



YEARLY STATUS REPORT - 2020-2021

Part A	
Data of the Institution	
1.Name of the Institution	LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING
• Name of the Head of the institution	Dr. Kadimalla Appa Rao
• Designation	Principal
• Does the institution function from its own campus?	Yes
• Phone No. of the Principal	08659222933
• Alternate phone No.	08659223936
• Mobile No. (Principal)	8333905791
• Registered e-mail ID (Principal)	principal@lbrce.ac.in
• Address	L.B.Reddy Nagar
• City/Town	Mylavaram
• State/UT	Andhra Pradesh
• Pin Code	521230
2.Institutional status	
• Autonomous Status (Provide the date of conferment of Autonomy)	17/09/2010
• Type of Institution	Co-education
• Location	Rural

• Financial Status	Self-financing				
• Name of the IQAC Co-ordinator/Director	Prof.B.Ramesh Reddy				
• Phone No.	08659222933				
• Mobile No:	9440990927				
• IQAC e-mail ID	iqac@lbrce.ac.in				
3.Website address (Web link of the AQAR (Previous Academic Year)	https://lbrce.ac.in/iqac/iqac%20docs/AOAR%202019-20.pdf				
4.Was the Academic Calendar prepared for that year?	Yes				
• if yes, whether it is uploaded in the Institutional website Web link:	https://lbrce.ac.in/academic_pages/aycalender.php				
5.Accreditation Details					
Cycle	Grade	CGPA	Year of Accreditation	Validity from	Validity to
Cycle 1	A	3.09	2013	05/01/2013	04/01/2018
Cycle 2	B++	2.96	2018	02/11/2018	01/11/2023
Cycle 2	A	3.20	2022	28/02/2022	27/02/2027
6.Date of Establishment of IQAC			01/08/2012		
7.Provide the list of Special Status conferred by Central and/or State Government on the Institution/Department/Faculty/School (UGC/CSIR/DST/DBT/ICMR/TEQIP/World Bank/CPE of UGC, etc.)?					

Institution/ Department/Faculty/School	Scheme	Funding Agency	Year of Award with Duration	Amount
Lakireddy Bali Reddy College of Engineering	CPE	UGC	01/04/2016	0
Lakireddy Bali Reddy College of Engineering	2 (f)	UGC	22/04/2010	0
Lakireddy Bali Reddy College of Engineering	12 (B)	UGC	28/09/2011	0

8. Provide details regarding the composition of the IQAC:

<ul style="list-style-type: none"> Upload the latest notification regarding the composition of the IQAC by the HEI 	View File	
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9. No. of IQAC meetings held during the year

4

<ul style="list-style-type: none"> Were the minutes of IQAC meeting(s) and compliance to the decisions taken uploaded on the institutional website? 	Yes
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<ul style="list-style-type: none"> If No, please upload the minutes of the meeting(s) and Action Taken Report 	No File Uploaded	
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10. Did IQAC receive funding from any funding agency to support its activities during the year?

No

<ul style="list-style-type: none"> If yes, mention the amount 	
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11. Significant contributions made by IQAC during the current year (maximum five bullets)

Participation in NIRF India Rankings 2021, DataquestCMR T Schools Survey 2021, Dataquest Digital Index 2021. The IQAC collects required data and information on Academic Programmes, Students

Enrolment, Faculty Strength, Infrastructure and Quality of the Programmes from all the departments and different sections of the College for regular update.

Organized FDPs on Emerging Areas, ICT tools , LMS, Hybrid mode of teaching and Administrative training programs for supporting staff. Organized training program on Pedagogical methods in teaching for all newly recruited faculty and faculty with less Faculty Performance Index(FPI) by considering the feedback from students, academic performance and contributions. Conducted awareness program on OBE and Technology Enhanced Learning (TEL).

Introduced collection of feedback on curriculum from all stakeholders. Quality analysis of Semester End Examination(SEE) papers is introduced. Revised Self Appraisal forms by incorporating additional necessary information. Encouraged faculty to conduct regular parent teacher meetings.

Faculty and students are further encouraged to take MOOCs online certification courses and strengthen collaborations and Industry Institute Interaction through Industry Institute Interaction Cell.

Faculty are motivated to file the patents and publish the research work in SCI/WoS/SCOPUS and UGC/AICTE approved journals.

12. Plan of action chalked out by IQAC at the beginning of the academic year towards quality enhancement and the outcome achieved by the end of the academic year:

Plan of Action	Achievements/Outcomes
<p>Applying for Accreditations</p>	<p>NAAC Re-Assessment SSR is submitted on 01-09-2021 and DVV clarifications are submitted on 30-09-2021. NAAC peer team visit is done on 21-02-2022 & 22-02-2022 and Institution is graded as A with 3.2 score. UG-Mechanical Engineering (ME) program applied for NBA reaccreditation and UG-CSE, UG-IT,UG-ECE and UG-EEE programs are submitted compliance to NBA.</p>
<p>Enhancing Students' English Communication Skills and Programming Skills</p>	<ul style="list-style-type: none"> • Training on Programming Skills by Internal certified faculty (17 Faculty are certified). • 756 placements during the A.Y with highest package of 10LPA are obtained • 81 No. of Students have achieved success in various competitive examinations like GATE, TOFEL,CAT, GMAT, etc.
<p>Encouraging faculty to involve in research work leading to publications in reputed journals and Patent Publications</p>	<ul style="list-style-type: none"> • Incentives around Rs. 3,46,000 to 54 faculty members for publications, sponsored research grants financial assistance for filing patents have been extended by college management that helps to increase overall R D accomplishments. • 9 Advanced Research Labs are made available with the latest software tools and equipment. • 184 research papers are published in indexed journals • 42 patents are published
<p>Encouraging faculty for applying for sponsored Projects and consultancy work.</p>	<ul style="list-style-type: none"> • 30 Research proposals have been submitted to different funding agencies worth of 765.93 Lakhs • 01 projects are sanctioned worth of 34.13 Lakhs

Improving the activities of CIIE to come out with Innovative ideas and Startup proposals

• ARIIA Ranking-2021: Listed in the Band "Excellent" 02 startups are launched • Mr. D.Sarath Kumar has started the second Start-Up INTERN-STUMP with LLP No. AAX-6999. • Mr. Sai Jaykrishna launched his first Start-Up "CHOAS Electronics" with LLP No.AAV-7667. • A project "Wearable Antennas for Health Care" has been shortlisted to be published in AICTE Chhatra Vishwakarma Award (CVA) booklet 2020. • III B.Tech. ME student received "Dassault Systems Project of the year 2020" for the Project "Healthy Washing Machine" from Sri. Ch. Madhusudhan Reddy garu, Chairman, APSSDC and Prof. D.V. Rama Koti Reddy garu, Executive Director, APSSDC. Centre for Innovation, Incubation and Entrepreneurship (CIIE) is accorded a 2.5 STAR Rating to by IIC,MHRD. • CIIE has received a grant of Rs. 40,000/ from IIC, MHRD, AICTE • 10 innovative prototypes viz., Smart Socket, Human Excreta Cleaning Machine, Tracking Tick, Green Bike, Smart Skivvy, Street Light switching automatically, Low cost Home Automation, Vehicle Tracker using GPS, UV Sanitizer and Water Bike were developed at CIIE. • Conducted Smart India Hackathon SIH 2020 by LBRCE and IICMHRD • Two students have successfully completed 1 year Technology Entrepreneurship Programme in Indian School Of Business (ISB) Hyderabad • 11 activities are conducted by LBRCECIIE to promote Innovation,

<p>Offering value added courses on Emerging Technologies</p>	<p>Incubation and Entrepreneurship.</p> <ul style="list-style-type: none"> • 15 Value added courses are conducted on latest technologies and career guidance and total 978 students are successfully completed the value added courses • 157 students are successfully completed the various NPTEL(Swayam) online courses on latest technologies during the period Jan 2021 to April 2021. Among them, 16 students are awarded as Elite+Silver, 95 students as Elite and 40 are successfully completed. • 146 students are successfully cleared the various NPTEL (Swayam) online courses on latest technologies during the period June 2020 to October 2020. Among them, 6 students are awarded as Elite+Gold , 31 students are awarded as Elite+Silver, 79 students as Elite and 30 are successfully completed.
<p>Encouraging faculty members to enhance their teaching learning abilities</p>	<ul style="list-style-type: none"> • Faculty members are effectively using ICT facilities, LMS and Microsoft Teams • 19 Faculty development Programs are organised. • 13 Faculty members were provided with financial support to attend International Conferences, FDPs, Workshops and Certifications programs • 40 faculty members have successfully completed the various NPTEL(Swayam) online courses on latest technologies during the period Jan 2021 to April 2021. • 28 faculty members have successfully cleared the various NPTEL (Swayam) online courses on latest technologies

	<p>during the period June 2020 to October 2020. Among them, 05 are the toppers, 02 Elite+Gold, 24 are awarded as Elite+Silver, 27 are Elite and 15 faculty have successfully completed. • An inhouse teacher training program for the newly joined faculty and faculty with poor performance index is organized by IQAC and mentoring by senior faculty to improve the Performance Index.</p>
<p>Participation in Institutional Rankings/Survey</p>	<p>? ARIIA 2021 Rankings: "BAND EXCELLENT" (Private/Self Financed) ? Internshala Rankings 2021: ? All India Ranking: 340 ? Zonal Rank: 134 ? Outlook ICARE 2021 Magazine Survey: ? 101-250 Rank Band ? Dataquest T Schools Survey 2021: ? 74 Rank (Among all Govt. and Private Colleges) ? 62 Rank (Among all Private Colleges) ? Dataquest Digital Index 2020 : 35th Rank ? AAA+ grade awarded by Careers 360 (2020) ? 2.5 STAR Rating to CIIE by MHRD Institution's Innovation Cell</p>
<p>13. Was the AQAR placed before the statutory body?</p>	<p>Yes</p>
<p>• Name of the statutory body</p>	
<p>Name of the statutory body</p>	<p>Date of meeting(s)</p>
<p>Academic Council</p>	<p>08/01/2022</p>
<p>14. Was the institutional data submitted to AISHE ?</p>	<p>Yes</p>
<p>• Year</p>	

