



LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(AUTONOMOUS)

Accredited by NAAC with 'A' Grade, ISO 9001:2015 Certified Institution

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)

EXTERNAL ACADEMIC AND ADMINISTRATIVE AUDIT REPORT

(ACADEMIC YEAR: 2017-18)

Date of Audit: 04-08-2018

Name and Designation of Audit Member-1: Dr. A. Venu Gopal, Professor, Mechanical Engineering, N.I.T. Warangal

Name and Designation of Audit Member-2: Dr.A.Subbarami Reddy, Principal, GKEC, Sullurupeta

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

Excellent	Good	Satisfactory	Needs improvement
A	B	C	D

Details of Programmes in the college:

S.No.	Name of the Programme	Sanctioned Strength	Actual Strength
UG			
1	B.Tech in Aerospace Engineering	60	43
2	B.Tech in Civil Engineering	60	58
3	B.Tech in Computer Science Engineering	120	117
4	B.Tech in Electronics and Communication Engineering	180	177
5	B.Tech in Electrical and Electronics Engineering	120	114
6	B.Tech in Electronics and Instrumentation Engineering	60	49
7	B.Tech in Information Technology	60	60
8	B.Tech in Mechanical Engineering	180	165
UG Total		840	783
PG			
1	M.Tech (Computer Science and Engineering)	18	05
2	M.Tech (Thermal Engineering)	18	14
3	M.Tech (Power Electronics and Drives)	18	03
4	M.Tech (VLSI & Embedded Systems)	30	10
5	MBA	120	120
6	MCA	60	49
PG Total		264	201
UG and PG Total		1104	984

1. Curricular Aspects				
S.No.	Item	HEIs i/p	Grade	Remarks
1.1	Curricula developed /adopted have relevance to the local/national /regional/global developmental needs with learning objectives including program outcomes, program specific outcomes and course outcomes of all programs offered by the Institution	R17 (CBCS)	A	
1.2	Percentage of new courses introduced of the total number of courses across all programs	14% (72/510)	A	Substantial number of new courses have been introduced
1.3	Percentage of programs in which Choice Based Credit System (CBCS) / Elective course system has been implemented	100%	A	
1.4	Institution integrates cross cutting issues relevant to Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum	The institute is offering courses on Environmental studies (S243), Professional Ethics and Human values (S355)	B	Courses related to Gender issues may be introduced.
1.5	Number of Value-added courses imparting transferable and life skills offered	41 courses (3072 students participated)	A	Courses related to Professional career and Placement, Skill development related courses have been introduced.
1.6	Feedback on curriculum and other aspects from stakeholders	The feedback on curriculum is collected regularly from the stakeholders and the same is uploaded in the institute website.	A	The feedback is being considered positively while revising the curriculum and introducing value-added courses.

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2. Teaching-Learning and Evaluation

S.No.	Item	MEIs i/p	Grade	Remarks
2.1	Demand Ratio (% of students admitted)	90%	B	UG is very good. However, a few PG Courses are having less than 50% demand.
2.2	Number of full-time teachers	272	A	With PhD = 67 With M.Tech. = 205
2.3	Number of students enrolled	3860	A	
2.4	Student - Full time teacher ratio	14.2:1	A	
2.5	No. of permanent faculty with Ph.D	67 (25%)	B	More faculty with higher qualification may be recruited.
2.6	Average teaching experience of full time teachers in years	11	A	
2.7	Total No. of teaching days	185	A	As per UGC/AICTE norms
2.8	Preparation and adherence to Academic Calendar and Teaching plans	Academic calendar is in place and academic activities are as per the academic calendar.	A	Every faculty member is actively involved in preparing the Teaching plans and adhering to the same.
2.9	Innovative processes adopted in Teaching and Learning	Yes (ICT tools, NPTEL online certification courses, Swayam Prabha, MOODLES, Google Class room etc.,)	A	
2.10	Teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources, MOODLES etc.	Faculty are using ICT facilities effectively. LMS is being used partially.	A	
2.11	Remedial Classes for slow learners and backlog students	Remedial classes are conducted regularly for Students with less than 50% of Mid marks and with backlog subjects.	A	Mechanism is in place to identify the slow learners and conducting remedial classes for them

