I.
Exhibits/Context to be Observed/Assessed: *Data to be verified for each of the assessment years*		
3.3. Placement, Higher studies and Entrepreneurship	**20**	Assessment Points = 20 × Average Placement i.e. (P1+P2+P3)/3 Placement Index (P) = [(x + y + z)/N] where, x = Number of students placed in companies or
		Government sector through on/off campus recruitment y = No. of students pursuing Ph.D. / JRF/ SRF z = No. of students turned entrepreneur in engineering/technology N = Total no. of students admitted in first year
Exhibits/Context to be Observed/Assessed:		
Data to be verified for atleast one of the assessment years		
3.4. Professional Activities	**15**	
3.4.1. Students' participation in professional societies/chapters and organizing engineering events	05	A. Availability & activities of professional societies/chapters (3) B. Number, quality of engineering events (organized at institute) (2) (Level - Institute/State/National/International)

Evaluation Guidelines with indicative exhibits/context to be Observed/Assessed - SAR (PG Engineering)

Exhibits/Context to be Observed/Assessed: *Self Explanatory*		
3.4.2. Students' Publications	10	A. Quality & Relevance of the contents and Print Material (3) B. Participation of Students from the program (2) C. List the publications along with the names of the authors and publishers, etc. (5)
Exhibits/Context to be Observed/Assessed: *A. & C. Documentary evidence* *B. Documentary evidence - Students participation (also to be confirmed during interaction with the students)*		
Total:	**75**	

Criterion 4: Faculty Contributions (75)

Sub Criteria	Marks	Evaluation Guidelines
4.1. Student-Faculty Ratio (SFR)	**10**	• Marks to be given proportionally from a maximum of 10 to a minimum of 05 for average SFR between 15:1 to 25:1, and zero for average SFR higher than 25:1. Marks distribution is given as below: ≤ 15 - 10 Marks ≤ 17 - 09 Marks ≤ 19 - 08 Marks ≤ 21 - 07 Marks ≤ 23 - 06 Marks ≤ 25 - 05 Marks >25.0 - 0 Marks

Evaluation Guidelines with indicative exhibits/context to be Observed/Assessed - SAR (PG Engineering)

Exhibits/Context to be Observed/Assessed:
 	
• *No. of Regular faculty will be calculated as per the definition given below:*
• *All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Faculty Student Ratio. However, following will be ensured in case of contractual faculty:*
  1. *Shall have the AICTE prescribed qualifications and experience.*
  2. *Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.*
  3. *Should have gone through an appropriate process of selection and the records of the same shall be made available to the visiting team during NBA visit*
• *Faculty to be calculated Department wise as per the format given in SAR; Faculty appointment letters, time table, subject allocation file, salary statements and random interaction in person.*
• *No. of students calculation as mentioned in the SAR (please refer table under criterion 3.1)*
• *Faculty Qualification as per AICTE guidelines shall only be counted*		

4.2. Faculty competencies in the area of Program specialization	**30**	
4.2.1. Faculty competency in the domain area.	10	
Exhibits/Context to be Observed/Assessed: Strength of Co-relation of the specialization of faculty with program specialization		
4.2.2. Faculty Research Publication	10	
Exhibits/Context to be Observed/Assessed: Strength of Co-relation of the specialization of faculty with program specialization		
4.2.3. Faculty Development work	10	

Evaluation Guidelines with indicative exhibits/context to be Observed/Assessed - SAR (PG Engineering)

Exhibits/Context to be Observed/Assessed: *Details such as program title, description, duration, resource person, type of training, training methodology, participants, etc.) Separate details for the programs organized and the programs participated outside the institution*		
4.3. Faculty as participants in Faculty development /training activities /STTPs	**5**	
Exhibits/Context to be Observed/Assessed: *Relevance of the training/development program. No of days; No. of faculty*		
4.4. Research and Development	**30**	
4.4.1. Sponsored Research	15	Funded research from outside; Cumulative for CAYm1,CAYm2 and CAYm3 Amount >50Lacs 15 Marks, Amount >40 and <50Lacs 10 Marks, Amount >30 and <40Lacs 5 Marks, Amount>15and <30Lacs 2 Marks, Amount< 15 Lacs 0 Mark
Exhibits/Context to be Observed/Assessed: • *Documentary evidence; Funding agency, Amount, Duration, Research progress; Outcome*		

4.4.2. Consultancy (From Industry)	15	Consultancy; Cumulative for CAYm1,CAYm2 and CAYm3 Amount >10 Lacs 15 Marks, Amount <10 and > 8 Lacs 10 Marks, Amount < 8 and >6 Lacs 8 Marks, Amount < 6 and >4 Lacs 5 Marks, Amount < 4 and >2 Lacs 2 Marks, Amount <2 Lacs 0 Mark
Exhibits/Context to be Observed/Assessed: • *Documentary evidence; Funding agency, Amount, Duration, Research progress; Outcome*		
Total:	**75**	

Criterion 5: Laboratories and Research Facilities (75)

Sub Criteria	Marks	Evaluation Guidelines
5.1.Adequate and well equipped laboratories in area of Program specialization	**30**	A. Adequate well-equipped laboratories to run all the program-specific curriculum (20) B. Availability of adequate and qualified technical supporting staff (10)
Exhibits/Context to be Observed/Assessed: A. *Adequacy; well-equipped laboratories; utilization* B. *Self explanatory*		
5.2.Research facilities / center of excellence	**30**	
Exhibits/Context to be Observed/Assessed: *Self-explanatory*		

5.3.Access to laboratory facilities, training in the use of equipment	15	

Exhibits/Context to be Observed/Assessed:

Self explanatory

Total:	**75**	

Criterion 6: Continuous Improvement (75)

Sub Criteria	Marks	Evaluation Guidelines
6.1. Actions taken based on the results of evaluation of each of the POs	**25**	A. Documentary evidences of POs attainment levels (10) B. Identification of gaps/shortfalls (05) C. Plan of action to bridge the gap and its Implementation (10)

Exhibits/Context to be Observed/Assessed:

Documentary evidence in respect of each of the POs

6.2. Improvement in Quality of Projects	**10**	

Exhibits/Context to be Observed/Assessed:

Self-Explanatory

6.3. Improvement in Placement, Higher Studies and Entrepreneurship	**10**	Assessment is based on improvement in: (Refer placement index 3.3) A. Improvement in Placement numbers, quality, core hiring industry and pay packages (5) B. Improvement in Higher Studies admissions for pursuing PhD. in premier institutions(3) C. Improvement in number of Entrepreneurs (2) (Marks to be given proportionately considering nos. in the base year CAY$m2$)

Evaluation Guidelines with indicative exhibits/context to be Observed/Assessed - SAR (PG Engineering)

Exhibits/Context to be Observed/Assessed: *A. B. & C. Nos. in each year of the assessment; improvement considering CAYm2 as a base year*		
6.4. Improvement in the quality of students admitted to the program	**10**	A. Assessment is based on improvement in terms of ranks/score in GATE examination
Exhibits/Context to be Observed/Assessed:		
A. Documentary evidence – list of students admitted; admission authority guidelines; ranks/scores; comparative status considering CAYm2 as a base year		
6.5. Improvement in quality of paper publication	**10**	
Exhibits/Context to be Observed/Assessed:		
6.6. Improvement in laboratories	**10**	
Exhibits/Context to be Observed/Assessed:		
Total:	**75**	