Year	Date of Submission
28/01/2021	31/01/2022
Extended Profile	
1.Programme	
1.1 Number of programmes offered during the year:	15
File Description	Documents
Institutional Data in Prescribed Format	View File
2.Student	
2.1 Total number of students during the year:	3972
File Description	Documents
Institutional data in Prescribed format	View File
2.2 Number of outgoing / final year students during the year:	1014
File Description	Documents
Institutional Data in Prescribed Format	View File
2.3 Number of students who appeared for the examinations conducted by the institution during the year:	3907
File Description	Documents
Institutional Data in Prescribed Format	View File
3.Academic	
3.1 Number of courses in all programmes during the year:	608

File Description	Documents
Institutional Data in Prescribed Format	View File
3.2	238
Number of full-time teachers during the year:	
File Description	Documents
Institutional Data in Prescribed Format	View File
3.3	238
Number of sanctioned posts for the year:	
4.Institution	
4.1	414
Number of seats earmarked for reserved categories as per GOI/State Government during the year:	
4.2	73
Total number of Classrooms and Seminar halls	
4.3	1342
Total number of computers on campus for academic purposes	
4.4	842.72
Total expenditure, excluding salary, during the year (INR in Lakhs):	
Part B	
CURRICULAR ASPECTS	
1.1 - Curriculum Design and Development	
1.1.1 - Curricula developed and implemented have relevance to the local, national, regional and global developmental needs which are reflected in Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) of the various Programmes offered by the Institution.	
The curricula developed have relevance to the regional/national/global developmental needs with well-defined learning objectives and outcomes at programme and course level. The department and the institute are guided and monitored in the	

preparation of course curriculum by two bodies, namely Board of Studies and Academic Council and typically undergoes with the following:

The Institute follows the guidelines issued by the regulatory bodies such as UGC, AICTE, affiliated university JNTUK, Kakinada and Andhra Pradesh State Council of Higher Education (APSCHE) while designing the curricula. A series of all faculty meetings are conducted in correlation to the stated Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs). The set of courses which require modifications (deletion/addition) are prepared and programme curricula adopted at other leading academic institutes in India and abroad are compared.

The Institute hosts reunion meets of Alumni. During such meets the institute takes the initiative of eliciting their views and suggestions in respect of required changes in curriculum. Several Memoranda of Understandings (MoUs) with local and national industries relevant to programs have been signed to make students acceptable at local, national and global level. In order to have right mix of curriculum, pedagogy and assessment to achieve the desired course and program outcomes, curriculum development and approval involves deliberations at various levels through relevant committees such as Department Advisory Board, Program Assessment Committee and Board of Studies.

For the effective design of curriculum structure feedback is collected from students, faculty, alumni, parents and employers. Also by conducting workshops, seminars and conferences periodically, faculties get an opportunity to interact with the academic and industrial experts which helps to design the curriculum more effectively. The recommendations of these committees are put up to Board of Studies with detailed programme structure, curricula and syllabi and further recommendations of BoS are put up for the approval of Academic Council.

The Institute introduced Choice Based Credit System (CBCS) and self-learning courses using MOOCs platform through SWAYAM, Coursera and some industry offered courses for undergraduate programmes and utilizes Learning Management System (LMS) for effective learning process. Value added courses to enhance communication, employability and entrepreneurship skills are included in the curriculum. Internship and live projects are also undertaken by students to enhance employability.

The Institute established Centre for Innovation, Incubation and

Entrepreneurship (CIIE) that helps in developing entrepreneurship skills among the students through their interaction with successful entrepreneurs and other related bodies. The Institute encourages the faculty and students to work in emerging areas by involving local industry. Curriculum revision is a continuous process with respect to elective and laboratory courses as per the need of the industry and regulatory bodies from time to time even though the normal cycle of revision is 3 years.

File Description	Documents
Upload additional information, if any	No File Uploaded
Link for additional information	https://lbrce.ac.in/academic_pages/acadregulations.php

1.1.2 - Number of Programmes where syllabus revision was carried out during the year

15

File Description	Documents
Minutes of relevant Academic Council/BOS meeting	View File
Details of syllabus revision during the year	View File
Any additional information	No File Uploaded

1.1.3 - Number of courses focusing on employability/entrepreneurship/ skill development offered by the Institution during the year

494

File Description	Documents
Curriculum / Syllabus of such courses	View File
Minutes of the Boards of Studies/ Academic Council meetings with approval for these courses	View File
MoUs with relevant organizations for these courses, if any	No File Uploaded
Any additional information	No File Uploaded

1.2 - Academic Flexibility**1.2.1 - Number of new courses introduced across all programmes offered during the year**

146

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	View File
Any additional information	No File Uploaded
Institutional data in prescribed format (Data Template)	View File

1.2.2 - Number of Programmes offered through Choice Based Credit System (CBCS)/Elective Course System

15

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	View File
Any additional information	No File Uploaded
List of Add on /Certificate programs (Data Template)	View File

1.3 - Curriculum Enrichment

1.3.1 - Institution integrates cross-cutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability, and Human Values into the curriculum

All the programmes offered in the institution include courses that deal with cross-cutting issues relevant to Professional Ethics, Gender, Human values, Environment and Sustainability. Such cross-cutting issues are integrated into the curriculum as Core, Mandatory and Elective courses in the undergraduate as well as postgraduate programmes.

The institution offers courses on Professional ethics and Human values, Business ethics and Corporate Governance, Human Resource Management, Environmental Science, Environmental Engineering, Renewable Energy Sources, Renewable Energy Technologies, Green buildings, Water and Wastewater Engineering, Environmental Sanitation, Energy Environment and Pollution, and Energy Conservation and Management.

PROFESSIONAL ETHICS AND HUMAN VALUES:

We believe every student needs to develop a set of beliefs, attitudes, and habits that would help him lead a life of productivity with a strong moral character. The prime objective is to make each individual harness his true potential in his chosen field so that he/she is able to deal with challenges in engineering practice with confidence and ethics.

The concept of "Professional Ethics and Human Values" is a very relevant subject in recent times due to the prevalence of a professional environment affected by conflicts and stress. In such a scenario, this course will certainly improve one's ability and judgement and refine one's behaviour, decisions, and actions in performing the duty to the family, organization, and to the society.

The pertinent issues in professional ethics are analysed to help students develop the right understanding, which is focused on the development of their ethical competence. Towards the end of this course, students are expected to develop the right knowledge and motivation to undertake a journey towards holistic and value-based living.

ENVIRONMENT AND SUSTAINABILITY:

Our focus has always been to educate young minds to be sensitive towards the environment, make judicious use of natural resources and be respectable towards the nature and the various life forms. The courses on Environment and sustainability help students to understand the environment and nature in the most practical way with the focus on renewable resource harvest, ecology, biodiversity, pollution control and sustainable development. This intends to better equip students to make informed decisions and taking ecologically positive actions that are in the interests of all species in the natural habitat.

A Green Energy Club, PRAKRUTHI- The Environmental club organizes various programs to enhance environmental awareness and make students and staff become conscious of their roles in environment protection.

GENDER:

In addition to enriching the curriculum by integrating cross-cutting issues, the institution organises various programs and events by the NSS unit, 4(A) Bn NCC Girls wing.

Moreover, the institution organizes special programs for girl students to achieve Women Empowerment and Gender sensitization through SAHELI-The Girls Club. Also, various awareness programs and commemorative events are organized on national and international days of importance such as World Health Day, World Cancer Day, World AIDS day, International Women's Day.

File Description	Documents
Upload the list and description of the courses which address issues related to Gender, Environment and Sustainability, Human Values and Professional Ethics in the curriculum	View File
Any additional information	No File Uploaded

1.3.2 - Number of value-added courses for imparting transferable and life skills offered during the year

15

File Description	Documents
List of value-added courses	View File
Brochure or any other document relating to value-added courses	View File
Any additional information	No File Uploaded

1.3.3 - Number of students enrolled in the courses under 1.3.2 above

978

File Description	Documents
List of students enrolled	View File
Any additional information	No File Uploaded

1.3.4 - Number of students undertaking field work/projects/ internships / student projects

969

File Description	Documents
List of programmes and number of students undertaking field projects / internships / student projects	View File
Any additional information	No File Uploaded

1.4 - Feedback System

1.4.1 - Structured feedback and review of the syllabus (semester-wise / year-wise) is obtained from 1) Students 2) Teachers 3) Employers and 4) Alumni

A. All 4 of the above

File Description	Documents
Provide the URL for stakeholders' feedback report	https://lbrce.ac.in/igac/igacurriculumfeedback.php
Upload the Action Taken Report of the feedback as recorded by the Governing Council / Syndicate / Board of Management	View File
Any additional information	No File Uploaded

1.4.2 - The feedback system of the Institution comprises the following

A. Feedback collected, analysed and action taken made available on the website

File Description	Documents
Provide URL for stakeholders' feedback report	https://lbrce.ac.in/igac/igacurriculumfeedback.php
Any additional information	No File Uploaded

TEACHING-LEARNING AND EVALUATION

2.1 - Student Enrollment and Profile

2.1.1 - Enrolment of Students

2.1.1.1 - Number of students admitted (year-wise) during the year

1018

File Description	Documents
Any additional information	No File Uploaded
Institutional data in prescribed format	View File

2.1.2 - Number of seats filled against reserved categories (SC, ST, OBC, Divyangjan, etc.) as per the reservation policy during the year (exclusive of supernumerary seats)

373

File Description	Documents
Any additional information	No File Uploaded
Number of seats filled against seats reserved (Data Template)	View File

2.2 - Catering to Student Diversity

2.2.1 - The institution assesses students' learning levels and organises special programmes for both slow and advanced learners.

The learning levels of the students are identified by the interaction of the faculty with students in the class and based on that, mentoring will be done by the respective mentor. Special care is given to slow learners by conducting additional classes and suggested to follow the standard pre-requisite books to understand the basics.

The mandatory continuous assessment also helps to assess the learning levels of the students, to categorize the slow and advanced learners for further measures. Before the first mid examinations, special classes are conducted for the first year and lateral entry students who seek late admission to be competent with other students.

