



# LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(AUTONOMOUS)

Accredited by NAAC & NBA (CSE, IT, ECE, EEE & ME)

Approved by AICTE, New Delhi and Affiliated to JNTUK, Kakinada

L.B.Reddy Nagar, Mylavaram-521230, Krishna Dist, Andhra Pradesh, India

## Internal Quality Assurance Cell (IQAC)

### ACADEMIC AND ADMINISTRATIVE AUDIT(AAA) BY EXTERNAL AGENCY

Date of Audit: 19-12-2020

ACADEMIC YEAR: 2019-20

**Audit Member-1** : Dr.A.Venu Gopal, Professor, Mechanical Engineering, NIT. Warangal

**Audit Member-2** : Dr.A.Subbarami Reddy, Professor, Department of ECE, JITS, Karimnagar

*(The activities are to be graded on the following scale)*

Excellent	Good	Satisfactory	Needs improvement
A	B	C	D

#### Details of Programmes in the institution:

Name of the Programme		Sanctioned Seats	Students Admitted
UG: B.Tech.	1. Aerospace Engineering	64	49
	2. Civil Engineering	64	62
	3. Computer Science and Engineering	193	193
	4. Electronics and Communication Engineering	193	193
	5. Electrical and Electronics Engineering	128	109
	6. Electronics and Instrumentation Engineering	64	23
	7. Information Technology	128	128
	8. Mechanical Engineering	193	140
<b>UG: B.Tech., Total</b>		<b>1027</b>	<b>897</b>
PG: M.Tech.	1. Computer Science and Engineering	19	2
	2. Thermal Engineering	19	1
	3. Power Electronics and Drives	19	4
	4. VLSI and Embedded Systems	19	1
<b>PG: M.Tech., Total</b>		<b>76</b>	<b>8</b>
PG: MBA	5. Master of Business Administration	128	99
<b>PG: M.Tech. &amp; MBA</b>		<b>203</b>	<b>107</b>
<b>UG and PG Total</b>		<b>1230</b>	<b>1004</b>

## Achievements/Recognitions:

### Institute:

- MHRD, National Institute Ranking Framework (NIRF-2020): In the Rank Band of 201-250
- DATAQUEST T-School Ranking-2020: 62
- MHRD, Centre for Innovation, Incubation and Entrepreneurship (CIIE): 3 STAR Rating
- LBRCE – CIIE received a grant of Rs. 40,000/- from IIC, MHRD, AICTE
- LBRCE – NSS unit has received an amount of Rs.40,000/- from NISD – MSJE, Govt. of India to organize one day National Seminar on “Drug De-Addiction”
- LBRCE – NPTEL Local Chapter graded with “A” during June – December 2019 exams
- LBRCE – Received “AAA+” grade from Carrier 360

### Department:

- Department of CSE received grant of Rs.10.75 Lakhs under AICTE MODROBs (Coordinator: Dr.Ch.Venkata Narayana, Professor of CSE)
- Department of EEE received grant of Rs.15.26 Lakhs under AICTE MODROBs (Coordinator: Dr.K.Harinadha Reddy, Professor of EEE and Vice Principal)
- Department of ECE received grant of Rs.9.37 Lakhs under AICTE MODROBs (Coordinator: Dr.E.V.Krishna Rao, Professor of ECE and Dean-R&D)

### Faculty:

- Dr.N.Suneel Nayak, Associate Professor, Dept. of ME, sanctioned a project of Rs.22.81 Lakhs from SERB under EMEQ Scheme.
- Dr. D. Veeraiah, Professor & HoD, Dept. of CSE, received a grant of Rs.6.22 Lakhs from AICTE to conduct Faculty Development Program (FDP) on Machine Learning to Deep Learning: Trends and Challenges.
- Dr. P. Vijay Kumar, Professor, Dept. of ME, received a grant of Rs. 5.00 lakhs under AICTE-PRERANA scheme to conduct classes for SC/ST Students related to higher education.
- Mr.P.Siva Reddy, Assistant Professor, Dept. of MBA, received a grant of Rs.3.00 Lakhs from ICSSR for Research Project
- Dr.P.Ashok Reddy, Professor, Department of CSE, awarded as “Best NSS Programme Officer” from Prof. M. Ramalinga Raju, Hon’ble Vice-Chancellor, JNTUK, Kakinada on 07-11-2019.

### Students:

- **Design and Manufacturing of Race Car:** Mechanical department students participated in Rally Car Design Challenge (RCDC-2019) Competition held at Bikaner, Rajasthan, during 2<sup>nd</sup> to 4<sup>th</sup> Oct, 2019. (2.5 Lakhs financial support extended by College)
- **Students bagged 1<sup>st</sup> place in JNTUK Central Zone Intercollegiate Football Tournament** organized during 28<sup>th</sup> & 29<sup>th</sup> Nov, 2019.
- **Students bagged 1<sup>st</sup> place in Kho-Kho in JNTUK Zone C competitions** organized during 6<sup>th</sup> & 7<sup>th</sup> Feb, 2020.
- **Students bagged 2<sup>nd</sup> place in Ball Badminton in JNTUK Zone C competitions** organized during 6<sup>th</sup> & 7<sup>th</sup> Feb, 2020.
- **M.Tirumala Sai bagged Two Gold Medals in Power Lifting** Competitions (120 & 155Kg) organized at Andhra Kesari Kalkshetram, Visakhapatnam during 7<sup>th</sup> & 8<sup>th</sup> Sep, 2019.
- **Winners of District Yoga Championship** competitions organized at Maganti Annapura Kalyana Mandapam, Tadepalligudem during 30<sup>th</sup> Aug, 2019.
- **Ms.K.Poojitha Gayathri, II EEE** participated in **NSS State Youth Festival Competitions** at GITAM University, Visakhapatnam during 25<sup>th</sup> & 26<sup>th</sup> Feb, 2020 and **bagged 1<sup>st</sup> Place in Patriotic Poem event.**
- **Sk.Vanhar Ali, III ASE** participated in **NSS National Youth Festival** during 12<sup>th</sup> – 16<sup>th</sup> Jan, 2020 at Lucknow, Uttar Pradesh.
- **S.Alekhyia , III ME, got Gold Medal** in Tug of war competition under "**Ek Bharat Shresth Bharat**" organized at Acharya Nagarjuna University Guntur.

