

**PART A**

**Evaluator's Visit Report**

**Undergraduate Engineering Program**

**Tier-II**

**Name of the Institution**

NADIMPALLI SATYANARAYANA RAJU INSTITUTE OF TECHNOLOGY  
VISAKHA PATNAM - 531173

**Name of the Program**

UG - COMPUTER SCIENCE & ENGINEERING

**Visit Dates**

06th - 08th MAY, 2022

**NATIONAL BOARD OF ACCREDITATION**

NBCC Place, East Tower, 4th Floor, Bhisham Pitamah Marg,  
Pragati Vihar, New Delhi 110003

Tel: +91 112430620-22; 01124360654; www.nbaind.org

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## Program Evaluator Summary

### Overview

The Expert team of National Board of Accreditation (NBA) conducted a three day accreditation visit from 06th to 08th May, 2022 at Madampalli Satyanarayana to evaluate UG Engineering program Computer Science & Engineering

Pre visit meeting of the expert tea was held on at 05-05-2022 at the hotel to exchange the respective findings with the evaluation team members, based on review of Self-Assessment Report (SAR) and the pre-visit evaluation reports.

During the visit, the visiting team met with Head of the Institution/<sup>Director</sup>Dean DR. J. RAJA MURUGADOSS. The briefing on the institution was given by Dr. J. Raja Murugadoss and on the program was given by the Director, NSRIT. The respective program evaluators also visited the various facilities of the program. Apart from comprehensive review of documental evidences pertaining to various accreditation criteria, the visiting team also held meeting and discussions with the following stakeholders (kindly tick).

Faculty	<input checked="" type="checkbox"/>	Alumni	<input type="checkbox"/>
Employers	<input type="checkbox"/>	Parents	<input checked="" type="checkbox"/>
Staff members	<input checked="" type="checkbox"/>	Students	<input checked="" type="checkbox"/>

The Program Evaluation Team found that (general findings about the program to be mentioned)

- Students projects are interesting and are good in quality
- PSOs are not correctly mapped from PO's
- Success-rate without backlog is poor



Date



### Program Details

Name of the Program: <u>Computer Science &amp; Engineering</u>					
Year of Commencement		<u>2008</u>			
Student	Year	Sanctioned Intake	Actual Admitted (without Lateral Entry)		
	CAY (20 <u>20</u> - 20 <u>21</u> )	120	120		
	CAY m1 (20 <u>19</u> - 20 <u>20</u> )	120	108		
	CAY m2 (20 <u>18</u> - 20 <u>19</u> )	120	106		
	Total Students in the Programme 1 <sup>st</sup> to Final Year	<u>498</u> <del>431</del> <u>8</u>			
Average of CAY, CAYm1 and CAYm2		<u>8</u> <del>102</del> $(415+364+299)/3 = 359$			
Faculty (Attach a Copy of faculty list compared with Time Table)	Regular		CAY	CAYm1	CAYm2
		Professor	1	2	2
		Associate professor	2	2	2
		Assistant professor	15	15	14
	Contractual	Professor	—	—	—
		Associate professor	—	—	—
		Assistant professor	—	—	—
	No. of Ph.D. available in the dept.		3	4	4
	Student - Faculty ratio (average of CAY, CAYm1 and CAYm2 (Refer criteria-5.1))		<u>8</u> <del>20.47</del> <u>20.47</u>		
	* Previous accreditation( if any)	First accreditation	No. of years accredited for	—	
With effect from					
Previous accreditation		No. of years accredited for	—		
		With effect from			

CAY: Current Academic Year

CAYm1: Current Academic Year minus 1= Current Assessment year

CAYm2: Current Academic Year minus 2= Current Assessment year minus 1

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**Note: Consideration of Contractual Faculty means:**

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

1. Shall have the AICTE prescribed qualifications and experience.
2. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.
3. Should have gone through an appropriate process of selection and the records of the same shall be made available to the visiting team during NBA visit

\* Not accredited during NBA visit from 27/09/2019 to 29/09/2019

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- *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*

**Explicit observations about the program**  
(Please use additional sheets if necessary to elaborate)

Program title Computer Science & Engineering

**Strengths:**

1. Students enrollment ratio is good
2. Faculty cadre proportion is satisfactory
3. Good infrastructure in terms of adequate number of class-rooms and Labs, seminars as per approved intake
4. Industry institute interaction is good, students are doing internships
5. Quality of student project is good

**Weakness/Areas of improvement:**

1. Success rate without backlog is poor
2. Students opting for higher studies and entrepreneurship is missing
3. Faculty retention is poor and it needs attention
4. ~~No sponsored research and consultancy from industry is conducted~~ <sup>institute</sup> mapping of COs with POs is not appropriate B
5. Content beyond syllabus is not mapped with PO