2.12	GATE Classes for Advanced Learners	GATE classes are conducted regularly for students with more than 7.5 CGPA.	A	
2.13	Mentoring System	Good mentoring system has been adopted.	A	Good mentoring system with a teacher for every 10 Students and meeting them at regular intervals.
2.14	Adequate facilities for teaching – learning, viz., classrooms, laboratories, computing equipment, etc.	Available	A	All the class rooms and laboratories are well equipped.
2.15	Advanced Research Centres	7 Advanced Research centres are made available	A	Good number of advanced research centres have been established out of the curriculum, promoting research culture.
2.16	Teachers attending professional development programs	266 faculty members attended professional development programs.	A	Faculty are being encouraged by the Management to attend FDPs by providing financial support and leave.
2.17	Organisation of Guest Lectures, Industrial Visits, Workshops, etc.,	Guest Lectures–20, Industrial visits – 17, Workshops- 21 APSSDC–740 students, IITB RC– (Students-122 Faculty-130)	A	
2.18	Online Certification Programmes	Institute has been accorded with all India 9 th rank with 'AAA' grade by NPTEL Faculty–139 Students– 605	A	Good culture among the faculty and students is prevailing on campus to register for online certification programmes.
2.19	Student Professional Society Chapter and Association Activities	IEI – 4 CSI – 2 IEEE – 7 IETE – 2 ISOI – 1 ISHRAE – 2	B	Activities are only limited to a few Programmes. The same may be promoted in all the other programmes, such as Civil and Aerospace Engineering.

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2.20	No. of Students undertaking field projects / internships	1057	A	Internship is made mandatory for all 3 rd year students and is given due credits.
2.21	Dissemination of PEOs, POs, PSOs, COs	PEOs, POs, PSOs and COs are disseminated in the Academic regulations - Syllabus books, and in the institute website. Also displayed at the strategic locations in the respective departments. COs and course articulation matrix are included in course handout.	A	
2.22	Attainment of COs, POs, PSOs	Measurement of attainment of COs, POs, PSOs is completed.	A	Targets have been fixed rationally and attainments have been completed.
2.23	Online student satisfaction survey	Conducting as per the guidelines of NAAC	A	

3. Research and Innovation				
S.No.	Item	HEIs i/p	Grade	Remarks
3.1	The institution has a well-defined policy for promotion of research	Yes (Incentives for publications, patent filing, matching grant)	A	Good number of faculty received incentives for publications, etc. approximately an amount of Rs. 2,00,000/-
3.2	The institution provides seed money to its teachers	Yes (Seed money is provided based on recommendations of R& D committee)	A	An amount of Rs. 5,00,000/- has been given to 20 faculty members in the institute
3.3	Teachers recognised as research guides	20 (JNTUK, JNTUA, JNTUH, ANU, SCSVMV, KLU, Annamalai University)	A	About 20 scholars are currently pursuing their PhD with these guides.
3.4	Sponsored research Projects and consultancy	Major projects – 2 (77.5 Lakhs) Minor projects – 3 (8.55 Lakhs) Ongoing projects – 5	C	It is only limited to few branches. Faculty from other departments have to be motivated to apply for more sponsored research projects.
3.5	Patents	No. of Patents Published: 03		
3.6	Workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices	10	A	
3.7	Research Publications	SCI – 13 Scopus – 27 UGC Approved – 61 Others – 139 Total – 240	B	Faculty should focus on publishing their research in SCI or Scopus journals.
3.8	No. of Faculty participated in conferences and symposia	68	B	Shall be motivated to attend conferences and build network.
3.9	Books and chapters in edited volumes / books published, and papers in national/international conference-proceedings.	Books and chapters in edited volumes – 1 Books published – 2 Conference Proceedings – 23	B	Faculty shall be motivated by providing some incentives for book publications / edited volumes / etc.

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3.10	Revenue generated from Consultancy	Civil: Rs. 45,900/- Mechanical: Rs.63,000/- Total: Rs. 1,08,900	C	Consultancy is very minimum and also limited to only two departments. Faculty may be motivated by giving substantial share to the faculty from the amount generated.
3.11	Linkages with institutions/industries for internship, on-the-job training, project work, sharing of research facilities etc.	26 Institute – 01 Industry – 25	B	It is only limited to Internship and Placement opportunities for the students. However, the linkages with Industries and higher level academic institutions may be focused.
3.12	Functional MoUs	12	C	It is only limited to job-training for the students.