## PLACEMENTS:

Program	No. of Final Year Students	No. of Students Registered	No. of Placements	No. of Students Placed
B.Tech., ASE	41	24	15	10
B.Tech., CE	66	21	4	3
B.Tech., CSE	129	100	111	81
B.Tech., ECE	212	181	140	112
B.Tech., EEE	134	78	83	66
B.Tech., EIE	39	27	3	3
B.Tech., IT	61	42	34	32
B.Tech., ME	196	109	63	58
M.Tech	24	0	0	0
MBA	112	107	61	47
MCA	44	35	9	8
<b>Total</b>	<b>1058</b>	<b>724</b>	<b>523</b>	<b>420</b>

- No. of career counselling activities conducted: 10
- No. of companies visited the campus: 28
- Placement related training programs organized by CSE & IT department faculty
  - ✓ Wipro Talent Next Program (Certified Faculty: 3 and Registered Students: 205)
  - ✓ TCS Code Vita (Certified Faculty: 23 and Registered Students: 300)
  - ✓ CISCO (Certified Faculty: 4 and Registered Students: 300)
  - ✓ SALESFORCE Developer Training Program: 2 Faculty

## Events organized through IQAC:

S.No.	Name of the Event	Date/Duration of an Event	Number of Participants
1.	Five Day Online Program for Faculty on “Pedagogy Techniques for Effective Teaching-Learning”	8 <sup>th</sup> – 12 <sup>th</sup> Jun 2020	55
2.	Four Day Online workshop for Students and Faculty on “COVID-19 Resurgence of Entrepreneurship and Start-ups at Indian Glance”	25 <sup>th</sup> – 28 <sup>th</sup> May 2020	695
3.	Two Day Technical Fest for Students “World Space Week-2019” in association with ISRO, Sriharikota.	9 <sup>th</sup> -10 <sup>th</sup> Oct 2019	2229
4.	Invited Talk on “How to write Good Research Proposal” Resource Person: Dr.Shakeel Ahmed, Joint Secretary, University Grants Commission (UGC) – New Delhi.	9 <sup>th</sup> Sept 2019	220
5.	Orientation program for students on “Entrepreneurship development and start-up” Resource Person: Sri.M. Sathish Kumar, CEO Atal Incubation Centre, SK University, Anantapur. AP	22 <sup>nd</sup> July 2019	450

## Criterion I: Curricular Aspects

Metric. No	Description	HEIs i/p	Audit Remarks	Grade										
1.1	Total number of programmes offered by the institution ( $N_p$ )	13	Curriculum is being revised as per the guidelines issued by AICTE/APSCH. E.	A										
	Number of programmes in which syllabus was revised ( $n_p$ )	13												
	Percentage of programmes where syllabus revision was carried out $(n_p/N_p) \times 100$	100%												
1.2	Total number of courses offered by the institution in all programmes ( $N_c$ )	606	All the programmes offered by the Institute have the employability	A										
	Number of courses having focus on employability or entrepreneurship or skill development ( $n_c$ )	499												
	Percentage of courses having focus on employability/entrepreneurship/skill development offered by the institution $(n_c/N_c) \times 100$	82.3%												
1.3	Number of programmes in which CBCS or elective course system implemented ( $n_{13}$ )	13	CBCS is implemented in all the programmes	A										
	Percentage of programmes in which Choice Based Credit System (CBCS)/ elective course system has been implemented $(n_{13}/N_p) \times 100$	100%												
1.4	Number of Value-added courses imparting transferable and life skills offered	<table border="1" style="border-collapse: collapse; width: 100%;"> <tr> <td style="text-align: center;">(&gt; 6 Days</td> <td style="text-align: center;">23</td> </tr> <tr> <td style="text-align: center;">5 Days</td> <td style="text-align: center;">5</td> </tr> <tr> <td style="text-align: center;">4 Days</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="text-align: center;">&lt; 3 Days</td> <td style="text-align: center;">38</td> </tr> <tr> <td style="text-align: center;">Total</td> <td style="text-align: center;">68</td> </tr> </table>	(> 6 Days	23	5 Days	5	4 Days	2	< 3 Days	38	Total	68	Good number of courses are added	A
(> 6 Days	23													
5 Days	5													
4 Days	2													
< 3 Days	38													
Total	68													
1.5	Total number of students enrolled ( $N_E$ )	3891	Large number of students were enrolled in the value-added courses	A										
	Number of students enrolled in value-added courses ( $n_E$ )	3223												
	Percentage of students enrolled in value-added courses $(n_E/N_E) \times 100$	82.83%												
1.6	Number of students undertaking field projects/internships/student projects ( $n_{16}$ )	2083	Students may be further motivated to undertake field projects/group projects/internships	A										
	Percentage of students undertaking field projects/internships/student projects $(n_{16}/N_E) \times 100$	53.53%												

Metric. No	Description	HEIs i/p	Audit Remarks	Grade
1.7	Structural feedback for design and review of syllabus is obtained from (All 4/Any 3/2/1/None)	All 4	--	A
	Students	YES		
	Teachers	YES		
	Employers	YES		
	Alumni	YES		
1.8	The feedback system of the institution comprises of the following (Choose one). A. Feedback collected, analysed and action taken and report made available on website B. Feedback collected, analysed and action taken C. Feedback collected and analysed D. Feedback collected E. Feedback not obtained	A	Well established feedback system and analysis is in place	A

**Suggestions for improvement:**

1. Syllabus revision was carried out in all the programmes
2. Choice Based Credit System (CBCS)/ elective course system has been implemented.
3. Value-added courses imparting transferable and life skills are offered benefiting almost all the students.
4. More students may be encouraged to undertake internships/field projects.