Sharma

Latet

Dasgupta

**Deficiencies:**

1. No sponsored research and consultancy from industry is available
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

**Other Observations, if any:**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

*Sharma*

*Labhi*

*Prakash*

## **Information for Evaluation**

### **Award of Accreditation (TIER II (UG))**

1. **Accreditation for Six years will be accorded to a program on fulfilment of the following requirements:**
  - i. Program should score a minimum of 750 points in aggregate out of 1000 points with minimum score of 60 per cent in mandatory fields (i.e. criteria 4 to 6)
  - ii. Number of available Ph.D. in the department should be greater than or equal to 30 per cent of the required number of faculty, averaged over two academic years i.e. Current Academic Year (CAY) and Current Academic Year Minus One (CAYM1).
  - iii. The admissions in the UG program under consideration should be more than or equal to 50 per cent, averaged over three academic years (including lateral entry), i.e., Current Academic Year minus One (CAYm1), Current Academic Year minus Two (CAYm2) and Current Academic Year minus Three (CAYM3).
  - iv. Faculty Student Ratio in the department should be less than or equal to 1:20, averaged over three academic years i.e. Current Academic Year (CAY), Current Academic Year Minus One (CAYM1) and Current Academic Year Minus Two (CAYM2).
  - v. At least 2 Professors or 1 Professor and 1 Associate Professor on regular basis with Ph.D. degree should be available in the respective department for two academic years i.e. Current Academic Year (CAY) and Current Academic Year Minus One (CAYM1).
  - vi. HOD of the program under consideration possesses Ph.D. degree in the Current Academic Year (CAY).
  
2. **Accreditation for Three years will be accorded to a program on fulfilment of the following requirements:**
  - i. Program should score a minimum of 600 points with atleast 40 per cent marks in Criterion V (Faculty Information and Contributions).
  - ii. The admissions in the UG program under consideration should be more than or equal to 50 per cent, averaged over three academic years (including lateral entry), i.e., Current Academic Year minus One (CAYm1), Current Academic Year minus Two (CAYm2) and Current Academic Year minus Three (CAYM3).
  - iii. At least one Professor or one Associate Professor on regular basis with Ph.D. degree is available in the respective department for two academic years i.e. Current Academic Year (CAY) and Current Academic Year Minus One (CAYM1).
  - iv. The faculty student ratio in the department under consideration should be less than or equal to 1:25, averaged over three academic years i.e. Current Academic Year

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(CAY), Current Academic Year Minus One (CAYM1) and Current Academic Year Minus Two (CAYM2).

- v. Number of Ph.D. available in the department should be greater than or equal to 10 per cent of the required number of faculty, averaged over two academic years i.e. Current Academic Year (CAY) and Current Academic Year Minus One (CAYM1).

**No Accreditation of the program**

If the program fails to meet the criteria for award of accreditation for three years, it is awarded "Not Accredited" Status

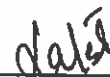


**Department/Programme Specific Criteria:**

S.no.	Criteria	Max. Marks	Marks Awarded	Remarks
1.	Vision, Mission and Program Educational Objectives	60	41	
2.	Program Curriculum and Teaching-Learning Processes	120	88	
3.	Course Outcomes and Program Outcomes	120	78	
4.	Students' Performance	150	92	
5.	Faculty Information and Contributions	200	108	
6.	Facilities and Technical Support	80	57	
7.	Continuous Improvement	50	28	
TOTAL		780	492	



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(Program Evaluator 1)



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Signature  
(Program Evaluator 2)



**Declaration of Conformity with evaluator's report by the Team Chair**

I agree with the observations of the program evaluators on each criterion.



Or

I agree with most of the observations of the program evaluators. However, I have following comments to make on certain criteria:

Criteria	Comments

*D. D. Mack*  
8-5-22

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Signature  
(Chairperson)

## Part B-Program Assessment Worksheet

### Program Level Criteria - To be Assessed by Evaluator


Name of the Institution Nadimpalli Satyanarayana Raju Institute of Technology, Visakhapatnam  
 Name of the Program Computer Science and Engineering