Slow Learners

Students who secure less than 50% of marks in continuous assessments, and have one or more backlogs in the semester end examinations are considered as slow learners. The identified slow learners will be considered for bridge classes, and monitored by respective counsellor. In order to support and motivate the slow learners, the following measures are taken.

Bridge Classes

These are the preparatory classes, conducted to gain the knowledge to meet the current course requirement.

Remedial Classes

These classes are conducted for slow learners-with backlogs to make them clear about the concepts and to qualify in the respective exams to reach the expected leaning level.

Mentoring system:

For an effective mentoring of the students, 20 to 25 students are assigned to a faculty mentor. Mentors classifies the allocated students according to their academic capabilities into following four categories: prerequisite ability, perception level, focus and comprehension. Then students will be counselled by the mentor to improve his/her academic performance accordingly.

The college endeavours to look after the total personality development of students through soft skills training programs, career counselling programs, and Co-Curricular and extra-curricular activities. Apart from counselling, expert lectures in personality development are conducted regularly to motivate the students to get them placed in industry, pursue higher studies, and to deal with stress management.

Advanced Learners

Those who secure CGPA of more than 7.75 are considered as advanced learners. The following choices are offered for their higher levels of learning in the respective discipline of study.

- Choice Based Credit System (CBCS) is offered by the institution for the advanced learners from second year onwards. This system provides the opportunity for the students to carry out their final year project in industry or MHRD institution as an intern.
- Concentrate on job-oriented trainings to get better placements.
- An adequate time to mould their ideas into design and development of innovative models.
- Opportunities to participate in various conferences, seminars, quiz competitions, and paper or poster presentations.
- To do online certificate courses in NPTEL/Course-era to strengthen their knowledge levels. Crash course on competitive examinations (GATE, GRE TOFEL, IELTS) for higher studies.

- Advanced training on C, Data Structures, JAVA, Python and Emerging Technologies.
- Industry specific training to make them industry ready.

Self-Learning/MOOCs Courses are introduced in curriculum to facilitate the slow/advanced learners to learn selected courses of various disciplines to acquire contemporary knowledge.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

2.2.2 - Student – Teacher (full-time) ratio

Year	Number of Students	Number of Teachers
30/06/2021	3972	238

File Description	Documents
Upload any additional information	View File

2.3 - Teaching- Learning Process

2.3.1 - Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

In addition to traditional teaching-learning methods, the institution is highly interested in providing innovative methods for enriching the learning experience. The methodologies include illustration, special lectures, field study, case-studies, project-based-methods, experimental methods and group-learning methods. The facilities arranged by the institution are:

EXPERIENTIAL LEARNING

Curriculum component

Every UG and PG programs are designed with minimum of two laboratory components in each semester. Conduct of these laboratory programs contribute towards experiential learning of the specific branch of engineering in a substantial way.

Internship:

Large percentage of students of UG and PG programs attend an internship for 4 weeks in the industry during the summer break of their program. Internship is included in curriculum and implemented in R14, R17 and R20 Regulations of B.Tech and M.Tech Programs.

Tool Based Training Programs: The Institution collaborates with APSSDC, DASSAULT, CISCO, ARK Solutions (ANSYS), NI Academy, AWS, MEMS, e-Yantra, Indwell Automation to train the faculty and students to meet the industry requirements.

Industry Driven National/Global Student Competitions: The institution encourages the students to participate in competitions conducted by IIT/NIT/IIIT/AICTE at national/global level.

Field Visits: The Institution gives top priority for industrial visits as a value-added learning method to students to explore the industry.

PARTICIPATIVE LEARNING

Seminar/Workshops:

Presentation of seminar by students is mandatory in all programs offered at the institution. Usually, students present seminar on contemporary topics as well as state-of-the-art technologies. Students are trained on regular basis in modern trends and innovative technologies by organizing workshops/seminars by experts from industry.

Group Assignments/Mock Interviews: Group discussions/tasks are conducted from second year onwards as a part of soft skills courses. Mock interviews are conducted before the campus placements, to improve confidence levels of the student.

Case studies: The case study method is a participatory, discussion-based way of learning where students gain skills in critical thinking, communication, and group dynamics. Appropriate integration of case studies in chosen subjects are arranged by all departments.

Student Association and Professional Society chapters: Every department has a student association and professional society chapters through which various activities like quizzes, group discussions, seminars, and guest lectures are conducted.

PROBLEM SOLVING LEARNING**Project-based Learning:**

Project work is mandatory for all the programs offered at the institution. The effective phases of survey, case-study, implementation, testing and report writing ensure the required project-based learning among the students. Some courses are augmented with learning through implementation of Problem Assisted Learning (PAL)/ Problem Based Learning (PBL).

Tutorials: Intended to have individual attention to develop better problem-solving skills with assistance of faculty.

Developing innovative models: Students are encouraged to take up real-world problems for developing new products/models with novelty in perspective of meeting challenges in industry, government and academia.

Mini and Major projects: Work done in the earlier semesters through field visits, and information gathered during Internship is continued for development, and implementation.

Hands-on training programs: In every semester, training activities covering advanced courses, and latest technology industry are held for students to explore, and practice on current technologies.

File Description	Documents
Upload any additional information	No File Uploaded
Link for additional Information	Nil

2.3.2 - Teachers use ICT-enabled tools including online resources for effective teaching and learning

Institution encourages intensive use of ICT tools and online resources for effective teaching and learning processes. In this regard all classrooms, seminar halls, laboratories, and auditoriums are equipped with ICT facilities which include LCD projectors, computers with internet connection to make students understand the concepts easily by seeing the technology or concept visually. Additionally, every department has smart classrooms equipped with interactive panels. Flipped classroom methodology is also adopted to make teaching and learning process healthier using licenced Microsoft Teams. The lecture notes, and PowerPoint presentations are

updated in LMS-MOODLE and MS Teams to keep the student updated even in his absence to the class. Institution motivates both students and faculty to register and learn from various MOOC platforms.

ICT tools and campus LAN are used widely to conduct laboratory experiments virtually. Industrial expert lectures from data base are used to train the students such that expertise in domain-based knowledge is gained through usage of such tools online. All faculty members are effectively using the available ICT enabled tools for effective implementation of teaching-learning process. Good number of faculty members are using learning material developed by them as well as SWAYAM, NPTEL, MIT OER, YouTube, Coursera. SWAYAMPRAKHA DTH Channels are available to strengthen the teaching-learning. A media centre is established to develop learning materials in the form of e-content.

The Central Library of our institution is also equipped with ICT tools. Digital library provides facilities to access e-resources, e-journal articles, e-books from any place, and OPAC to check the catalogue of library resources.

File Description	Documents
Provide link for webpage describing ICT enabled tools including online resources for effective teaching and learning process	https://lbrce.ac.in/studentcorner_pages/central_library.php#digital
Upload any additional information	View File

2.3.3 - Ratio of students to mentor for academic and other related issues

2.3.3.1 - Number of mentors

184

File Description	Documents
Upload year-wise number of students enrolled and full-time teachers on roll	View File
Circulars with regard to assigning mentors to mentees	View File

2.3.4 - Preparation and adherence to Academic Calendar and Teaching Plans by the institution

The Institution follows a well-planned academic calendar which is given by College Advisory Board (CAB) members. The academic calendar is prepared with minimum number of working days, duly taking the national & public holidays, festival breaks, summer vacation, in addition to the college fests, training programmes, and placement activities into cognizance. The academic calendar provides adequate balance between academic and non-academic activities, teaching, and examination schedule. The academic calendar is approved by the Academic Council. Then calendar is uploaded in the institution website, and communicated through the webmail to all the relevant functionaries for adherence.

Every faculty member prepares a 'Lesson Plan' for every course as per academic calendar and it is uploaded in the website at the beginning of the semester and is duly approved by the Head of the department. Respective faculty prepare teaching plans as a part of their course files keeping the following points in view

- Course Objectives and Outcomes
- COs-POs & PSOs Articulation Matrix
- Syllabus content to be delivered
- Time allotment
- Teaching methodologies
- Assessment tools
- Cognitive levels of learning
- Content beyond the syllabus

Review and Monitoring :

- Course coordinators undertake an intense review in relevant courses
- Module coordinators take up a conceptual review related to delivery and assessment of different courses in tune with the respective modules
- Programme coordinators take up a comprehensive review
- Academic Audit is carried out twice in a semester
- Head of the Department, Dean-Academics and IQAC-Coordinator are vested with the authority to seek any clarification from any of the functionaries in the process and suggest any modification at any point in the process and the required modifications are by the respective members of faculty.
- Moreover, at the beginning of academic year, every programme coordinator prepares the calendar of academic events like workshops, conferences, guest lectures, industrial visits, FDPs, seminars and webinars. Action Taken Reports on above

activities are prepared and submitted to IQAC.

The institution strictly adheres to the academic calendar, except at unforeseen circumstances without prejudice to the overall deadlines and some of the important items as a part of the academic/activity calendar of the college is permitted subjected to the approval in the CAB meeting chaired by the principal.

File Description	Documents
Upload the Academic Calendar and Teaching Plans during the year	View File

2.4 - Teacher Profile and Quality

2.4.1 - Number of full-time teachers against sanctioned posts during the year

238

File Description	Documents
Year-wise full-time teachers and sanctioned posts for the year	View File
List of the faculty members authenticated by the Head of HEI	View File
Any additional information	No File Uploaded

2.4.2 - Number of full-time teachers with PhD/ D.M. / M.Ch. / D.N.B Super-Specialty / DSc / DLitt during the year

69

File Description	Documents
List of number of full-time teachers with PhD./ D.M. / M.Ch. / D.N.B Super-Specialty / D.Sc. / D.Litt. and number of full-time teachers for 5 years	View File
Any additional information	No File Uploaded

2.4.3 - Total teaching experience of full-time teachers in the same institution: (Full-time teachers' total teaching experience in the current institution)

1794

File Description	Documents
List of teachers including their PAN, designation, Department and details of their experience	View File
Any additional information	No File Uploaded

2.5 - Evaluation Process and Reforms

2.5.1 - Number of days from the date of last semester-end/ year- end examination till the declaration of results during the year

File Description	Documents
List of Programmes and the date of last semester-end / year-end examinations and the date of declaration of result	View File
Any additional information	No File Uploaded

2.5.2 - Number of students' complaints/grievances against evaluation against the total number who appeared in the examinations during the year

308

File Description	Documents
Upload the number of complaints and total number of students who appeared for exams during the year	View File
Upload any additional information	No File Uploaded

2.5.3 - IT integration and reforms in the examination procedures and processes including Continuous Internal Assessment (CIA) have brought in considerable improvement in the Examination Management System (EMS) of the Institution

Examination reforms by the institution keeps its examination system open for modifications to strengthen it from time to time, to make the system fool proof. It also, address the grievances of students, if any. The institutional reforms activities keep the examination system at par with the examination reforms by AICTE.