## Criterion II: Teaching-Learning and Evaluation

Metric. No	Description	HEIs i/p	Audit Remarks	Grade																
2.1	Student admission percentage ( $n_{21}/N_{21}$ ) x 100  where, N <sub>21</sub> : Total number of sanctioned seats n <sub>21</sub> : Total number of students admitted	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">N<sub>21</sub></th> <th style="text-align: center;">n<sub>21</sub></th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>UG</td> <td style="text-align: center;">1027</td> <td style="text-align: center;">897</td> <td style="text-align: center;">87.35</td> </tr> <tr> <td>PG</td> <td style="text-align: center;">203</td> <td style="text-align: center;">107</td> <td style="text-align: center;">52.71</td> </tr> <tr> <td>Total</td> <td style="text-align: center;">1230</td> <td style="text-align: center;">1004</td> <td style="text-align: center;">81.63</td> </tr> </tbody> </table>		N <sub>21</sub>	n <sub>21</sub>	%	UG	1027	897	87.35	PG	203	107	52.71	Total	1230	1004	81.63	UG admissions are very good. However, PG Courses are having around 50% admissions	A
	N <sub>21</sub>	n <sub>21</sub>	%																	
UG	1027	897	87.35																	
PG	203	107	52.71																	
Total	1230	1004	81.63																	
2.2	Number of students admitted from the reserved category (SC,ST,OBC, Divyangian, etc.) (n <sub>22</sub> )	762	Good	A																
	Number of seats earmarked for reserved category as per GOI or state government rule (N <sub>22</sub> )	883																		
	Percentage of seats filled against reserved categories ( $n_{22}/N_{22}$ )x100	86.3%																		
2.3	Total number of full-time teachers in the institution (N <sub>T</sub> )	<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>Professors</td> <td style="text-align: center;">45</td> </tr> <tr> <td>Associate Professors</td> <td style="text-align: center;">30</td> </tr> <tr> <td>Assistant Professors</td> <td style="text-align: center;">155</td> </tr> <tr> <td>Total</td> <td style="text-align: center;">230</td> </tr> </tbody> </table>	Professors	45	Associate Professors	30	Assistant Professors	155	Total	230	--	A								
Professors	45																			
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Total	230																			
2.4	Total number of students enrolled (N <sub>E</sub> )	3891	--	A																
	Student-full time Teacher ratio (N <sub>E</sub> /N <sub>T</sub> )	16.92 : 1	--	B																
2.5	Number of faculty Mentors (n <sub>25</sub> )	216	--	A																
	Mentor-Mentee ratio (n <sub>25</sub> /N <sub>E</sub> )	1:18																		
2.6	Number of sanctioned posts (n <sub>25</sub> )	230	--	A																
	Percentage of full time teachers against sanctioned posts ( $n_{26}/N_T$ )x100	100%																		
2.7	Number of full-time teachers with Ph.D (n <sub>27</sub> )	65	Faculty shall be encouraged to do PhD by providing some research seed grant, if necessary	A																
	No. of permanent faculty pursuing Ph.D	71																		
	Percentage of full-time teachers with Ph.D ( $n_{27}/N_T$ )x100	28.3%																		
2.8	Total experience of full-time teachers in the same institution (n <sub>28</sub> )	1723.66 Years	Faculty retention is good	A																
	Average teaching experience of full-time teachers in the same institution ( $n_{28}/N_T$ )	7.49 Years																		

Metric. No	Description	HEIs i/p				Audit Remarks	Grade
2.9	Average number of days from the date of last semester-end examination till the declaration of results (N <sub>29</sub> )	<b>Program/Sem</b>	<b>N<sub>29</sub></b>			Transparent system of evaluation is in place.	A
		B.Tech., I-Sem	6				
		B.Tech., II-Sem	14				
		B.Tech., III-Sem	13				
		B.Tech., IV-Sem	14				
		B.Tech., V-Sem	11				
		B.Tech., VI-Sem	14				
		B.Tech., VII-Sem	17				
		B.Tech., VIII-Sem	11				
		M.Tech., I-Sem	9				
		M.Tech., II-Sem	14				
		MBA., I-Sem	4				
		MBA., II-Sem	14				
		MBA., III-Sem	18				
		MBA., IV-Sem	14				
MCA., III-Sem	20						
MCA., IV-Sem	11						
MCA., V-Sem	26						
		<b>Average</b>	<b>13.5</b>				
2.10	Average percentage of student complaints/grievances about evaluation against total number of appeared in the examination $(n_{210}/N_{210}) \times 100$  where, N <sub>210</sub> : Total number of students appeared in the examination. n <sub>210</sub> : Number of complaints/grievances about evaluation.	<b>Program</b>	<b>N<sub>210</sub></b>	<b>n<sub>210</sub></b>	<b>%</b>	--	A
		B.Tech., I-Sem	883	0	0		
		B.Tech., II-Sem	878	0	0		
		B.Tech., III-Sem	869	0	0		
		B.Tech., IV-Sem	870	0	0		
		B.Tech., V-Sem	885	0	0		
		B.Tech., VI-Sem	872	0	0		
		B.Tech., VII-Sem	872	0	0		
		B.Tech., VIII-Sem	867	0	0		
		M.Tech., I-Sem	7	0	0		
		M.Tech., II-Sem	7	0	0		
		MBA., I-Sem	96	0	0		
		MBA., II-Sem	96	0	0		
		MBA., III-Sem	112	0	0		
		MBA., IV-Sem	112	0	0		
MCA., III-Sem	44	0	0				
MCA., IV-Sem	44	0	0				
MCA., V-Sem	56	0	0				
		<b>Total</b>	<b>7570</b>	<b>0</b>	<b>0</b>		
2.11	Pass percentage of Final year students $(n_{211}/N_{211}) \times 100$  where, N <sub>211</sub> : Total number of final year students who appeared for the examination. n <sub>211</sub> : Total number of final year students who passed the examination.	<b>Program</b>	<b>N<sub>211</sub></b>	<b>n<sub>211</sub></b>	<b>%</b>	Student success is > 95%, which is very good.	A
		B.Tech.,ASE	41	40	97.56		
		B.Tech.,CE	60	57	95.00		
		B.Tech.,CSE	127	123	96.85		
		B.Tech.,ECE	212	203	95.75		
		B.Tech.,EEE	133	122	91.73		
		B.Tech.,EIE	39	36	92.31		
		B.Tech.,IT	61	56	91.80		
		B.Tech.,ME	194	187	96.39		
		M.Tech	24	24	100.00		
		MBA	112	106	94.64		
		MCA	51	51	100.00		
		<b>Total</b>	<b>1054</b>	<b>1005</b>	<b>95.35</b>		