S.No.	Sub Criteria	Max. Marks	Evaluation Guidelines (Marks)	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/Reasons)
				Marks	Total		
<b>Criterion 1: Vision, Mission and Program Educational Objectives (60)</b>							
1.1.	State the Vision and Mission of the Department and Institute	5	A. Availability of statements of the Departments (1) B. Appropriateness/Relevance of the Statements (2) C. Consistency of the Department statements with the Institute statements (2)	1 1 1	3	Overall Marks for 1.1 3	<del>PEO</del> Vision, Mission & Statements of the Institute and the department are defined
1.2.	State the Program Educational Objectives (PEOs)	5	Program Educational Objectives (3 to 5) (5) Appropriateness	3	3	Overall Marks for 1.2 3	Appropriate
1.3.	Indicate where and how the Vision, Mission and PEOs are published and disseminated among stakeholders	10	A. Adequacy in respect of publication & dissemination (2) B. Process of dissemination among stakeholders (2) C. Extent of awareness of Vision, Mission & PEOs among the stakeholder (6)	2 2 4	8	Overall Marks for 1.3 8	Disseminated among the stakeholders
1.4.	State the process for defining the Vision and Mission of the Department, and PEOs of the program	25	A. Description of process for defining the Vision, Mission of the Department (10) B. Description of process for defining the PEOs of the program (15)	8 12	20	Overall Marks for 1.4 20	Process for defining Vision, Mission exist
1.5.	Establish consistency of PEOs with Mission of the Department	15	A. Preparation of a matrix of PEOs and elements of Mission statement (5) B. Consistency/justification of co-relation parameters of the above matrix (10)	2 5	7	Overall Marks for 1.5 7	PEO, mission mapping is not appropriate
<b>Total of Criterion 1:</b>				<b>Overall Marks for Criterion 1:</b>		<b>41</b>	

41



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Criterion 2: Program Curriculum and Teaching – Learning Processes (120)

S.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total		
2.1.	Program Curriculum	20					
	State the process used to identify extent of compliance of the University curriculum for attaining the Program Outcomes (POs) & Program Specific Outcomes (PSOs), mention the identified curricular gaps, if any	10	A. Process used to identify extent of compliance of University curriculum for attaining POs & PSOs (6) B. List the curricular gaps for the attainment of defined POs & PSOs (4)	5 3	8	Overall Marks for 2.1 13	Available
2.1.1.			A. Steps taken to get identified gaps included in the curriculum. (letter to university/BOS) (2) B. Delivery details of content beyond syllabus (5)	2 3	5		mapping of contents beyond syllabus & with PO, PSOs & absent.
2.1.2.	State the delivery details of the content beyond the syllabus for the attainment of POs & PSOs	10	C. Mapping of content beyond syllabus with the POs & PSOs (3)	0			
2.2.	Teaching-Learning Processes	100					
			A. Adherence to Academic Calendar (3) B. Use of various instructional methods and pedagogical initiatives (3) C. Methodologies to support weak students and encourage bright students (4) D. Quality of classroom teaching (Observation in a Class) (3) E. Conduct of experiments (Observation in Lab) (3) F. Continuous Assessment in the laboratory (3) G. Student feedback on teaching learning process and actions taken (6)	3 2 3 2 2 2 5	19	Overall Marks for 2.2	Teaching, Learning process is satisfactory
2.2.1	Describe the Process followed to improve quality of Teaching Learning	25					
			A. Process for internal semester question paper setting, evaluation and effective process implementation (5) B. Process to ensure questions from outcomes/learning levels perspective (5) C. Evidence of COs coverage in class test / mid-term tests (5) D. Quality of Assignment and its relevance to COs (5)	4 4 4 3	15		Satisfactory
2.2.2	Quality of internal semester Question papers, assignments and Evaluation	20					

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2.2.3.	Quality of student projects	25	<p>A. Identification of projects and allocation methodology to Faculty (3)</p> <p>B. Types and relevance of the projects and their contribution towards attainment of POs and PSOs(5)</p> <p>C. Process for monitoring and evaluation (5)</p> <p>D. Process to assess individual and team performance(5)</p> <p>E. Quality of completed projects/working prototypes (5)</p> <p>F. Evidences of papers published /Awards received by projects etc. (2)</p>	3 4 4 4 4 1	20	75	Quality is good	
2.2.4.	Initiatives related to industry interaction	15	<p>A. Industry supported laboratories (5)</p> <p>B. Industry involvement in the program design and partial delivery of any regular courses for students (5)</p> <p>C. Impact analysis of industry institute interaction and actions taken thereof (5)</p>	3 4 3	10		Satisfactory	
2.2.5.	Initiatives related to industry internship/summer training	15	<p>A. Industrial training/tours for students (3)</p> <p>B. Industrial /internship /summer training of more than two weeks and post training Assessment (4)</p> <p>C. Impact analysis of industrial training (4)</p> <p>D. Student feedback on initiative (4)</p>	2 3 3 3	11		Satisfactory	
Total of Criterion 2:		120		Overall Marks for Criterion 2:			88	

88

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Criterion 3: Course Outcomes and Program Outcomes (120)