4. Central library Facility

S.No.	Item	HEIs i/p	Grade	Remarks
4.1	Library is automated using Integrated Library Management System (ILMS)	Yes	A	
4.2	Collection of rare books, manuscripts, special reports or any other knowledge resource for library enrichment	Yes	A	No. of Rare books: 152
4.3	Does the institution have the following: e – journals, e-ShodhSindhu, Shodhganga membership, e-books, Databases	Yes (e – journals, e-ShodhSindhu, e-books)	A	
4.4	Expenditure for purchase of books and journals	32.74 Lakhs	A	
4.5	Availability of digital library with a provision for remote access on intranet	Yes (30 systems are available)	A	
4.6	Per day usage of library by teachers and students	437	B	It is only about 12% and students shall be motivated to read good resources available in the library.

Total volumes, periodicals, etc. in the library:

	Existing	Newly added	Total	Total Value in Rs.
Text Books	40541	1919	42460	80,91,653
Reference Books	13638	160	13798	46,38,575
Journals	800	140	940	13,42,892
e-Journals	6800	6800	6800	81,87,547

5. Examination Section				
S.No.	Item	HEIs i/p	Grade	Remarks
5.1	Number of days from the date of last semester-end/ year- end examination till the declaration of results	< 15days	A	
5.2	Percentage of student complaints/grievances about evaluation against total number appeared in the examinations	0%	A	A fool proof and transparent system is being followed.
5.3	Percentage of applications for revaluation leading to change in marks	24%	B	May be a large number and shall be looked into by incorporating strict measures of evaluation, like a fixed number of scripts per day, increasing the remuneration for valuation of each script, etc.
5.5	Status of automation of Examination division along with approved Examination Manual	Yes 100% automation	A	
5.6	Pass percentage of outgoing students	94%	A	

6. Amenities and Sports facilities				
S.No.	Item	HEIs i/p	Grade	Remarks
6.1	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	Exclusive stadium with all sports facilities is available.
6.2	Awards/medals for outstanding performance in sports, Yoga /cultural activities at national/international level	Total: 178 (International: 2 National: 5 State Level: 171)	A	
6.3	Number of sports, Yoga and cultural activities / competitions organised at the institution level.	Total: 24 (Sports – 09 Games - 12 Yoga – 01 Cultural – 02)	A	

7. Internet Connectivity				
S.No.	Item	HEIs i/p	Grade	Remarks
7.1	Institution frequently updates its IT facilities including Wi-Fi	Wi-Fi enabled campus	A	
7.2	Student - Computer ratio	Total number of computers for academic purpose: 1111 Student - Computer ratio: 3.5:1	A	More than sufficient systems for UG and PG are available
7.3	Available bandwidth of internet connection in the Institution	330 Mbps	A	
7.4	Facilities for e-content development such as Media centre, recording facility, Lecture Capturing System (LCS)	Recording Facility is available.	A	Media centre with LCS may also be developed.

8. Placements and Higher Education				
S.No.	Item	HEIs i/p	Grade	Remarks
8.1	Capability enhancement and development schemes	<ul style="list-style-type: none"> ➤ Guidance for competitive examinations ➤ Career Counselling ➤ Yoga and Meditation ➤ Remedial coaching ➤ Soft skill development ➤ Language lab ➤ Bridge course ➤ Personal Counselling 	A	
8.2	No of students benefited by guidance for competitive examinations and career counselling offered by the institution	Career counselling – 697 Competitive exams – 170	A	
8.3	Number of placements of outgoing students	546	B	Placements in core jobs for respective branches of engineering shall be improved.
8.4	Students Qualified in Competitive Examinations	51	B	Training to advanced learners to get more success in Competitive examinations shall be improved.

9.Alumni Engagement				
S.No.	Item	HEIs i/p	Grade	Remarks
9.1	The Alumni Association / Chapters	AALBRCE is registered with registration number 154 on 28th April, 2006 and is functional	B	It is only limited to the Institute. Opening Local chapters shall be encouraged.
9.2	Alumni contributions	Alumni are contributing in terms of Placements, Career guidance and guest lectures	B	Is only limited to a few placements and job training on campus.
9.3	Alumni Association / Chapters meetings Conducted	Alumni Association meeting is conducted as alumni day once in a year in the institute.	B	Is to be conducted at various local chapters regularly.