Metric. No	Description	HEIs i/p	Audit Remarks	Grade																										
2.12	Quality analysis of Mid and End Semester examination question papers	Standard Procedures are established	External audit may be planned	A																										
2.13	Weightage of internal and external marks in R17 Regulations	<table border="1"> <tr> <td>Internal Marks</td> <td>40</td> </tr> <tr> <td>External Marks</td> <td>60</td> </tr> </table>	Internal Marks	40	External Marks	60	--	A																						
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2.14	Minimum credits for award of degree in R17 Regulations	<table border="1"> <thead> <tr> <th>Program</th> <th>Credits</th> </tr> </thead> <tbody> <tr> <td>B.Tech</td> <td>176/176</td> </tr> <tr> <td>M.Tech</td> <td>72/72</td> </tr> <tr> <td>MBA</td> <td>88/88</td> </tr> <tr> <td>MCA</td> <td>124/124</td> </tr> </tbody> </table>	Program	Credits	B.Tech	176/176	M.Tech	72/72	MBA	88/88	MCA	124/124	--	A																
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2.15	Number of credits for project work in R17 Regulations	<table border="1"> <thead> <tr> <th>Program</th> <th>Credits</th> </tr> </thead> <tbody> <tr> <td>B.Tech</td> <td>12</td> </tr> <tr> <td>M.Tech</td> <td>26</td> </tr> <tr> <td>MBA</td> <td>6</td> </tr> <tr> <td>MCA</td> <td>12</td> </tr> </tbody> </table>	Program	Credits	B.Tech	12	M.Tech	26	MBA	6	MCA	12	--	A																
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B.Tech	12																													
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2.16	Status of automation of Examination division along with approved Examination Manual	100% automation of entire division & implementation of Examination Management System (EMS)	--	A																										
2.17	Preparation and adherence to Academic Calendar and Teaching plans by the institution	Academic calendar is in place and academic activities are as per the academic calendar.	--	A																										
2.18	Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences	<p><b>Guest Lectures, Workshops, Certification Programs are organized, and Industrial Visits are arranged</b></p> <table border="1"> <tr> <td>Guest Lectures</td> <td>20</td> </tr> <tr> <td>Workshops</td> <td>38</td> </tr> <tr> <td>Certification Programs</td> <td>12</td> </tr> <tr> <td>Webinars-</td> <td>18</td> </tr> <tr> <td>Industrial visits</td> <td>17</td> </tr> </table> <p><b>Institute has been accorded with 'A' grade in NPTEL.</b></p> <table border="1"> <tr> <td>NPTEL Certifications</td> <td>895</td> </tr> <tr> <td>Coursera Certifications</td> <td>168</td> </tr> </table> <p><b>Association activities are conducted under student professional society chapters</b></p> <table border="1"> <tr> <td>CSI</td> <td>4</td> </tr> <tr> <td>IE</td> <td>8</td> </tr> <tr> <td>IEEE</td> <td>6</td> </tr> <tr> <td>ISTE</td> <td>1</td> </tr> <tr> <td>IETE</td> <td>4</td> </tr> <tr> <td>ISHRAE</td> <td>1</td> </tr> </table>	Guest Lectures	20	Workshops	38	Certification Programs	12	Webinars-	18	Industrial visits	17	NPTEL Certifications	895	Coursera Certifications	168	CSI	4	IE	8	IEEE	6	ISTE	1	IETE	4	ISHRAE	1	--	A
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IEEE	6																													
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ISHRAE	1																													



Metric. No	Description	HEIs i/p	Audit Remarks	Grade
2.19	Program outcomes, program specific outcomes and course outcomes for all programs offered by the institution are stated and displayed on website and communicated to teachers and students	Yes	They are all well defined and displayed on all prominent places/locations	A
2.20	Attainment of program outcomes, program specific outcomes and course outcomes are evaluated by the institution	Yes	A systematic procedure has been followed in measuring attainments.	A
2.21	Teachers use ICT enabled tools including online resources for effective teaching and learning process	Yes, teachers are using ICT facilities	All the classrooms are provided with WiFi connectivity and LCD projectors.	A
2.22	The institution assesses the learning levels of the students, after admission and organises special programs for advanced learners and slow learners	Bridge classes for Lateral Entry and First Year Late admitted students. Remedial Classes for slow learners and backlog students. GATE Classes for Advanced Learners	Very good initiatives to address both the slow and fast learners by providing necessary extra inputs.	A
2.23	Duration of online Student Satisfaction Survey (SSS) conducted	26 <sup>th</sup> Jun – 11 <sup>th</sup> July 2020	--	A
	Total number of students on rolls (N <sub>220</sub> )	3831		
	Number of students participated in SSS (n <sub>220</sub> )	2917		
	Percentage of students participated in SSS $(n_{220}/N_{220}) \times 100$	76.14%		
	Grade Point Average (GPA) on 4 point scale	3.41		