S.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total		
3.1.	Establish the correlation between the courses and the POs & PSOs	20					
3.1.1.	Course Outcomes	5	Evidence of COs being defined for every course (5)	5	5	Overall Marks for 3.1 120	Co-PO mapping is not appropriate
3.1.2.	CO-PO/PSOs matrices of courses selected in 3.1.1 (six matrices)	5	Explanation of table to be ascertained (5)	2	2		
3.1.3.	Program level Course-PO/PSOs matrix of ALL courses including first year courses	10	Explanation of tables to be ascertained (10)	5	5		
3.2.	Attainment of Course Outcomes	50				Overall Marks for 3.2 36	Indirect assessment methods are rarely used for CO's  Satisfactory
3.2.1.	Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based	10	A. List of assessment processes (2)	2	6		
3.2.2.	Record the attainment of Course Outcomes of all courses with respect to set attainment levels	40	B. The quality/relevance of assessment processes & tools used (8)  Verify the attainment levels as per the benchmark set for all courses (40)	4	30		
3.3.	Attainment of Program Outcomes and Program Specific Outcomes	50				Overall Marks for 3.3 30	Satisfactory  PO's are not properly mapped to PSOs, so PSOs are not correctly evaluated
3.3.1.	Describe assessment tools and processes used for assessing the attainment of each of the POs & PSOs	10	A. List of assessment tools & processes (5)	3	6		
3.3.2.	Provide results of evaluation of each PO & PSO	40	B. The quality/relevance of assessment tools/processes used (5)  A. Verification of documents, results and level of attainment of each PO/PSO (24) B. Overall levels of attainment (16)	3	24		
Total of Criterion 3:						78	78

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Criterion 4: Students' Performance (150)						
S.No.	Sub Criteria	Max. Marks	Evaluation Guidelines			
				Marks Awarded	Overall Marks	Observations of Evaluators (Provide Justifications/ Reasons)
		Marks	Total			
4.1.	Enrolment Ratio (20)	20	A. >= 90% students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year (20)	20	20	Enrolment. CAY 1: 120 ⇒ 100% CAY 1: 108 ⇒ 90% CAY 2: 106 ⇒ 88.33% Average = 92.78%
			B. >= 80% students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year (18)			
			C. >= 70% students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year (16)			
			D. >= 60% students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year (14)			
			E. >= 50% students enrolled at the First Year Level on average basis during the previous three academic years starting from current academic year (12)			
			F. Otherwise '0'.			
4.2.	Success Rate in the stipulated period of the program	40				
4.2.1.	Success rate without backlogs in any Semester/year of study Without Backlog means no compartment or failures in any semester/year of study	25	SI = (Number of students who graduated from the program without backlog)/(Number of students admitted in the first year of that batch and actually admitted in 2nd year via lateral entry and separate division, if applicable) Average SI = Mean of success index (SI) for past three batches Success rate without backlogs in any year of study = 25 × Average SI	07	07	SI for 2016-17: 5/78 = 0.06 2015-16: 13/50 = 0.26 2014-15: 13/27 = 0.48 Average SI = 25(0.06+0.26+0.48)/3 = 6.75
			Success rate in stipulated period (actual duration of the program) [Total of with backlog + without backlog]	07	07	SI for 2016-17: 26/78 = 0.33 Mention Numbers 2015-16: 22/50 = 0.44 2014-15: 17/27 = 0.63 Success Rate = 15 × (0.33+0.44+0.63)/3 = 7
4.2.2.	Success rate in stipulated period (actual duration of the program) [Total of with backlog + without backlog]	15	Academic Performance = 1.5 × Average API (Academic Performance Index)	10	10	API for 2017-18: 7.48(63/64) = 7.36 2016-17: 7.5(72/75) = 7.2 Mention Numbers 2015-16: 6.5(47/48) = 6.28 Academic Performance = 1.5(7.36+7.2+6.28)/3 = 10.4
4.3.	Academic Performance in Third Year	15	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 Third Year/10)) × (successful students/number of students appeared in the examination) Successful students are those who are permitted to proceed to the final year			