The following significant reforms are implemented in the Examination Management System (EMS).

- Examination schedules are prepared by adhering to institution

academic calendar.

- In continuous assessment, a couple of midterm examinations, and assignments are conducted as per the schedules.
- The marks obtained by the students are posted in ERP(i-Campus) and it is made visible to both students and parents.
- All the permissible pre-examination and post-examination tasks have been integrated with Examination Management System using ERP. The college has been involving electronic processes in publishing the examination schedules in the college website, preparing database of eligible candidates, conducting examinations on pre-printed bar-coded and OMR answer booklets, and post-examination task- declaration of results, and issue of grade cards.
- The question paper for the Semester End Examinations (SEE) is also set by external members from premier institution. Enough care is taken to ensure the questions are standard, and from the syllabus with appropriate Bloom's Taxonomy.
- Special squad team comprises of internal faculty to take prompt actions by against malpractices, if any. Additionally, scribe for the Physically Challenged students is arranged as per norms.

Reforms

Positive Impacts

Four Sets of question papers are prepared for each course in SEE

- Confidentiality in the question paper selection.
- Prevention of question paper leakage.

Preparation of detailed scheme of evaluation by internal subject experts

- Uniformity in the evaluation among the evaluators

Initiation of flying squad team consisting of senior faculty members

- Strict vigilance for smooth conduct of examinations.
- Eliminates the possibilities of use of unfair means by students.

Inclusion of CCTV cameras

- Identifies the entry of un-authorized persons into the examination section.
- Continuous monitoring of activities of examination section and spot evaluation process.

Implementation of RFID locking system

- Prevents the entry of un-authorized persons into the examination section.
- Improved security to the examination management system.

Establishment of spot evaluation centre

- Confidentiality and custody of answer scripts are ensured.

Chief examiner in the evaluation

- Ensures the uniform evaluation among the valuers.

Inclusion of security features in grade cards

- Chances of manipulations are nullified.

Inclusion of OMR booklet with barcode

- Data processing has become more accurate.
- Absolutely no human error
- Reliable & no scope for manipulation.

Complete Automation of Examination Management System

- Considerable improvement in the speed, reliability, security, transparency, and confidentiality in the entire examination process.
- Declaration of results at the earliest.
- Students and Parents can view the results.

Examination Management System (EMS)

- Dedicated server with standby
- RFID locking
- Protected server with firewall security
- Authorised access to the Controller of Examinations
- CCTV surveillance

Continuous Internal Assessment on the examination management system:

An internal Examination Committee (EC) headed by Principal is constituted to monitor the activities of examination section continuously for effective and smooth functioning.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional Information	https://lbrce.ac.in/college_docs/policies/7.%20Examination%20policy.pdf

2.6 - Student Performance and Learning Outcomes

2.6.1 - Programme Outcomes and Course Outcomes for all Programmes offered by the institution are stated and displayed on the website and communicated to teachers and students

The Programme outcomes (POs), Program Specific Outcomes (PSOs) and Course Outcomes (COs) of all the programs offered by the institution are framed through discussion with course instructor, Course Coordinator, Module Coordinator, Program Assessment Committee (PAC), Department Academic Committee (DAC) and finally approved in BoS meetings. The COs are in line with POs & PSOs of the department.

The COs are published in academic regulations and curriculum book, and departmental website. They are made reachable to all the stakeholders of the program through institution website, faculty workshops, student awareness workshops, student induction programs and faculty meetings. The POs and PSOs are achieved through a curriculum that offers a number of courses. Each course has a defined set of COs that are mapped to the POs & PSOs. A set of performance criteria are used to provide a quantitative measurement of how well COs are achieved. The COs are thus directly and quantitatively assessed, and in turn contribute for attainment of POs and PSOs. Therefore, if the course outcomes are attained, it provides direct quantitative evidence that POs and PSOs are attained.

The course outcomes of each course are mapped to the Program Outcomes with a level of emphasis being substantial, moderate and slight.

File Description	Documents
Upload COs for all courses (exemplars from the Glossary)	View File
Upload any additional information	No File Uploaded
Link for additional Information	https://lbrce.ac.in/academic_pages/pospsos.php

2.6.2 - Attainment of Programme Outcomes and Course Outcomes as evaluated by the institution

The following processes & tools are used for the attainment of course outcomes.

Mid Examinations-This type of performance assessment is carried out during the examination sessions which are held twice a semester. Each and every exam is focused in attaining the course outcomes.

Quiz examination-This type of performance assessment is carried out during the examination sessions which are held twice a semester.

Semester End Examination-Semester End examination is a metric for assessing whether all the COs are attained or not. Examination is more focused on attainment of course outcomes and program outcomes using a descriptive exam.

Assignment-Each and every student is assigned with course related tasks during every course work and assessment will be done based on their performance. Grades/Marks are assigned depending on their innovation in solving/deriving the problems.

Rubrics are formulated for the assessment of laboratory, mini project, major project, seminar and internship courses.

The expected target level of course outcomes is set by PAC at the beginning of the semester based on the cognitive level of CO/the past COs attainment record/student performance in the previous semesters.

The performance of the students in the examinations (Mid-Semester, Assignment /Quiz & Semester End Examinations) during the semester in each course is used to compute the level of direct attainment of the COs.

Threshold value is taken as either class average mark or 60% of the marks allocated to the question whichever is maximum.

Attainment of Program Outcomes and Program Specific Outcomes:

List of assessment tools & processes

a) Direct assessment:

The performance of the students in the examinations during the semester in each course is used to compute the level of attainment of the POs and PSOs through the mapping of questions to COs and COs to POs and PSOs. CO-PO & PSO mapping (1(Slight), 2 (Moderate) and 3 (Substantial) for all the courses in the program are prepared by Module Coordinator Committee (MCC) and approved in the Department Academic Committee (DAC). An Excel sheet is used to compute the level of attainment of the POs and PSOs.

b) Indirect assessment:

The following indirect assessment tools are used for calculating PO & PSO attainments.

- Programme exit survey
- Student portfolio which includes student performance in Co-curricular activities, extra curricular activities, placements & higher studies and Extension activities.

The overall PO & PSO attainments are calculated by considering 70% of direct attainment and 30% of indirect attainment through surveys. Out of 30% of indirect attainment, 10% weightage is given for program exit survey and 20% for student portfolio.

File Description	Documents
Upload any additional information	View File
Paste link for additional Information	https://lbrce.ac.in/academic_pages/pospsos.php

2.6.3 - Pass Percentage of students

2.6.3.1 - Total number of final year students who passed in the examinations conducted by Institution

1013

File Description	Documents
Upload list of Programmes and number of students appear for and passed in the final year examinations	View File
Upload any additional information	No File Uploaded
Paste link for the annual report	https://lbrce.ac.in/examsection_pages/examannual.php

2.7 - Student Satisfaction Survey

2.7.1 - Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design its own questionnaire). Results and details need to be provided as a weblink

<https://lbrce.ac.in/igac/igacsss.php>

RESEARCH, INNOVATIONS AND EXTENSION

3.1 - Promotion of Research and Facilities

3.1.1 - The institution's research facilities are frequently updated and there is a well-defined policy for promotion of research which is uploaded on the institutional website and implemented

The institution has a well-defined R&D Policy in place to promote research by the faculty and students in tune with the requirements of the corporate world. The institution provides all necessary infrastructural facilities and a conducive environment to promote research activity in the campus. To enhance the research activities, Faculty are encouraged to apply for various funding agencies with industry collaboration and to pursue their research for any product development. However, the institution is ready to provide seed funding or partial funding based on the merit of proposals submitted by faculty or students. The faculty and students are encouraged to present their ideas / project proposals before the research committee for getting the sanction of seed funding in accordance with institution guidelines.

The faculty and students are given freedom to choose the research area of their choice and guidance is given to seek funding from various funding agencies and industries. The institution encourages the faculty by providing incentives for peer reviewed publications, writing books, and patents.

A thorough review is done for all research proposals seeking funding from various funding agencies by consulting the research committee comprising the Dean R&D, Head of respective department and subject expert(s) of the department. This committee also monitors the impact of research and consultancy and ensures non-violation of research & consultancy ethics, professional ethics, privacy of the people, human rights, causing problems to health & safety of human beings and damage to property before selecting the proposal. On completion of such research project the institution gives a free hand to report research results and findings of any researcher.

Research Centres and Advanced laboratories are established in various departments of the institution with necessary software and computing facilities for carrying out research activities. Four Research Centres of our institution are recognized by the affiliated university JNTUK, Kakinada to facilitate research and guide the PhD scholars.

The institution governing body reviews the complete research activity and takes the required budget allocation to upgrade the research facilities as well as other research policy decisions every year.