### Suggestions for improvement:

1. Institute has been accorded with 'A' grade in NPTEL MHRD, National Institute Ranking Framework (NIRF-2020): In the Rank Band of 201-250, DATAQUEST T-School Ranking-2020: 62
2. Outcome based education is fully implemented and the attainments are also satisfactory.
3. 28% of the faculty are possessing Ph.D. qualification and another 32% of the faculty are encouraged to pursue Ph.D. Further, they may encouraged to do PhD by providing some kind of research seed grant.
4. Question paper auditing may be performed by the external subject experts in relation to the Blooms taxonomy.
5. Opportunity is provided in the curriculum design for fast learners to earn credits early from V semester onwards and do a full semester internship for VIII semester.
6. Student Teacher Ratio (STR) is slightly poor and efforts shall be made to improve. This may be because of increase in admission for the current year.

### Criterion III: Research, Innovation and Extension

Metric. No	Description	HEIs i/p	Audit Remarks	Grade
3.1	Research facilities are frequently updated and there is well defined policy for promotion of research which is uploaded on the institutional website and implemented	<p>Nine Advanced Research Centres are available</p> <ol style="list-style-type: none"> <li>1. Applied Robotic Control (ARC) Lab</li> <li>2. Dassault systems lab (APSSDC- CATIA)</li> <li>3. ANSYS Skill Development Centre</li> <li>4. CISCO Networking Academy</li> <li>5. National Instruments LabVIEW</li> <li>6. National MEMS Design centre</li> <li>7. Green Energy Technology Centre</li> <li>8. e-Yantra</li> <li>9. Cognitive Science Research Centre</li> </ol> <p>There is a well-defined policy for promotion of research like, Incentives for publications, patent filing, and project grants.</p>	Good number of research centres have been established for promoting research culture among students and faculty.	A
3.2	Grants received from Government and non-governmental agencies for research projects, endowments, Chairs in the institution	Rs. 59,40,667/-	It is observed that an improvement in the grants received. However, the faculty from all the depts have to be motivated to apply for more sponsored research projects.	B
3.3	Total number of teachers having research projects ( $n_{33}$ )	9	Very low.	C
	Percentage of teachers having research projects $(n_{33}/N_T) \times 100$	3.91%		

Metric. No	Description	HEIs i/p	Audit Remarks	Grade
3.4	Number of teachers recognised as research guides (n <sub>34</sub> )	31	Satisfactory	B
	Percentage of teachers recognised as research guides (n <sub>34</sub> /N <sub>T</sub> )x100	13.48%		
3.5	Number of departments having Research projects funded by government and non-government agencies (n <sub>35</sub> )	6	Good	B
	Total number of departments (N <sub>35</sub> )	11		
	Percentage of departments having Research projects funded by government and non-government agencies (n <sub>35</sub> /N <sub>35</sub> )x100	54.54%		
3.6	Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR), entrepreneurship and skills development	54	Very good	A
3.7	Number of teachers recognized as guides (N <sub>37</sub> )	31	--	A
	Number of Ph.D scholars registered (n <sub>37</sub> )	44		
	Number of Ph.D scholars registered per teacher (n <sub>37</sub> /N <sub>37</sub> )	1.42		
3.8	Number of publications in UGC notified journals (n <sub>38</sub> )	274	Most of the faculty are actively in publishing papers in quality journals.	A
	Number of research papers per teacher in the Journals notified on UGC website (n <sub>38</sub> /N <sub>T</sub> )	1.19		
3.9	Total number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings (n <sub>39</sub> )	44	--	A
	Number of books and chapters in edited volumes / books published per teacher (n <sub>39</sub> /N <sub>T</sub> )	0.19		
	Total number of Publications in Scopus	274		
	Total number of Publications in Web of Science	40		
3.10	Total amount generated from consultancy and corporate training	Rs.2,47,000/-	Increased activities in consultancy is observed.	C
3.11	Total number of awards and recognition received by the Institution, its teachers and students for extension activities from Government / recognised bodies	255	--	A

Metric. No	Description	HEIs i/p	Audit Remarks	Grade										
3.12	Number of extension and outreach programs conducted by the institution through NSS/NCC/Red cross/YRC etc. (including Government initiated programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. and those organised in collaboration with industry, community and NGOs)	69	--	A										
3.13	Total number of students participating in extension activities (n <sub>313</sub> )	<table border="1"> <tr> <td>NSS</td> <td>1584</td> </tr> <tr> <td>NCC</td> <td>108</td> </tr> <tr> <td>'B' Certificate: 57</td> <td></td> </tr> <tr> <td>'C' Certificate: 51</td> <td></td> </tr> <tr> <td>Total</td> <td>1692</td> </tr> </table>	NSS	1584	NCC	108	'B' Certificate: 57		'C' Certificate: 51		Total	1692	--	A
NSS	1584													
NCC	108													
'B' Certificate: 57														
'C' Certificate: 51														
Total	1692													
	Percentage of students participating in extension activities (n <sub>313</sub> /N <sub>E</sub> ) x100	43.48%												
3.14	Total number of Collaborative activities for research/ faculty exchange/ student exchange/ internship/ on –the-job training/ project work	70	--	A										
3.15	Number of functional MoUs with institutions of national, international importance, other universities, industries, corporate houses etc. (only functional MoUs with ongoing activities to be considered)	12	--	A										
3.16	Institution has created an eco-system for innovations including Incubation centre and other initiatives for creation and transfer of knowledge	CIIE established in 2017 and organizing events. Amount received in CIIE: <b>3.75 Lakhs</b>	--	B										
3.17	Patents Published	13	--	A										

### Suggestions for improvement:

1. Good number of advanced research centres have been established for promotion of research.
2. Number of teachers among the PhD holders have been recognised as research guides by the University.
3. Publications in quality journals (Scopus and Web of Science) has improved substantially.
4. A good number of patents have been published.
5. Sponsored research and consultancy are limited. The faculty members have to be motivated by giving matching grants either fully or partially towards applying for sponsored research projects.