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API for

4.4.	Academic Performance in Second Year	15	Academic Performance Level = $1.5 \times \text{Average API (Academic Performance Index)}$ API = $(\text{Mean of 2nd Year Grade Point Average of all successful Students on a 10 point scale})$ or $(\text{Mean of the percentage of marks of all successful student sin Second Year}/10) \times (\text{successful students}/\text{number of students appeared in the examination})$	10	10	10	Overall Mark for 4.4	10	2018-19: $6.94(115/117) = 6.82$ 2017-18: $6.93(64/64) = 6.93$ 2016-17: $6.73(75/75) = 6.73$ Academic performance = $1.5(6.82 + 6.93 + 6.73)/3 = 10.24$ Final Year Students = $72 + 47 + 23 = 142 = N$ $X = (28, 22, 17)$ , $Y = (0.9, 0) = Z$ for $(2016-17, 2015-16, 2014-15)$ along with the calculation Average placement = $0.53$ Assessment = $40 \times 0.53 = 21.33$
4.5.	Placement, Higher studies and Entrepreneurship	40	Assessment Points = $40 \times \text{average of three years of } [(x + y + z)/N]$ where, x = Number of students placed in companies or Government sector through on/off campus recruitment, y = Number of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National level tests, GRE, GMAT etc.), z = No. of students turned entrepreneur in engineering/technology	21	21	21	Overall Marks for 4.5	21	
4.6.	Professional Activities	20	N = Total number of final year students						
4.6.1.	Professional societies/chapters and organizing engineering events	5	A. Availability & activities of professional societies/chapters (3) B. Number, quality of engineering events (organized at institute, Level- Institute/State/National/International) (2)	3	2	5		Satisfactory	
4.6.2.	Publication of technical magazines, newsletters, etc.	5	A. Quality & Relevance of the contents and Print Material (3) B. Participation of Students from the program (2) A. Events within the state (2) B. Events outside the state (3) C. Prizes/awards received in such events (5)	3	1	4	Overall Marks for 4.6	17	
4.6.3.	Participation in inter-institute events by students of the program of study (at other institutions)	10		2	2	8		Satisfactory	
Total of Criterion 4:		150		Overall Marks for Criterion 4:			99	99	

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Criterion 5: Faculty Information and Contributions (200)

S.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total		
5.1.	Student-Faculty Ratio (SFR)	20	<p>Marks to be given proportionally from a maximum of 20 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:</p> <p>&lt;= 15 - 20 Marks                      &lt;= 17 - 18 Marks                      &lt;= 19 - 16 Marks                      &lt;= 21 - 14 Marks                      &lt;= 23 - 12 Marks                      &lt;= 25 - 10 Marks                      &gt; 25 - 0 Marks</p> <p>Note: All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Faculty Student Ratio. However, following will be ensured in case of contractual faculty:</p> <ol style="list-style-type: none"> <li>1. Shall have the AICTE prescribed qualifications and experience.</li> <li>2. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.</li> <li>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</li> </ol>	14	14	5.1 14	<p>Total students (&amp; teachers)                      CAY : 392 (18)                      CAYm1 : 389 (19)                      CAYm2 : 381 (18)  <math>SFR1 = \frac{392}{18} = 21.78</math>  <math>SFR2 = \frac{389}{19} = 20.47</math>  <math>SFR3 = \frac{381}{18} = 21.17</math>                      SFR = 20.47                      (21.14) To be weighted</p>
5.2.	Faculty Cadre Proportion	25	<p>Cadre Proportion Marks =</p> $\left[ \frac{AF1}{RF1} + \frac{AF2}{RF2} + \frac{AF3}{RF3} \right] \times 12.5$ <ul style="list-style-type: none"> <li>• If AF1 = AF2 = 0 then zero marks</li> <li>• Maximum marks to be limited if it exceeds 25 (Refer calculation in SAR)</li> </ul>	20	20	5.2 20	<p>RF1 = 2, RF2 = 4  <math>RF3 = (13+13+12)/3 = 12.67</math>                      Mention numbers  <math>AF1 = 14.67, AF2 = 2, AF3 = 14.67</math>  <math>Marks = 12.5 \left( \frac{14.67}{2} + \frac{2}{4} + \frac{14.67}{12.67} \right) = 19.9</math></p>
5.3.	Faculty Qualification	25	<p><math>FQ = 2.5 \times [(C \times X + Y) / F]</math> where,                      X is no. of faculty with Ph.D., Y is no. of faculty with M.Tech, F is no. of faculty required to comply 1:20 Faculty Student ratio (no. of faculty and no. of students required to be calculated as per 5.1)</p>	13	13	5.3 13	<p><math>X = (3+4+4)/3 = 3.67</math>                      Mention numbers  <math>Y = (15+16+14)/3 = 15,</math>  <math>F = 2.5 \times (96.7/19) = 12.72</math></p>
5.4	Faculty Retention	25	<p>A. ≥ 90% of required Faculties retained during the period of assessment keeping CAYm2 as base year (25)                      B. ≥ 75% of required Faculties retained during the period of assessment keeping CAYm2 as base year (20)                      C. ≥ 60% of required Faculties retained during the period of assessment keeping CAYm2 as base year (15)</p>	10	10	5.4 10	<p>Faculty retained = 10 (in CAY to CAYm2)                      Required faculty = (2+4+12.67) = 18.67                      Retention = 53.56</p>