File Description	Documents
Upload the Minutes of the Governing Council/ Syndicate/Board of Management related to research promotion policy adoption	View File
Provide URL of policy document on promotion of research uploaded on the website	https://www.lbrce.ac.in/college_docs/policies/9.%20Research%20Policy.pdf
Any additional information	No File Uploaded

3.1.2 - The institution provides seed money to its teachers for research

3.1.2.1 - Seed money provided by the institution to its teachers for research during the year (INR in lakhs)

1.5871

File Description	Documents
Minutes of the relevant bodies of the institution regarding seed money	No File Uploaded
Budget and expenditure statements signed by the Finance Officer indicating seed money provided and utilized	View File
List of teachers receiving grant and details of grant received	View File
Any additional information	No File Uploaded

3.1.3 - Number of teachers who were awarded national / international fellowship(s) for advanced studies/research during the year

00

File Description	Documents
e-copies of the award letters of the teachers	No File Uploaded
List of teachers and details of their international fellowship(s)	View File
Any additional information	No File Uploaded

3.2 - Resource Mobilization for Research

3.2.1 - Grants received from Government and Non-Governmental agencies for research projects, endowments, Chairs during the year (INR in Lakhs)

26.73934

File Description	Documents
e-copies of the grant award letters for research projects sponsored by non-governmental agencies/organizations	View File
List of projects and grant details	View File
Any additional information	No File Uploaded

3.2.2 - Number of teachers having research projects during the year

10

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional Information	https://lbrce.ac.in/rnd_pages/rndprojects.php
List of research projects during the year	View File

3.2.3 - Number of teachers recognised as research guides

35

File Description	Documents
Upload copies of the letter of the university recognizing teachers as research guides	View File
Institutional data in Prescribed format	View File

3.2.4 - Number of departments having research projects funded by Government and Non-Government agencies during the year

6

File Description	Documents
Supporting document from Funding Agencies	View File
Paste link to funding agencies' website	Nil
Any additional information	No File Uploaded

3.3 - Innovation Ecosystem

3.3.1 - Institution has created an ecosystem for innovations and creation and transfer of knowledge supported by dedicated centres for research, entrepreneurship, community orientation, incubation, etc.

Eco System for Innovation

The institution has undertaken a comprehensive approach towards promotion of innovation, incubation, and entrepreneurship. While identifying the need for a concerted strategy, the institution realized that not just fragmented endeavours, but a pragmatic eco-

system needs to be developed. The manifestation of such eco-system at our institution is as follows.

1. Incubation and Start-up Policy

An Incubation & Start-up Policy is in place that facilitates students and faculty to carry out innovation activities pertaining to the remarkable technological developments by supporting them with suitable needs such as patent filing, commercialization of prototypes, start-ups etc.

2. Resources

Centre for Innovation, Incubation and Entrepreneurship (CIIE) is established with required facilities. The Institution is nurturing the innovation with a financial support up to 50% to students. Institution encourages the faculty and students to protect their Intellectual property Rights (IPR) by providing facilitates and financial support.

CIIE has been recognized by IIC in Nov. 2018 and the institution obtained Two-star rating in 2018-19 and Three-star rating in 2019-20 for activities undertaken as per IIC calendar.

R&D Cell has been actively engaging the faculty and students to carry out research in cutting-edge technologies by establishing advanced research labs in addition to four JNTUK recognized research centres. The institution has been making the seed money available for the faculty to undertake Innovative projects with relevant material resources.

3. Collaboration

Collaborations have been established with the following:

- Atal Incubation Centre, S.K. University, Anantapur.
- National Instruments
- DASSAULT Systems
- IISc, Bangalore
- IITB, Bombay
- CISCO
- European Centre for Mechatronics (ECM), Germany

Overall, the institution has 27 National/International MOUs to undertake collaborative activities for innovation, incubation, IPRs and Consultancy.

4. Activities

- Mini Projects/PAL/PBL and Major Projects have embedded the innovation as nucleus of the curriculum.
- Every year Innovative and entrepreneurship activities including Hackathons, Idea competitions (Ideation Fest), Awareness workshops on IPR and Cognitive and Critical thinking, Leadership Talks, etc. are conducted as per guidelines of Innovation cell, MHRD.
- The institution encourages the students to participate in Regional and National level Idea competitions conducted by the recognized bodies and institutions of reputation.

5. Outcomes

The sustained efforts have resulted in the following accomplishments

1. ARIIA 2021 Rankings: BAND-EXCELLENT
2. Mr. D.Sarath Kumar has started the second Start-Up INTERN-STUMP with LLP No. AAX-6999.
3. Mr. Sai Jaykrishna launched his first Start-Up "CHOAS Electronics" with LLP No.AAV-7667 (pfolio.in is developpe)
4. A project "Wearable Antennas for Health Care" has been shortlisted to be published in AICTE Chhatra Vishwakarma Award (CVA) booklet 2020.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	https://lbrce.ac.in/committees/ciie.php

3.3.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR), Entrepreneurship and Skill Development during the year

File Description	Documents
Report of the events	View File
List of workshops/seminars conducted during the year	View File
Any additional information	No File Uploaded

3.4 - Research Publications and Awards

3.4.1 - The Institution ensures implementation of its Code of Ethics for Research uploaded in the website through the following: Research Advisory Committee Ethics Committee Inclusion of Research Ethics in the research methodology course work Plagiarism check through authenticated software

A. All of the above

File Description	Documents
Code of Ethics for Research, Research Advisory Committee and Ethics Committee constitution and list of members of these committees, software used for plagiarism check	View File
Any additional information	No File Uploaded

3.4.2 - Number of PhD candidates registered per teacher (as per the data given with regard to recognized PhD guides/ supervisors provided in Metric No. 3.2.3) during the year

3.4.2.1 - Number of PhD students registered during the year

11

File Description	Documents
URL to the research page on HEI website	https://lbrce.ac.in/rnd_pages/rndguidance.php
List of PhD scholars and details like name of the guide, title of thesis, and year of registration	View File
Any additional information	No File Uploaded

3.4.3 - Number of research papers per teacher in CARE Journals notified on UGC website during the year

154

File Description	Documents
List of research papers by title, author, department, and year of publication	View File
Any additional information	No File Uploaded

3.4.4 - Number of books and chapters in edited volumes / books published per teacher during the year

59

File Description	Documents
Upload any additional information	View File
Paste link for additional information	Nil

3.4.5 - Bibliometrics of the publications during the year based on average Citation Index in Scopus/ Web of Science/PubMed

3.4.5.1 - Total number of Citations in Scopus during the year

228

File Description	Documents
Any additional information	No File Uploaded
Bibliometrics of the publications during the year	No File Uploaded

3.4.6 - Bibliometrics of the publications during the year based on Scopus/ Web of Science – h-Index of the University

3.4.6.1 - h-index of Scopus during the year

18

File Description	Documents
Bibliometrics of publications based on Scopus/ Web of Science - h-index of the Institution	No File Uploaded
Any additional information	No File Uploaded

3.5 - Consultancy**3.5.1 - Revenue generated from consultancy and corporate training during the year (INR in lakhs)****0.0118**

File Description	Documents
Audited statements of accounts indicating the revenue generated through consultancy and corporate training	View File
List of consultants and revenue generated by them	View File
Any additional information	No File Uploaded

3.5.2 - Total amount spent on developing facilities, training teachers and clerical/project staff for undertaking consultancy during the year**37,54,354**

File Description	Documents
Audited statements of accounts indicating the expenditure incurred on developing facilities and training teachers and staff for undertaking consultancy	View File
List of training programmes, teachers and staff trained for undertaking consultancy	No File Uploaded
List of facilities and staff available for undertaking consultancy	View File
Any additional information	View File

3.6 - Extension Activities

3.6.1 - Extension activities carried out in the neighbourhood sensitising students to social issues for their holistic development, and the impact thereof during the year

The institution envisions a close and shared bonding with the neighbourhood community through a network of activities and services for its socio-economic development. Our students receive the best training in social service and community engagement through the initiatives of our NSS unit. The institution promotes regular

engagement of students, faculty and supporting staff with the neighbourhood community for a holistic and sustained community development through various activities listed below.

Advancement in Technology Activities

- ISRO World Space week celebrations
 - It is a collaborative activity with ISRO, Sriharikota to motivate the young mindstowards the Space technologies. The exhibition which depicted Rockets, Satellites, etc. was visited by about 10,000 school students, citizens and our institution students.
- Rural Women skill improvement through PMKVY
- Engineers' Day Celebration
- Sensitization Programs on specific Technologies
- Computer Training for School Teachers and students
- Career Guidance Programs for school students
- Special programs for reducing school dropouts in the adopted villages

Sensitization: Through such events, students as well as the community people gain richer insights into pressing socio-economic, education that are so critical for sustainable development and become eco-friendly with technology adoption.

Social and Community Service Activities

- PushkaraSeva in association with Government of AP during Krishna Pushkaralu with participation of 515 students who served lakhs of devotees.
- Blood donation and Free Medical camps organized by NSSand NCC units of the institution in association with Indian Red Cross benefitted the needy and underprivileged.
- Establishment of Water kiosk for public
- Sivarathri Festival Celebrations
- Voluntary Service at Devotional Programs/Govt.Programs
- Distribution of Dental Kits/Medicines
- Distribution of Exam Kits to SSC Students

Sensitization: These service activities have made the students understand practical problems of the common people in society and enhance social empathy among them. Such programmes helped our students to become more sensitive and responsive to the societal needs.

Public Health and Safety Activities

- Awareness program on women safety(DISHA App - Govt.of A.P)
- Health Awareness Programs
- Awareness on Road safetyand traffic rules
- Awareness on Open Defecation Free Village
- Swachh Sarvekshan
- Janma Bhoomi-Ma vuru
- Awareness on Fire Safety Measures
- Awareness Program on Anti-Ragging

Sensitization: These events helped our students to understand the value of civic sense, public morality, optimum utilization of resources, good traffic sense, public safety and ethical living.

Environmental Protection Activities

- Swachh Bharat, plantation and Eco-friendly Clay Ganesh idol distribution
- Awareness on Agri-Farming to farmers
- Jal Shakti Abayan
- World Ozone week celebrations
- Wellbeing out of Waste
- Distribution of paper bags
- Distribution of saplings

Sensitization: These events createan awareness on healthy environment, cleanliness, and sanitation practices, besides highlighting the values of plantation, environmental protection for reducing land, water and air pollutions.