### Criterion IV: Infrastructure and Learning Resources

Metric. No	Description	HEIs i/p	Audit Remarks	Grade	
4.1	Total number of classrooms/ seminar halls in the institution (N <sub>41</sub> )	79	--	A	
	Number of classrooms and seminar halls with ICT facilities (n <sub>41</sub> )	75			
	Percentage of classrooms and seminar halls with ICT-enabled facilities such as smart class, LMS, etc. (n <sub>41</sub> /N <sub>41</sub> )x100	95%			
4.2	Total expenditure, excluding salary (N <sub>42</sub> )	<b>1002.65 Lakhs</b>	Infrastructure and facilities are being updated regularly by spending substantial amount.	A	
	Expenditure for infrastructure augmentation, excluding salary (n <sub>42</sub> )	461.29 Lakhs			
	Percentage of expenditure for infrastructure augmentation excluding salary (n <sub>42</sub> /N <sub>42</sub> )x100	46%			
4.3	Annual expenditure for purchase of books/ e-books and subscription to journals/ e-journals	25.62 Lakhs	e-Books may be increased.	B	
4.4	Total number of teachers and students (N <sub>44</sub> )	4121	--	A	
	Number of teachers and students using library per day over one year (n <sub>44</sub> )	Direct			331
		Online			112
		Total			443
Percentage per day usage of library by teachers and students (foot falls and login data for online access) (n <sub>44</sub> /N <sub>44</sub> )x100	10.75%				
4.5	Total number of Students (n <sub>45</sub> )	3891	Very good and more than the requirement.	A	
	Total number of Computers (N <sub>45</sub> )	1517			
	Student-Computer ratio (n <sub>45</sub> /N <sub>45</sub> )	2.56 : 1			
4.6	Bandwidth of internet connection in the institution	630 Mbps	Very good.	A	

Metric. No	Description	HEIs i/p	Audit Remarks	Grade
4.7	Facilities available for e-content development (All 4/only 3/2/1/None)	Only 3	A media center at the institute level may be planned	A
	Media centre	N		
	Audio visual centre	Y		
	Lecture Capturing System (LCS)	Y		
	Mixing equipment and software's for editing	Y		
4.8	Total expenditure excluding salary component (N <sub>48</sub> )	1002.65 Lakhs	--	A
	Expenditure on maintenance of physical and academic support facilities excluding salary component (n <sub>48</sub> )	541.43 Lakhs	--	
	Percentage expenditure incurred on maintenance of physical and academic support facilities excluding salary component $(\frac{n_{48}}{N_{48}}) \times 100$	54%	--	
4.9	Institution has an IT policy covering wi-fi, cyber security, etc., and allocated budget for updating its IT facilities	IT policy on expansion of IT infrastructure in the campus is available	--	A
4.10	The institution has adequate facilities for teaching – learning, viz., classrooms, laboratories, computing equipment, etc.	Available	--	A
4.11	The institution has adequate facilities for sports, games (indoor, outdoor, gymnasium, yoga centre etc.) and cultural activities	Indoor stadium, outdoor sports facilities, gymnasium, yoga centre and enough space for cultural activities is available.	--	A

**Suggestions for improvement:**

1. The classrooms are fully equipped with WiFi, LCD projectors, etc.
2. The campus is WiFi enabled at all the required places.
3. The facilities are being updated / added regularly.
4. In view of the pandemic and also for future usage, a media centre may be developed with all the recording facilities for recording the lectures and developing the e-content.

Criterion V: Student Support and Progression				
Metric. No	Description	HEIs i/p	Audit Remarks	Grade
5.1	Number of students benefited by scholarships and freeships provided by the Government (n <sub>51</sub> )	2577	--	A
	Percentage of students benefited by scholarships and freeships provided by the Government (n <sub>51</sub> /N <sub>E</sub> ) x100	66.22%		
5.2	Number of students benefited by scholarships, freeships, etc provided by the institution and non-government agencies (n <sub>52</sub> )	225	More awards may be initiated for motivation of the students.	B
	Percentage of students benefited by scholarships, freeships, etc provided by the institution and non-government agencies (n <sub>52</sub> /N <sub>E</sub> ) x100	5.78%		
5.3	Following Capacity development and skills enhancement activities are organised for improving students capability (All 4/only 3/2/1/None)	All 4	Institute has very good sports facilities and conducts certification courses in Yoga.	A
	Soft skills	Soft Skill training classes are conducted through dedicated CCGT		
	Language and communication skills	Yes		
	Life skills (Yoga, physical fitness, health and hygiene)	Full time Yoga master is available and conducting certification courses Co-curricular and Extra Curricular activities are made as mandatory.		
	Awareness of trends in technology	Certification courses and workshops on emerging areas and latest technologies are conducted regularly.		
5.4	Number of students benefited by guidance for competitive examinations and career counselling offered by the institution (n <sub>54</sub> )	3891	--	B
	Percentage of students benefited by guidance for competitive examinations and career counselling offered by the institution (n <sub>54</sub> /N <sub>E</sub> ) x100	100		