Signature (Program Evaluator 1):

Signature (Program Evaluator 2):



5.5.	Innovations by the Faculty in Teaching and Learning	20	<p>A. The work must be made available on Institute Website (4)</p> <p>B. The work must be available for peer review and critique (4)</p> <p>C. The work must be reproducible and developed further by other scholars (2)</p> <p>D. Statement of clear goals, use of appropriate methods, significance of results, effective presentation and reflective critique (10)</p> <p>For each year: Assessment = 3xSum/0.5RF Average assessment over last three years starting from CAYm1 (Marks limited to 15)</p>	3 1 1 5 8	10	10 Overall Marks for 5.5	with is not available for review and critique
5.6	Faculty as participants in Faculty development /training activities /STTPs	15		8	8	Overall Marks for 5.6	Sum = 22 Mention numbers RF = 19
5.7.	Research and Development	30					
5.7.1.	Academic Research	10	<p>A. Number of quality publications in refereed/SCI Journals, citations, Books/Book Chapters etc. (6)</p> <p>B. PhD guided /PhD awarded during the assessment period while working in the institute (4)</p> <p>Funded research from outside; Cumulative CAYm1, CAYm2 and CAYm3: Amount &gt; 20 Lakh - 5 Marks Amount &gt;= 16 Lakh and &lt;= 20 Lakh - 4 Marks Amount &gt;= 12 Lakh and &lt; 16 Lakh - 3 Marks Amount &gt;= 8 Lakh and &lt; 12 Lakh - 2 Marks Amount &gt;= 4 Lakh and &lt; 8 Lakh - 1 Mark Amount &lt; 4 Lakh - 0 Mark</p>	4 2	06		The number and quality of publications needs improvement
5.7.2	Sponsored Research	5		0	0	11 Overall Marks for 5.7	No funded research mentioned
5.7.3	Development Activities	10	<p>A. Product Development</p> <p>B. Research laboratories</p> <p>C. Instructional materials</p> <p>D. Working models/charts/monograms etc.</p> <p>Consultancy; Cumulative CAYm1, CAYm2 and CAYm3: Amount &gt; 10 Lakh - 5 Marks Amount &gt;= 8 Lakh and &lt;= 10 Lakh - 4 Marks Amount &gt;= 6 Lakh and &lt; 8 Lakh - 3 Marks Amount &gt;= 4 Lakh and &lt; 6 Lakh - 2 Marks Amount &gt;= 2 Lakh and &lt; 4 Lakh - 1 Mark Amount &lt; 2 Lakh - 0 Mark</p>	5	5		Few products developed with the help of students noticed
5.7.4.	Consultancy (From industry)	5		0	0		No consultancy reported
5.8.	Faculty Performance Appraisal and Development System (FPADS)	30	<p>A. A well defined performance appraisal and development system instituted for all the assessment years (10)</p> <p>B. Its implementation and effectiveness (20)</p>	6 12	18	Overall Marks for 5.8	Improvement of FPADS is necessary
5.9.	Visiting/Adjunct/Emeritus Faculty etc.	10	<p>Provision of Visiting /Adjunct/Emeritus faculty etc.(1)</p> <p>Minimum 50 hours per year interaction per year to obtain three marks : 3 x 3 = 9</p>	1 3	4	Overall Marks for 5.9	One visiting faculty exists
Total of Criterion 5:		200		Overall Marks for Criterion 5:		108	

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Criterion 6: Facilities and Technical Support (80)				Evaluation Guidelines	Overall Marks	Observations of Evaluators (Provide Justifications/ Reasons)
S.No.	Sub Criteria	Max. Marks	Marks Awarded			
6.1.	Adequate and well equipped laboratories, and technical manpower	30	15	A. Adequate well-equipped laboratories to run all the program-specific curriculum (20) B. Availability of adequate technical supporting staff (5) C. Availability of qualified technical supporting staff (5)	Overall Marks for 6.1	Adequate
6.2.	Additional Facilities created for improving the quality of learning experience in Laboratories	25	3	A. Availability and relevance of additional facilities(10) B. Facilities utilization and effectiveness (10) C. Relevance to POs and PSOs (5)	Overall Marks for 6.2	Adequate
6.3.	Laboratories: Maintenance and overall ambience	10	8	Maintenance and overall ambience (10 )	Overall Marks for 6.3	Adequate
6.4.	Project laboratory	5	4	Facilities & Utilization (5)	Overall Marks for 6.4	Adequate
6.5.	Safety measures in laboratories	10	7	Safety measures in laboratories (10)	Overall Marks for 6.5	Adequate
Total of Criterion 6:				Marks for Criterion 6:	57	