Adopting Village Activities

To discharge its sacrosanct duty towards the socio-economic betterment of the neighbourhood community, the institution has a policy of adopting one nearby village every year. The institute promotes regular engagement of students, faculty and supporting staff with the neighbourhood community for holistic and sustained community development.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	https://lbrce.ac.in/nss/index.php

3.6.2 - Number of awards and recognition received by the Institution, its teachers and students

for extension activities from Government / Government-recognised bodies during the year

175

File Description	Documents
Number of awards for extension activities in during the year	View File
e-copy of the award letters	View File
Any additional information	No File Uploaded

3.6.3 - Number of extension and outreach programmes conducted by the institution through NSS/NCC/Red Cross/YRC, etc. during the year (including Government-initiated programmes such as Swachh Bharat, AIDS Awareness, and Gender Sensitization and those organised in collaboration with industry, community and NGOs)

28

File Description	Documents
Reports of the events organized	View File
Any additional information	View File

3.6.4 - Number of students participating in extension activities listed in 3.6.3 during the year

2969

File Description	Documents
Reports of the events	View File
Any additional information	View File

3.7 - Collaboration**3.7.1 - Number of collaborative activities during the year for research/ faculty exchange/ student exchange/ internship/ on-the-job training/ project work**

1014

File Description	Documents
Copies of documents highlighting collaboration	View File
Any additional information	No File Uploaded

3.7.2 - Number of functional MoUs with institutions of national and/or international importance, other universities, industries, corporate houses, etc. during the year (only

functional MoUs with ongoing activities to be considered)

11

File Description	Documents
e-copies of the MoUs with institution/ industry/ corporate house	View File
Details of functional MoUs with institutions of national, international importance, other institutions etc. during the year	View File
Any additional information	No File Uploaded

INFRASTRUCTURE AND LEARNING RESOURCES**4.1 - Physical Facilities**

4.1.1 - The Institution has adequate infrastructure and physical facilities for teaching-learning, viz., classrooms, laboratories, computing equipments, etc.

The following physical facilities are available for teaching-learning in LBRCE:

The college has adequate number of classrooms and laboratories as per norms of UGC and AICTE for effective implementation of the teaching-learning process. Further, every department is equipped with its own computing resources as well as departmental library. The Departments have required as well as specialized software in their laboratories. In addition to the above, the college has a Central Library including a Digital Library which is well equipped with many learning resources. The library server is an added advantage for the faculty and students in terms of storage of learning material and accessibility.

The college has auditoriums "Dr. A.P.J. Abdhul Kalam Hall" and "Dr. Sarvepalli Radhakrishnan Hall" in addition to the department seminar halls. All seminar halls are ICT enabled with interactive panels. All computing facilities in all departments meet the required curriculum requirements in terms of software and number. Moreover, the institution has established 09 advanced laboratories which are listed below.

- CMS Skill Development Centre
- Dassault Systems
- Applied Robotic Control Lab

- ANSYS Skill Development Centre
- CISCO Networking Academy
- Green Energy Technology Centre
- MEMS Centre
- National Instruments Centre of Excellence and Lab View academy
- E-YANTRA Lab

Computing and ICT Facilities

The college has provided more than 1300 computers and 150 laptops distributed over all the departments for day-to-day usage. Laptops are made available for faculty members with additional responsibilities. Reprographic facilities are made available wherever necessary.

Each department is provided with one Smart Classroom, one Interactive panel. All classrooms are provided with necessary ICT facilities for effective implementation of Teaching-Learning. Digital display systems are made available in each block. Internet is provided for all the departments and computer centres with 1160 Mbps bandwidth. Software necessary for the preparation of computer-aided teaching material by the faculty is also made available. A centralized media centre facility is also added for preparation of learning material and e-content for the benefit of students.

File Description	Documents
Upload any additional information	View File
Paste link for additional information	Nil

4.1.2 - The institution has adequate facilities for cultural activities, yoga, sports and games (indoor and outdoor) including gymnasium, yoga centre, auditorium etc.)

With the availability of 09 acres of land physical education department has arranged facilities for playgrounds, outdoor stadium, and indoor stadium. At present all these facilities are adequate for conducting outdoor as well as indoor games for both boys and girls. The institution hosts inter University zonal tournaments regularly on campus. A well-qualified Physical Director with support staff, trains the students in both indoor and outdoor games.

Outdoor sports facilities

- Two badminton courts with size 17mX16.30m are prepared in the

year 2003 @30 users per day.

- A Basketball court with size 32.65mX17.20m is prepared in the year 2003 @24 users per day
- Two volleyball courts with size 38mX40m are prepared in the year 2002 @48 users per day.
- Kabaddi court with size 15mX12m is prepared in the year 2002 @48 users per day.
- Football field with size 100mX60m is prepared in the year 2002 @40 users per day.
- Ball badminton court with size 34mX15m is prepared in the year 2004 @30 users per day.
- Cricket nets with size 18mX7.50m are prepared in the year 2003 @48 users per day.
- Kho-Kho court with the size 50mX40m is prepared in the year 2010 @36 users per day.
- Throwball, Volleyball and Badminton(Girls) with size 36mX50m are prepared near mechanical block in the year 2003 @40 users per day.
- Three badminton courts with the size 59mX8m are prepared in the year 2018 @36 users per day.
- Throwball, and Volleyball with size 63mX45m are prepared for girls at the Girls hostel in the year 2018 @60 users per day.
- Throwball, Volleyball, Ball-Badminton, Kho-Kho, Kabbadi, 200 m running track, Shot Put sector, Discus sector and Javelin courts with size 200mX65m are prepared at the Girls hostel in the year 2019 @90 users per day .
- Indoor facilities such as carroms(07 boards) and table tennis(02 boards) with size of 12.2m X11m are prepared in the year 2004 @60 users per day.

Indoor games facilities:

- Four Badminton courts/Two volley ball courts/1 Basketball /Gymnastics with size of 30m*40m*12m are prepared in the year 2004 @90 users per day.
- A well-equipped 24-station modern Gymnasium with size of 14m*8m is created in 2011 @80 users per day. All the required equipment is made available.

Yoga, Meditation Centre, and Cultural activities:

- Full-time yoga master is available for yoga training
- A 60-capacity auditorium is provided for Yoga and Meditation.
- Yoga certification course is added as a mandatory course in

the curriculum

- International Yoga Day is celebrated every year with major participation from students and Staff.

Kruthi-the fine arts and Cultural club is established to promote cultural activities in the campus. This Club encourages students to participate in District, State, National level, Inter Collegiate and Inter University level cultural festivals. LAKSHYA- a national level Technical and Cultural fest is conducted every year with participation of students from other institutions within as well as outside the state. As part of annual day celebrations, various cultural activities are also organized under the auspices of this club.

File Description	Documents
Geotagged pictures	View File
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

4.1.3 - Number of classrooms and seminar halls with ICT-enabled facilities

73

File Description	Documents
Upload any additional information	View File
Upload Number of classrooms and seminar halls with ICT enabled facilities (Data Template)	View File

4.1.4 - Expenditure for infrastructure augmentation, excluding salary, during the year (INR in Lakhs)

178.624

File Description	Documents
Upload audited utilization statements	View File
Details of Expenditure, excluding salary, during the years	View File
Any additional information	No File Uploaded

4.2 - Library as a Learning Resource

4.2.1 - Library is automated using Integrated Library Management System (ILMS)

College Central Library has a spacious built-up area of 2025.32 Sqm, with a seating capacity for 500 users. The library personnel include a qualified Librarian, Assistants and supporting staff. The library operates on all working days from 08:00 AM to 08:00 PM and on the holidays from 09:00 AM to 01:00 PM.

The library has 54100 volumes with 12114 titles of books and about 3400 back volumes of scientific and technical periodicals. The library also subscribes to nearly 115 National journals and 45 magazines and more than 6800 e-journals. A separate reference section is maintained with Handbooks and General-knowledge books. Inter-library loan facility is available through DELNET. Central Library supports departmental libraries in all departments. The library follows open access system encouraging the user to browse freely in the stack area.

Library is fully automated using the following Integrated Library Management System:

Name of the ILMS software: ERP

Nature of automation (fully or partially): Fully

Version: 2018

Year of automation: 2005&2018

Online Public Access Catalogue (OPAC) is available for remote access.

Library automation is implemented in a phased manner, the details of which are given below:

The central library is operating on an Integrated Library Management

System since 2018, while VolkSoft Technologies Integrated Library Management System was in use till that time.

The ERP software is integrated with Library Management system that is designed and developed by D-Base solutions. This user-friendly software is developed to work under client-server environment. This software is suitable for bibliographic formats and circulation protocols. The modules included in LMS with menu driven facilities are Circulation, WEB-OPAC, Administration, Catalogue, Member Login/Logout.

CIRCULATION:

This module facilitates Membership, Transaction, Overdue charges, Reminders. Maintenance of the items such as binding, lost, replace, missing, and withdrawal are also provided in report generation.

WEB -OPAC:

WEB-OPAC facilitates remote access to users. They can retrieve the status of his/her account, such as due date, number of titles borrowed and overdue charges.

ADMINISTRATION:

The administration module includes the features of grouping of users based on the policy, transactional rights over the ILMS, transaction level security to users, various configuration settings such as labels, e-mail and other parameters related to the software use, and common master databases.

CATALOGUE:

This module is used for retrospective conversion of library resources. The salient feature of this module is to retrieve information such as corporate body, subject headings and series name.

MEMBER LOGIN/LOGOUT:

ERP software integrate log-in and log-out facilities to authenticate attendance in library for members with bar-coding option. It is possible to generate log reports according to date, month, and year.

Digital library:

- The institute has a digital library with 40 computers in the main library and 15 computers in the girls' hostel for access. Digital library can also be accessed from any department through campus LAN.
- It has a reasonably good collection of e-journals like IEEE, ASCE, ASME, SPRINGER, ELSEVIER, DELNET and N-List e-books.

NPTEL videos, e-books, GATE papers, previous years' question papers, and e-journal articles are made available in the digital library for easy access.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	https://lbrce.ac.in/studentcorner_pages/central_library.php

4.2.2 - Institution has access to the following: e-journals e-ShodhSindhu Shodhganga Membership e-books Databases Remote access to e-resources

A. Any 4 or more of the above

File Description	Documents
Details of subscriptions like e-journals, e-books, e-ShodhSindhu, Shodhganga membership	View File
Upload any additional information	No File Uploaded

4.2.3 - Expenditure on purchase of books/ e-books and subscription to journals/e-journals during the year (INR in lakhs)

23.47654

File Description	Documents
Audited statements of accounts	View File
Any additional information	No File Uploaded
Details of annual expenditure for purchase of books/e-books and journals/e-journals during the year (Data Template)	View File

4.2.4 - Usage of library by teachers and students (footfalls and login data for online access)**4.2.4.1 - Number of teachers and students using the library per day during the year**

350

File Description	Documents
Upload details of library usage by teachers and students	View File
Any additional information	No File Uploaded

4.3 - IT Infrastructure

4.3.1 - Institution has an IT policy covering Wi-Fi, cyber security, etc. and has allocated budget for updating its IT facilities

The institute has an IT policy in place which specifies clearly about the procedures to be adopted for all IT facilities that are made available in the campus. Adequate budget allocations are made regularly to establish, maintain, and upgrade these IT facilities. IT facilities include computing systems, Wi-Fi systems, cyber-security, intranet, internet, and all other software necessary for handling these systems as well as support systems like website, campus management software, library information system, MOOCs, CCTVs, biometric devices, Learning Management System (LMS), online assessments, access to online learning resources.