Metric. No	Description	HEIs i/p	Audit Remarks	Grade										
5.5	Number of outgoing students (N <sub>55</sub> )	1030	Efforts are to be made to increase the placements further	B										
	Number of outgoing students placed (n <sub>55</sub> )	523												
	Percentage of placement of outgoing students (n <sub>55</sub> /N <sub>55</sub> ) x100	50.77%												
5.6	Number of final year students- previous graduating batch (N <sub>56</sub> )	1044	--	B										
	Number of outgoing student progressing to higher education- previous graduating batch (n <sub>56</sub> )	49												
	Percentage of student progression to higher education- previous graduating batch (n <sub>56</sub> /N <sub>56</sub> )x100	4.69%												
5.7	Number of students appeared in state/ national/ international level examinations (eg:IIT/JAM/NET/SLET/GATE/GMAT/CAT/GRE/TOEFL/ IELTS/ Civil Services/State government examinations, etc) (N <sub>57</sub> )	143	--	B										
	Number of students qualified in state/ national/ international level examinations (eg:IIT/JAM/NET/SLET/GATE/GMAT/CAT/GRE/TOEFL/ IELTS/ Civil Services/State government examinations, etc) (n <sub>57</sub> )	<table border="1"> <tr><td>GATE</td><td>22</td></tr> <tr><td>GRE</td><td>10</td></tr> <tr><td>IELTS</td><td>22</td></tr> <tr><td>State Govt.</td><td>16</td></tr> <tr><td><b>Total</b></td><td><b>70</b></td></tr> </table>			GATE	22	GRE	10	IELTS	22	State Govt.	16	<b>Total</b>	<b>70</b>
	GATE	22												
	GRE	10												
IELTS	22													
State Govt.	16													
<b>Total</b>	<b>70</b>													
Percentage of students qualified in state/ national/ international level examinations (eg:IIT/JAM/NET/SLET/GATE/GMAT/CAT/GRE/TOEFL/ IELTS/ Civil Services/State government examinations, etc) (n <sub>57</sub> /N <sub>57</sub> )x100	48.95%													
5.8	Number of awards/medals for outstanding performance in sports/cultural activities at inter-university / state /national / international events (award for a team event should be counted as one)	<b>State Level</b>	--	A										
		Sports & games			13									
		Yoga			6									
		Cultural			12									
		<b>Institute Level</b>												
Sports & Games	126													
<b>Total</b>	<b>171</b>													
5.9	Number of sports and cultural events / competitions organised by the institution	Sports & games	--	A										
		Yoga			1									
		Cultural			15									
		<b>Total</b>			<b>59</b>									
5.10	Alumni financial contribution	3.95 Lakhs		A										

### Suggestions for improvement:

- Career guidance for the students encouraging them towards higher studies is in place and the training is also arranged by the Institute for fast learners.
- Interactions with the alumni may be increased on campus for the motivation of the students. Reunion of alumni in batches may be planned
- Strong alumni base needs to be established.

## Criterion VI: Governance, Leadership and Management

Metric. No	Description	HEIs i/p	Audit Remarks	Grade						
6.1	Implementation of e-governance in areas of operation (All 4 / only 3 / 2/ 1 / None)	All 4	--	A						
	Administration	YES								
	Finance and Accounts	YES								
	Student Admission and Support	YES								
	Examination	YES								
6.2	Number of teachers provided with financial support to attend conferences/ workshops and towards membership fee of professional bodies ( $n_{62}$ )	192	--	A						
	Percentage of teachers provided with financial support to attend conferences/ workshops and towards membership fee of professional bodies ( $n_{62}/N_T$ )x100	83.42%								
6.3	Total number of professional development/ administrative training programmes organized by the institution for teaching and non-teaching staff	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px;">Teaching</td> <td style="border: 1px solid black; text-align: center; padding: 2px;">26</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">Non-teaching</td> <td style="border: 1px solid black; text-align: center; padding: 2px;">6</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px; text-align: center;"><b>Total</b></td> <td style="border: 1px solid black; text-align: center; padding: 2px;"><b>32</b></td> </tr> </table>	Teaching	26	Non-teaching	6	<b>Total</b>	<b>32</b>	--	A
Teaching	26									
Non-teaching	6									
<b>Total</b>	<b>32</b>									
6.4	Total number of teachers attended professional development Programmes, viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes ( $n_{64}$ )	212	Very good.	A						
	Percentage of teachers undergoing online/ face-to-face Faculty Development Programmes (Professional Development Programmes, Orientation / Induction Programmes, Refresher Course, Short Term Course etc.) ( $n_{64}/N_T$ ) x 100	92.17%								
6.5	Quality assurance initiatives of the institution include(All 4/only 3/2/1/None)	All 4	--	A						
	Regular meeting of Internal Quality Assurance Cell (IQAC); Feedback collected, analysed and used for improvements	YES								
	Collaborative quality initiatives with other institutions	YES								
	Participation in NIRF	YES Rank Band: 201-250								
	Any other quality audit recognized by state, national or international agencies (ISO Certification)	Yes, ISO: 9001-2015 recertification audit conducted on 10-01-2020								

Metric. No	Description	HEIs i/p	Audit Remarks	Grade
6.6	The governance of the institution is reflective of an effective leadership in tune with the vision and mission of the Institution	Governing body meetings are conducted twice in a year to ensure institute activities.	--	A
6.7	The institution has effective welfare measures for teaching and non-teaching staff and avenues for career development/ progression	<b>Welfare measures</b> EPF facility, Health Insurance, Concessional, Transport, Free medical facility, Gratuity to supporting staff and fee concession for staff children	--	A
6.8	Institution conducts internal and external financial audits regularly	<b>YES</b> Internal financial audit is done quarterly and External Financial audit is conducted from 22-06-2020 to 27-06-2020.	--	A
6.9	Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes	Contributions of IQAC ➤ Documentation of the activities leading to quality improvement ➤ Periodical conduct of Academic and Administrative Audit and its follow-up ➤ Preparation and submission of the Annual Quality Assurance Report (AQAR). ➤ Collection and analysis of feedback from all stakeholders ➤ Dissemination of information on various quality parameters to all stakeholders ➤ Organization of inter and intra institutional workshops, seminars on quality related themes. ➤ Development and application of quality benchmarks	--	A