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Criterion 7: Continuous Improvement (50)						
S.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total	
7.1.	Actions taken based on the results of evaluation of each of the POs and PSOs	20	A. Documentation of POs and PSOs attainment levels (5) B. Identification of gaps/shortfalls (5) C. Plan of action to bridge the gap and its implementation (10)	3 3 7	13	Satisfactory
7.2.	Academic Audit and actions taken during the period of Assessment	10	Assessment shall be based on conduct and actions taken in relation to continuous improvement (10)	7	7	Satisfactory
7.3.	Improvement in Placement, Higher Studies and Entrepreneurship	10	A. Improvement in Placements numbers, quality, core hiring industry and pay packages (5) B. Improvement in Higher Studies admissions (3) C. Improvement in number of Entrepreneurs (2)	3 0 0	3	Satisfactory
7.4.	Improvement in the quality of students admitted to the program	10	Assessment is based on improvement in terms of ranks/score in qualifying state level/national level entrance tests, percentage Physics, Chemistry and Mathematics marks in 12th Standard and percentage marks of the lateral entry students	5	5	Quality of students admitted is poor
Total of Criterion 7:					28	28

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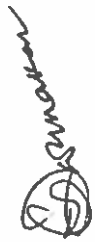
## Part B-Program Assessment Worksheet Institute Level Criteria to be Assessed by Chairman

Name of the Institution Nadimpalli Satyanarayana Raju Institute of Technology, Sontyem, Vashapatnam-531173, Andhra Pradesh.  
Name of the Program UG - Combustion Science & Engineering

S.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total		
8.1.	First Year Student- Faculty Ratio (FYSFR)	5	For each year of assessment = $(5 \times 20) / \text{FYSFR}$ (Limited to Max. 5) Average of previous three academic years including Current Academic Year. *Note: If FYSFR is greater than 25, then assessment equal to zero.	5	5	5 Overall Marks for 8.1 Mention Numbers	5 Mention Numbers
8.2.	Qualification of Faculty Teaching First Year Common Courses	5	A. Assessment of faculty qualification $(5x + 3y) / \text{RF}$ B. Average of Assessment of last three years including current academic year (Refer 8.2. for x, y and RF)	2	2	Overall Marks for 8.2	2 Mention Numbers
8.3.	First Year Academic Performance	10	Academic Performance = $(\text{Mean of 1st Year Grade Point Average of all successful Students on a 10 point scale})$ or $(\text{Mean of the percentage of marks in First Year of all successful students}/10) \times (\text{successful students}/\text{number of students appeared in the examination})$ Successful students are those who are permitted to proceed to the Second year	7	7	7 Overall Marks for 8.3	7 Mention Numbers
8.4.	Attainment of Course Outcomes of first year courses	10					
8.4.1.	Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is based	5	A. List of assessment processes (1) B. The relevance of assessment tools used (4)	1 3	4	7 Overall Marks for 8.4	Evaluation of COs may be corrected for getting better results. Process is available.
8.4.2.	Record the attainment of Course Outcomes of all first year courses	5	Verify the records as per the benchmark set for the courses (5)	3	3		
8.5.	Attainment of Program Outcomes of all first year courses	20					
8.5.1.	Indicate results of evaluation of each relevant PO/PSO	15	A. Process of computing POs/PSOs attainment level from the COs of related first year courses (5) B. Verification of documents validating the above process (10)	3 7	10	13 Overall Marks for 8.5	Process for POs /PSO attainment exist. Validating the above exists. Proper actions are not taken.
8.5.2.	Actions taken based on the results of evaluation of relevant POS /PSOs	5	Appropriate actions taken (5)	3	3		
Signature of the Chairman				Overall Marks for Criterion 8:		34	