10.Social service and Extension activities				
S.No.	Item	HEIs i/p	Grade	Remarks
10.1	Initiatives taken to engage with and contribute to local community	NSS unit is functional and involving students in activities like Blood donation camps, Tree plantations, Pulse polio camps to local children etc.	A	
10.2	No. of Activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national social cohesion as well as for observance of fundamental duties integration and communal harmony	15	A	
10.3	Extension activities in the neighbourhood community in terms of impact and sensitising students to social issues and holistic development	43 (NSS-41, NCC-2)	A	
10.4	Awards and recognition received for extension activities	02 (Nehru Yuva Kendra by	B	

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		Ministry of Youth Affairs & Sports, Govt of India)		
10.5	Extension and outreach programs conducted in collaboration Government Organisations, Non-Government Organisations	02 (Swatch Pakwada Week Program-834 AIDS Awareness Program-67)	B	
10.6	Number of students participating in extension activities	380 (through NSS)	B	It is limited to 12% of the institute strength and shall be encouraged.
10.7	Village adaptation	Pondugala village is adopted	A	Adapting one Village every year.
10.8	NCC (Awards)	One student participated in republic day parade in New Delhi. One more student participated in republic day parade at Amaravathi, AP. (B- Certificate: 25) (C- Certificate: 24)	A	

11. Administrative Procedures				
S.No.	Item	HEIs Input	Grade	Remarks
11.1	Budget allocation, excluding salary for infrastructure augmentation	Standard and regular procedures are followed.	A	
11.2	Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component	1699.87 Lakhs	A	
11.3	Established systems and procedures for maintaining and utilizing physical, academic and support facilities -laboratory, library, sports complex, computers, classrooms etc.	Standard and regular procedures are followed.	A	
11.4	Students benefited by scholarships and freeships provided by the Government.	Number of students benefited by Scholarships – 1580 Freeships – 2440	A	
11.5	Students benefited by scholarships, freeships, etc. provided by the institution besides government schemes	Class toppers – 58 (Rs. 5.8 Lakhs) 100% attendance – 168 (Rs. 8.4 Lakhs) Economically poor students – 41 (Rs. 10.3 Lakhs)	A	Institute is providing good encouragement through scholarships and freeships to the meritorious as well as needy students.
11.6	Support to differently abled students -	Adequate facilities are made available	A	
11.7	Transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases	Mechanisms are in place.	A	
11.8	Presence of an active Student Council & representation of students on academic & administrative bodies/committees	Active student representation is ensured through academic & administrative bodies/committees	B	Though an exclusive student council is not existing on campus, the representation of students in various academic and administrative bodies is ensured.
11.9	Professional development / administrative training programs organized by the Institution for teaching and non-teaching staff	21 Teaching –13 Non-teaching – 08	A	

12. Governance, Leadership and Management

S.No.	Item	HEIs Input	Grade	Remarks
12.1	Governance of the institution is reflective of an effective leadership in tune with the vision and mission of the Institution	Governing body meeting is conducted twice a year to ensure institute activities to be in tune with vision and mission.	A	
12.2	Decentralization and participative management	Proactive and participative management is in place. Administrative hierarchy is ensured by governing body.	A	
12.3	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	
12.4	Organizational structure of the Institution including governing body, administrative setup, and functions of various bodies, service rules, procedures, recruitment, promotional policies as well as grievance redressal mechanism	All are in place.	A	
12.5	Implementation of e-governance in areas of operation	The following areas of e-governance are in place: Administration Finance and Accounts Student Admission and Support Examination	A	
12.6	Effectiveness of various bodies/ cells/ committees is evident through minutes of meetings and implementation of their resolutions	Effectively implemented.	A	

12.7	Welfare measures for teaching and non-teaching staff	Welfare measures like EPF facility, Health Insurance, Concessional Transport, Free medical facility, Gratuity for supporting staff and fee concession for staff children are in place.	A	
12.8	Performance Appraisal System for teaching and non-teaching staff	It is in implementation	A	
12.9	Institutional strategies for mobilisation of funds and the optimal utilisation of resources	Promoting R&D by giving incentives to the faculty Conducting National/State level online examinations Promoting Consultancy through In-house expertise Optimal utilisation of resources is ensured through appropriate auditing.	A	
12.10	Teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies	Total financial support of Rs. 4.8 Lakhs is given to 221 faculty members	A	