Metric. No	Description	HEIs i/p	Audit Remarks	Grade
6.10	The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms	Every month internal audits are conducted through IQAC on Teaching & Learning Process in the campus	--	A
6.11	The institution practices decentralization and participative management	Proactive and participative management is in place. Administrative hierarchy is ensured by governing body.	--	A
6.12	Perspective/Strategic plan and deployment documents	Selective agenda items of strategic plan are discussed in governing body meeting and decisions are circulated to all the departments.	--	A

**Suggestions for improvement:**

1. Proactive and participative management is in place
2. IQAC is very well organised in collecting the data and providing necessary inputs to all the stakeholders for continuous improvement.

## Criterion VII: Institutional Values and Best Practices

Metric. No	Description	HEIs i/p	Audit Remarks	Grade
7.1	The Institution has facilities for alternate sources of energy and energy conservation measures (Any 4 or all 5/ 3 / 2/ 1 / None)	4	--	A
	Solar energy	YES 400kVA Solar PV system is established		
	Biogas plant	NO		
	Wheeling to the Grid	YES		
	Sensor-based energy conservation	YES		
	Use of LED bulbs/ power efficient equipment	All outdoor lamps are replaced with LED lights in the Campus		
7.2	Water conservation facilities available in the Institution (Any 4 or all 5/ 3 / 2/ 1 / None)	4	--	A
	Rain water harvesting	YES		
	Borewell /Open well recharge	YES		
	Construction of tanks and bunds	YES		
	Waste water recycling	NO		
	Maintenance of water bodies and distribution system in the campus	YES		
7.3	Green campus initiatives (Any 4 or all 5/ 3 / 2/ 1 / None)	All 5	--	A
	Restricted entry of automobiles	YES		
	Use of Bicycles/ Battery powered vehicles	YES		
	Pedestrian Friendly pathways	YES		
	Ban on use of Plastic	YES		
	landscaping with trees and plants	YES		


Metric. No	Description	HEIs i/p	Audit Remarks	Grade
7.4	Quality audits on environment and energy are regularly undertaken by the institution (Any 4 or all 5/ 3 / 2/ 1 / None)	4	--	A
	Green audit	YES		
	Energy audit	YES		
	Environment audit	YES		
	Clean and green campus recognitions/awards	NO		
	Beyond the campus environmental promotional activities	YES through LBRCE NSS unit		
7.5	The Institution has disabled-friendly, barrier free environment (Any 4 or all 5/ 3 / 2/ 1 / None)	All 5	--	A
	Built environment with ramps/lifts for easy access to classrooms.	YES		
	Disabled-friendly washrooms	YES		
	Signage including tactile path, lights, display boards and signposts	YES		
	Assistive technology and facilities for persons with disabilities (Divyangjan) accessible website, screen-reading software, mechanized equipment	YES		
	Provision for enquiry and information: Human assistance, reader, scribe, soft copies of reading material, screen reading	YES		
7.6	The Institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic programmes in this regard (All 4 / Any 3 / 2/ 1 / None)	All 4	--	A
	The Code of Conduct is displayed on the website	YES		
	There is a committee to monitor adherence to the Code of Conduct	YES		
	Institution organizes professional ethics programmes for students, teachers, administrators and other staff	YES		
	Annual awareness programmes on Code of Conduct are organized	YES		
7.7	Measures initiated by the Institution for the promotion of gender equity	9 events conducted through SAHELI-The Girls Club	--	A




Metric. No	Description	HEIs i/p	Audit Remarks	Grade
7.8	Institution celebrates / organizes national and international commemorative days, events and festivals	21 Events conducted (Through NSS & NCC)	--	A
7.9	Best practices successfully implemented by the Institution	YES	--	A
	<b>Best Practices:</b> <ul style="list-style-type: none"> <li>✓ Special Leaves with pay and seed grant are provided to the faculty pursuing Ph.D</li> <li>✓ Additional increments/promotions are given for those who acquire Ph.D during service</li> <li>✓ Reduced workload at the time of writing thesis</li> <li>✓ Financial assistance to the faculty to attend reputed International/ National conferences</li> <li>✓ The institute has a well-defined policy in providing incentives for sponsored projects, matching grants, patents and publications in indexed journals</li> <li>✓ Good number of COEs are established to promote research culture</li> <li>✓ 31% of the faculty are possessing Ph.D. qualification and another 30% of the faculty are encouraged to pursue Ph.D.</li> <li>✓ Funding students to promote innovation - Student participation in Innovation, Incubation and Entrepreneurship activities through CIEE.</li> <li>✓ Providing remedial classes to slow learners and coaching to the fast learners for higher studies opportunities such as GATE, IELTS, PGECET and Foreign languages.</li> <li>✓ Good infrastructure and well-equipped laboratories with modern tools.</li> <li>✓ Placement record is good. Initiative from the department for placements in core domains other than central Training and Placement cell.</li> <li>✓ The practice of conducting Guest lectures, Industrial visits and Industrial training has been enhanced.</li> <li>✓ The functioning of Research groups to promote better quality research and publications has been strengthened.</li> <li>✓ Industry Internship is made mandatory for all students</li> <li>✓ Continuous inputs from all stakeholders like Alumni, Academicians and Industry experts are taken to improve the curriculum on regular basis.</li> <li>✓ Participation of students in Sports, Games at National and International level, NCC, NSS activities.</li> </ul>			

**Suggestions for improvement:**

1. Waste water treatment plant may be planned
2. The campus is clean and green and the efforts shall be put in to get clean and green recognitions/awards.

  
 29-12-2020  
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