## Criterion 9: Student Support Systems (50)

S.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total		
9.1.	Mentoring system to help at individual level	5	Details of the mentoring system that has been developed for the students for various purposes and also state the efficacy of such system (5)	3	3	Overall Marks for 9.1	Mentoring system needs improvement.
9.2.	Feedback analysis and reward /corrective measures taken, if any	10	A. Methodology being followed for analysis of feedback and its effectiveness (5) B. Record of corrective measures taken (5)	3	6	Overall Marks for 9.2	Methodology for getting feedback is poor, record of corrective measures exists.
				3	3	Overall Marks for 9.3	No effective corrective measures taken.
9.4.	Self Learning	5	A. Scope for self-learning (2) B. Self Learning facilities, materials for learning beyond syllabus, Webinars, Podcast, MOOCs etc. and demonstrate its effective utilization (3)	1	3	Overall Marks for 9.4	Self learning processes are to be improved.
				2	2	Overall Marks for 9.5	More efforts required for the improvement in placement of the students. Counseling for higher studies not effective.
9.5.	Career Guidance, Training, Placement	10	A. Availability of career guidance facilities (2) B. Counseling for higher studies (GATE/GRE, GMAT, etc.) (2) C. Pre-placement training (3) D. Placement process and support (3)	2	7	Overall Marks for 9.6	Very poor. Number of students benefitted is very less.
				1			
				2			
				2			
9.6.	Entrepreneurship Cell	5	A. Entrepreneurship Initiatives (1) B. Data on students benefitted (4)	1	3	Overall Marks for 9.7	NCC unit is non-existent. Co-curricular activities need further improvement.
				2	2		
9.7.	Co-curricular and Extra-curricular Activities	10	A. Availability of sports and cultural facilities (3) B. NCC, NSS and other clubs (3) C. Annual students activities (4)	2	6	Overall Marks for 9.7	
Total of Criterion 9:				Overall Marks for Criterion 9:		50	3



## Criterion 10: Governance, Institutional Support and Financial Resources (120)

S.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Overall Marks	Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total		
10.1.	Organization, Governance and Transparency	40					
10.1.1.	State the Vision and Mission of the Institute	5	A. Availability of the Vision & Mission statements of the Institute (2) B. Appropriateness/Relevance of the Statements (3)	2	4		Available, and to some extent appropriate.
10.1.2.	Governing body, administrative setup, functions of various bodies, service rules procedures, recruitment and promotional policies	10	A. Governing Body Composition, senate, and all other academic and administrative bodies; their memberships, functions, and responsibilities; frequency of the meetings; participation details of external members and attendance therein (4) B. The published service rules, policies and procedures with year of publication (3) C. Minutes of the meetings and action-taken reports (3)	3	7	2.6	Governing Body details are available with MOMs for the meetings held. Action taken reports are not effective, reports are not very clear.
10.1.3.	Decentralisation in working and grievance redressal mechanism	10	A. List the names of the faculty members who have been delegated powers for taking administrative decisions (1) B. Specify the mechanism and composition of grievance redressal cell (2) C. Action taken report as per 'B' above (7)	1	7	10.1	Available, but needs to be more effective.
10.1.4.	Delegation of financial powers	10	A. Financial powers delegated to the Principal, Heads of Departments and relevant in-charges (3) B. Demonstrate the utilization of financial powers for each of the assessment years (7)	2	5		Records for the financial power delegations are available. Utilization of the above powers are not clear.
10.1.5.	Transparency and availability of correct/unambiguous information in public domain	5	A. Information on the policies, rules, processes is to be made available on web site (2) B. Dissemination of the information about student, faculty and staff (3)	2	3		
10.2.	Budget Allocation, Utilization, and Public Accounting at Institute level	30	Expenditure per student: <u>Rs. 4,491.00 per year (2020-21)</u> Fee per student: <u>Rs. 45,000.00 per year (60 per student)</u>				
10.2.1.	Adequacy of Budget allocation	10	A. Quantum of budget allocation for three years (5) B. Justification of budget allocated for three years (5)	3	5	18	The exact document was not provided. Unavailability of Budget allocation and justifications of allocations are not clear.
10.2.2.	Utilization of allocated funds	15	Budget utilization for three years (15)	8	8	10.2	Documentation for utilization of budgets are poor.
10.2.3.	Availability of the audited statements on the institute's website	5	Availability of Audited statements on website (5)	5	5		Available



Signature of Chairman



Program Specific Budget Allocation, Utilization		30	To be evaluated in consultation with the Program Experts			Overall Marks for 10.3	16
10.3.			A. Quantum of budget allocation for three years (5)	3	5		
10.3.1.	Adequacy of budget allocation	10	B. Justification of budget allocated for three years (5)	2		Needs to follow systematic path. Proper justification for the allocations should opt. Proper utilization of the budgets are required.	
10.3.2.	Utilization of allocated funds	20	Budget utilization for three years (20)	11	11		
10.4.	Library and Internet	20				Learning resources are available, but access to these resources to the students is poor. Most of the students are staying outside the campus. Classrooms do not have ICT facilities, as facilities are poor.	
10.4.1.	Quality of learning resources (hard/soft)	10	A. Availability of relevant learning resources including e-resources and Digital Library (7)	4	6		
10.4.2.	Internet	10	B. Accessibility to students (3)	2	6		
			A. Available bandwidth (4)	2			
			B. Wi Fi availability (2)	1			
			C. Internet access in labs, classrooms, library and offices of all Departments (2)	1			
	D. Security mechanism (2)	2					
Total of Criterion 10:		120	Overall Marks for Criterion 10:			72	



Signature of Chairman