The details of upgradations that have taken place over the last five years (2015-16 to 2019-20) are described below:

- Procured more than 1300 desktop computers in the last five years, among which more than 100 Desktops and 40 Laptops (procured in the years 2019-20) are with the latest core i5 processor, 4/2 GB graphic cards, 8 GB RAM 1 TB HDD and other resources of higher end. In addition, 9 servers and 3 workstations are also procured.
- Replaced 25 basic network switches to CISCO Non manageable L2 switches in 2018.
- 92 Wi-Fi access points are added to the existing 82 points, to supplement the campus network with wireless access facility. Two Wi-Fi controllers are also added to manage these access points.
- Improved internet bandwidth from 220 Mbps in 2015-16 to 760 Mbps in 2019-20 through multiple lines.
- The Microsoft campus license agreement is renewed regularly.

- Replaced existing biometric attendance system (Bio-enable) in 2019 with 8 devices with licensed reporting software.
- Upgraded RAM from 4 GB to 8 GB for 75 desktops.
- Procured 98 LCD projectors in last five years for classrooms, seminar halls, conference halls and laboratories.
- 6 digital signage displays are placed all over the campus in 2018-19 to display and disseminate information to student community on time.
- The institute has arranged for 6 smart classrooms equipped with smart interactive boards in 2019-20.
- Electronic surveillance system with 150 cameras is deployed in the campus in 2018-19.
- The ERP software is upgraded in 2018-19 to add more facilities for students like online payments and unified software to manage entire campus academic workflow.
- A learning management system based on MOODLE framework is deployed in 2015-16 to facilitate asynchronous interaction beyond classroom.
- The college website lbrce.ac.in is upgraded with latest Content Management System (CMS) to facilitate easy updating.
- The entire network is protected using SOPHOS firewall.
- The server room is equipped with power backup and standby facilities.

Adequate budget allocations are made for these upgradations as and when required in the span of previous five years.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	https://lbrce.ac.in/college_docs/policies/12.IT%20Policy.pdf

4.3.2 - Student - Computer ratio

Number of Students	Number of Computers
3972	1342

File Description	Documents
Upload any additional information	View File

4.3.3 - Bandwidth of internet connection in the Institution and the number of students on campus	A. 50 Mbps								
<table border="1"> <thead> <tr> <th data-bbox="76 311 550 376">File Description</th> <th data-bbox="550 311 1476 376">Documents</th> </tr> </thead> <tbody> <tr> <td data-bbox="76 376 550 483">Details of bandwidth available in the Institution</td> <td data-bbox="550 376 1476 483" style="text-align: center;">View File</td> </tr> <tr> <td data-bbox="76 483 550 584">Upload any additional information</td> <td data-bbox="550 483 1476 584" style="text-align: center;">No File Uploaded</td> </tr> </tbody> </table>	File Description	Documents	Details of bandwidth available in the Institution	View File	Upload any additional information	No File Uploaded			
File Description	Documents								
Details of bandwidth available in the Institution	View File								
Upload any additional information	No File Uploaded								
4.3.4 - Institution has facilities for e-content development: Facilities available for e-content development Media Centre Audio-Visual Centre Lecture Capturing System (LCS) Mixing equipments and software for editing	A. All four of the above								
<table border="1"> <thead> <tr> <th data-bbox="76 887 550 952">File Description</th> <th data-bbox="550 887 1476 952">Documents</th> </tr> </thead> <tbody> <tr> <td data-bbox="76 952 550 1059">Upload any additional information</td> <td data-bbox="550 952 1476 1059" style="text-align: center;">View File</td> </tr> <tr> <td data-bbox="76 1059 550 1207">Paste link for additional information</td> <td data-bbox="550 1059 1476 1207" style="text-align: center;">https://lbrce.ac.in/igac/igac_reassessment_docs/videos/DSC_0434.MP4</td> </tr> <tr> <td data-bbox="76 1207 550 1312">List of facilities for e-content development (Data Template)</td> <td data-bbox="550 1207 1476 1312" style="text-align: center;">View File</td> </tr> </tbody> </table>	File Description	Documents	Upload any additional information	View File	Paste link for additional information	https://lbrce.ac.in/igac/igac_reassessment_docs/videos/DSC_0434.MP4	List of facilities for e-content development (Data Template)	View File	
File Description	Documents								
Upload any additional information	View File								
Paste link for additional information	https://lbrce.ac.in/igac/igac_reassessment_docs/videos/DSC_0434.MP4								
List of facilities for e-content development (Data Template)	View File								
4.4 - Maintenance of Campus Infrastructure									
4.4.1 - Expenditure incurred on maintenance of physical and academic support facilities, excluding salary component, during the year (INR in lakhs)									
664.09									
<table border="1"> <thead> <tr> <th data-bbox="76 1585 550 1650">File Description</th> <th data-bbox="550 1585 1476 1650">Documents</th> </tr> </thead> <tbody> <tr> <td data-bbox="76 1650 550 1715">Audited statements of accounts</td> <td data-bbox="550 1650 1476 1715" style="text-align: center;">View File</td> </tr> <tr> <td data-bbox="76 1715 550 1816">Upload any additional information</td> <td data-bbox="550 1715 1476 1816" style="text-align: center;">No File Uploaded</td> </tr> </tbody> </table>	File Description	Documents	Audited statements of accounts	View File	Upload any additional information	No File Uploaded			
File Description	Documents								
Audited statements of accounts	View File								
Upload any additional information	No File Uploaded								
4.4.2 - There are established systems and procedures for maintaining and utilizing physical, academic and support facilities – classrooms, laboratory, library, sports complex, computers, etc.									
The institution has a well-defined maintenance policy which specifies procedures for maintaining physical, academic and support facilities.									

The institution has established a maintenance section with adequate staff. This section takes care of maintenance of infrastructural facilities which includes plumbing, electrical, carpentry, masonry and sewage maintenance requirements. The section receives requests for maintenance from the departments and other sections and accordingly undertakes the necessary maintenance work.

As per maintenance policy a common procedure is as following:

- Any problem that occurs in a department is represented to the maintenance supervisor through a letter/mail.
- The supervisor deputes a skilled person/technician to attend to the specific problem.
- The skilled person will resolve the problem on site if no additional material is required. In case of material requirement, it is received from the maintenance section or central store through proper request.
- If the material is to be procured from outside, permission is to be obtained from the purchase committee on recommendation of maintenance supervisor.
- Annual stock verification is conducted every year and the status of furniture, lab equipment, stationery, ICT facilities, Library, sports items and all other assets is collected. All the items usable are accordingly repaired and maintained.
- While purchasing any new equipment the terms of Annual Maintenance Contract (AMC) are also taken into consideration before deciding the purchase.

The maintenance aspects of different types of facilities are described below:

1. ACADEMIC FACILITIES:

Laboratories:

The maintenance and repair of equipment is done by the respective departments with the help of technical assistants and services of external agencies are also hired if required.

- Each department of the institute carries out the calibration and maintenance of the measuring instruments periodically.
- All other equipment in the laboratories is maintained regularly.
- The in-house maintenance and repairs are addressed by the

respective department technicians who are qualified and trained.

- Major problems and repairs will be attended in consultation with the suppliers following the central purchase procedure.

Class Rooms:

- Every department has a faculty in-charge who will periodically check the condition of classroom amenities like benches, chairs, black boards, fans, lights and ICT facilities.
- The in-charge will resolve the problem through the Head of the Department following the internal operating procedure.

Library:

- The maintenance of library is taken care by Librarian and his supporting staff. Internal periodic audits are done in the library for maintaining wellness of the books. Frequent interactions are made by the librarian with the students and faculty to know the short falls and take necessary action to overcome them.
- Library committee is vested with responsibility of scheduling and coordinating all the maintenance activities of the library.

Computer and ICT Facilities:

- Institution has established systems maintenance section headed by Professor who is given responsibility of maintaining of computer and ICT facilities.
- All computers in the institute premises have been connected by LAN. The systems section maintains the firewall, LAN connectivity, Campus Wi-Fi and internet connectivity throughout the institute. Maintenance of computer systems is carried out by technical assistants of the respective department. If the department is not able to resolve the issue, the problem is referred to technician. In case the problem persists, the same is referred to the outside vendor. The functioning of college intranet and internet facility is monitored and maintained by the hardware technicians in association with Network administrator.
- Fiber Optic cable issues are maintained with the support from vendor.
- Any upgradations or modification of the existing Network Model is carried out by inviting quotations from external agencies

by following the central purchase procedure.

1. Maintenance of Infrastructure:

Building Maintenance:

- Building maintenance includes civil work modifications, civil repairs in buildings, other repairs and maintenance of internal roads, plumbing, pest control, colouring and painting for structures. It also monitors housekeeping, cleaning of water tanks, and sanitary arrangements. Small repairs and maintenance are carried in-house whereas contractor services are obtained for major maintenance requirements.
- Annual inspection is done for Fire Safety by AP state Disaster Response, and Fire Service Department and issues fire safety certificate.

Electrical Systems Maintenance:

- Monthly monitoring of electrical systems such as solar PV system, generator, UPS, and batteries is done and its status is entered in the Log/Stock Book. The suppliers/service providers are approached in case of any major fault.
- Major electrical equipment is covered under Annual Maintenance Contract (AMC) by the suppliers.
- Adequate number of UPS are installed in each department to ensure uninterrupted power supply for all computers.
- Technicians are available as part of maintenance section to maintain refrigeration and air conditioning systems.