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13. Best Practices of the Institution				
S.No.	Item	HEIs Input	Grade	Remarks
13.1	Number of gender equity promotion programs organized by the institution	5 such programmes are conducted.	A	
13.2	Power requirement of the Institution met by the renewable energy sources	400kVA Solar Photovoltaic system	A	
13.3	Percentage of lighting power requirements met through LED bulbs	17.39%	A	
13.4	Waste Management steps	Appropriate Solid waste, Liquid waste and e -waste management measures are taken care.	A	
13.5	Rain water harvesting structures and utilization in the campus	Appropriate measures are implemented.	A	
13.6	Green Practices	Vehicle entry is restricted Use of bicycles in the campus is promoted. Plantation programme has been taken up by the NSS unit. Greenery is well maintained in the campus.	A	
13.7	Expenditure on green initiatives and waste management (Excluding salary component)	Rs. 4.5 Lakhs	A	
13.8	Initiatives to address locational advantages and disadvantages	Necessary initiatives have been taken to strengthen the interaction with the nearby Industries Adequate transportation facility is provided to the students Adequate travel grant is provided to faculty	A	
13.9	Code of conduct handbook exists for students, teachers, governing body, administration including Principal /Officials and support staff	Available and also disseminated in institute website	A	

13.10	Display of core values in the institution and on its website	Disseminated * in institute website	A	
13.11	Activities to increase consciousness about national identities and symbols; Fundamental Duties and Rights of Indian citizens obligations and other constitutional obligations	Awareness programmes are conducted	A	
13.12	Functioning is as per professional code of prescribed / suggested by statutory bodies / regulatory authorities for different professions.	Institute is functioning as per the code prescribed by statutory/regulatory bodies	A	
13.13	Organizes national festivals and birth / death anniversaries of the great Indian personalities.	YES	A	
13.14	Transparency in its financial, academic, administrative and auxiliary functions	Transparency is maintained regarding academic, administrative, and financial information.	A	

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14. IQAC				
S.No.	Item	HEIs Input	Grade	Remarks
14.1	Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes	Significant contributions are made	A	
14.2	The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms	Monitor-Measure-Modify mechanism of reviewing is implemented as per norms.	A	
14.3	Quality initiatives by IQAC for promoting quality culture	Assessing the faculty through quality parameters of self-appraisal forms and providing required suggestions for improvement. Arranging training on pedagogy every semester for all newly admitted faculty. Conducting seminars / workshops, FDPs on emerging technologies for faculty. Conducting Guest Lectures by Industry experts. Arranging regular training / certification programmes for students and teaching/supporting staff. Encouraging R&D and Consultancy.	A	

Best Practices followed in the Institute:

- Value addition by certification programs as well as technology training is focused through Skill Development Centre (APSSDC, IITB-RC, NPTEL, Spoken tutorial, Swayam Prabha).
- Student participation in Innovation, Incubation and Entrepreneurship activities through CIIE.
- Departmental initiative for placements in core domains other than central Training and Placement cell.
- The course coordinator system has been continued.
- Conduct of subject based Seminars and workshops have been continued. Involvement of students in various committees has been increased.
- The practice of conducting Guest lectures, Industrial visits and Industrial training has been enhanced.
- The functioning of Research groups to promote better quality research and publications has been strengthened.
- More Practical orientation is supported through Mini-projects, Technical seminars.
- Industry Internship is made mandatory for all students
- Program electives, Open electives and Mandatory courses as well as MOOCs are incorporated

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11. Continuous inputs from all stakeholders like Alumni, Academicians and Industry experts are taken to improve the curriculum on regular basis.
12. To ensure a good character with better ethical values among the students, professional ethics course has been introduced in the curriculum for all the students
13. Additional Training on communication skills and soft skills is further increased.
14. Research aptitude among the students is inculcated through project implementations.
15. An Advisory Committee has been formulated for every department with suitable external members.
16. A regular monitoring of Academic growth is taken care by the College Advisory Board (CAB)
17. Improved Membership in various professional bodies like IEEE, CSI, ISTE, IE, IETE, ISHRE
18. Institute has signed some MOUs and established Tie ups/collaborations with reputed organizations and institutions
19. Improved class room facilities with ICT tools.
20. Participation of students in Sports, Games at National and International level, NCC, NSS activities.

Suggestions for improvement:

1. Sponsored research and consultancy is limited to a few departments. The faculty members of other departments have to be motivated towards applying for sponsored research projects.
2. Research output by a way of publications in SCI / Scopus indexed journals needs a substantial improvement.
3. Motivate the faculty without PhD to pursue the PhD as a priority.
4. A strong alumni base needs to be established so that they may be invited to the Institute on a regular basis to promote interactions among the students on campus with the alumni.
5. Placements are majorly in software for most of the branches of engineering. Efforts are required to invite core companies for campus placement.
6. Industry-Institute interaction may be given a priority.

Signature of AAA member 1

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