Furniture Maintenance:

- Furniture maintenance includes customized fabrication of cabinets, desks, counter tops, installation of doors and windows, and concerned supporting staff attends to all repairs and maintenance.
- The internal operating procedures are followed for maintaining the furniture in the institution.

3. SPORTS AND GAMES FACILITIES:

- The indoor and outdoor stadiums, gymnasium, playgrounds, and all other sporting equipment are regularly supervised and

maintained by the Physical Director with the help of supporting staff.

4. OTHER FACILITIES:

- The Institute has an RO plant, which provides 24 X 7 drinking water facility. Sufficient numbers of water coolers are available in the departments to provide clean drinking water. Periodically the quality of water is tested in the Environmental Engineering laboratory.
- One faculty member is nominated as transport in-charge to supervise and maintain all transport facilities of the institution with the help of supporting staff.
- Adequate manpower is employed to maintain cleanliness of the campus, Classrooms, Staff rooms, Seminar halls and Laboratories, washrooms and rest rooms for good ambience.
- The Green Cover of the campus is well maintained by full time gardeners as well as contractual labour.
- The campus security is monitored through surveillance Cameras and is maintained by a supplier under AMC.
- The college has Canteen facility where subsidized food is provided to staff and students. The maintenance of the canteen is the responsibility of canteen manager under the supervision of food committee.
- Central Bank of India branch is located inside the campus to facilitate transactions and the maintenance is taken care by the bank itself.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	https://lbrce.ac.in/college_docs/policies/13.%20Maintenance%20policy.pdf

STUDENT SUPPORT AND PROGRESSION

5.1 - Student Support

5.1.1 - Number of students benefitted by scholarships and freeships provided by the Government during the year

2316

File Description	Documents
Upload self-attested letters with the list of students receiving scholarships	View File
Upload any additional information	View File

5.1.2 - Number of students benefitted by scholarships and freeships provided by the institution and non-government agencies during the year

26

File Description	Documents
Upload any additional information	View File
Institutional data in prescribed format	View File

5.1.3 - The following Capacity Development and Skill Enhancement activities are organised for improving students' capabilities Soft Skills Language and Communication Skills Life Skills (Yoga, Physical fitness, Health and Hygiene) Awareness of Trends in Technology

A. All of the above

File Description	Documents
Link to Institutional website	https://lbrce.ac.in/cgt/index.php
Details of capability development and schemes	View File
Any additional information	No File Uploaded

5.1.4 - Number of students benefitted from guidance/coaching for competitive examinations and career counselling offered by the institution during the year

3972

File Description	Documents
Any additional information	No File Uploaded
Number of students benefited by guidance for competitive examinations and career counseling during the year (Data Template)	View File

5.1.5 - The institution adopts the following mechanism for redressal of students' grievances, including sexual harassment and ragging: Implementation of guidelines of statutory/regulatory bodies Creating awareness and implementation of policies with zero tolerance Mechanism for submission of online/offline students' grievances Timely redressal of grievances through appropriate committees

A. All of the above

File Description	Documents
Minutes of the meetings of students' grievance redressal committee, prevention of sexual harassment committee and Anti-ragging committee	View File
Details of student grievances including sexual harassment and ragging cases	View File
Upload any additional information	No File Uploaded

5.2 - Student Progression

5.2.1 - Number of outgoing students who got placement during the year

445

File Description	Documents
Self-attested list of students placed	View File
Upload any additional information	No File Uploaded

5.2.2 - Number of outgoing students progressing to higher education

21

File Description	Documents
Upload supporting data for students/alumni	View File
Details of students who went for higher education	View File
Any additional information	No File Uploaded

5.2.3 - Number of students qualifying in state/ national/ international level examinations during the year

5.2.3.1 - Number of students who qualified in state/ national/ international examinations (e.g.: IIT-JAM/NET/SET/JRF/ GATE /GMAT /CAT/ GRE/ TOEFL/Civil Services/State government examinations) during the year

173

File Description	Documents
Upload supporting data for students/alumni	View File
Any additional information	View File

5.3 - Student Participation and Activities

5.3.1 - Number of awards/medals for outstanding performance in sports and/or cultural activities at inter-university / state /national / international events (award for a team event should be counted as one) during the year

00

File Description	Documents
e-copies of award letters and certificates	View File
Any additional information	No File Uploaded

5.3.2 - Presence of an active Student Council and representation of students in academic and administrative bodies/committees of the institution

An active student council and representation of students on academic and administrative bodies is in place at our institution. The institution promotes value-based education for inculcating social responsibility and good citizenry among its student community. For this, the institution has put in place the necessary infrastructure

and encourages active participation of the students in academic, social, and cultural activities. The institution believes that overall and holistic development is possible only with the participation of students in all spheres of activities. Keeping this in view as well as statutory recommendations of UGC, and AICTE, the institution has made adequate representation of students in specific cases as members. The role of student members in few specific cases are described in the following

Academic and Administrative Planning:

- **Internal Quality Assurance Cell (IQAC):** It looks into various quality enhancement measures and has the representation of student members. Different academic and student development matters are discussed with the active participation of the student members.
- **Central Library:** The library committee consists of student representatives. Students are given an opportunity to discuss the requirements regarding the availabilities of digital content as well as reference books and accessibility factors. Other advancement related matters, and digital upgradations are undertaken in tune with the expectations of the students.
- **Class Review Committee:** Every class of the degree program shall have a class review committee, consisting of faculty and student members. For student members of class review committee, it gives an opportunity for modification of the content delivery, verification of assessments made, verification of syllabus coverage, and many such parameters which help better lesson plan implementation.

2. **Anti - Ragging Committee:** Student members representation in the Anti - Ragging committee helps the institution in making it ragging free. This committee is constituted as per the guidelines of the UGC with internal and external members. Those student members are encouraged to gather information in case of any ragging incidents if happen, and also publicize ragging prevention among other students.

3. Functioning related to career-oriented activities, College level Amenities & Facilities

- Student members are involved as T&P Coordinators for assisting the Placement Cell during the recruitment drives.
- Student members are involved in Canteen Committee in order to take feedback regarding the functions of the canteen pertaining to quality, cost, variety, and other such parameters.

- Student members are involved in the hostel committee to facilitate improvements in hostel facilities, improvements in food quality, regular maintenance of hostel equipment, and improving the overall ambiance of the hostel.

4. Units of Co-Curricular & Extra-Curricular planning & execution

- LAKSHYA - National level Techno-cultural fest is organized every year in which students take an active role in organizing various events, and coordinating all fete activities.
- Student members take an active part in presenting the technical exhibitions, department association activities, club activities, and student professional chapters activities.
- Student members are included in Editorial board of Departmental Newsletter, and Magazine.
- Student teams undertake all the coordination activities on Annual Day and Sports Day.
- Students have an active representation in NSS/NCC activities

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	https://www.lbrce.ac.in/committees/studentcouncil.php

5.3.3 - Number of sports and cultural events / competitions organised by the institution

00

File Description	Documents
Report of the event	No File Uploaded
List of sports and cultural events / competitions organised per year	View File
Upload any additional information	No File Uploaded

5.4 - Alumni Engagement

5.4.1 - The Alumni Association and its Chapters (registered and functional) contribute significantly to the development of the institution through financial and other support services

The Alumni Association of Lakireddy Bali Reddy College of Engineering (AALBRCE) is a registered society with registration

number 154 on 28th April, 2006. The main objective is to enrol all alumni as members of the association and facilitate active participation of the alumni in appropriate activities, events, and extend help in initiatives taken by the institution. This is an official unit of the institution with the primary objective being an interface between LBRCE alumni and the institution there by creating a veritable platform to the entire LBRCE fraternity. The LBRCE is proud of its brilliant alumni who are currently positioned all over the globe and have distinguished themselves in all spheres of high-end engineering and technology. The AALBRCE also coordinates the networking of all the LBRCE alumni to create a single global LBRCE community for the benefit of our institution as well as current student community. The alumni-meet is organized every year in the month of February on second Saturday.

The financial contributions of AALBRCE are described below:

- Generated a corpus fund of Rs. 4, 65,312/- and the accruing interest of which is being utilized for various alumni activities conducted in the college.
- Out of this corpus fund Rs. 2,65,000/- has been extended for medical expenses for one student who was detected with cancer.
- Initiated a Scholarship programme "LBRCE SAHAYA". Under this programme, meritorious and economically poor students are being identified and selected in the third year of their Engineering programme. Each selected student is assisted with Rs.7,500/- for the preparation to any competitive examination. LBRCE SAHAYA scholarships started with 13 students during the academic year 2019-20.

The Academic and Professional Support contributions of AALBRCE are described below:

- Feedback is collected from the alumni to design regulations and update the curriculum accordingly.
- Board of Studies members nominated from alumni contribute towards curriculum content development in terms of present industry requirement.
- Feedback from the alumni helps the current students whenever recruitment drives are being conducted.
- Alumni members conduct mock interviews for current students which also helps them in placement.
- Career guidance and mentoring help is extended by many alumni.
- The alumni network of the institution helps in expanding placement opportunities for the students. Information on job opportunities in their companies is passed on by the alumni in

time to the institution for appropriate training and placement activity.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional Information	https://lbrce.ac.in/alumni/index.php

5.4.2 - Alumni's financial contribution during the year

E. <2 Lakhs

File Description	Documents
Upload any additional information	View File

GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 - Institutional Vision and Leadership

6.1.1 - The governance of the institution is reflective of an effective leadership in tune with the vision and mission of the Institution

VISION

To empower the students to become technologically vibrant, innovative and emotionally matured; and to train them to face the challenges of the quality conscious globalized world economy.

MISSION

- To provide an environment most conducive to learning and to create a stimulating intellectual atmosphere in the campus.
- To achieve Academic Excellence.
- To ensure a holistic development of personality.
- To spread education to rural areas.
- To establish partnership between Institution & Industry.

The vision and mission statements define the institution distinctive characteristics in addressing the needs of stakeholders involved. In adherence to the above vision and mission as well as the norms of AICTE and UGC, college management has constituted a Governing body. All the members of the Governing Body participate actively, and with their extensive experience, and leadership skills contribute for growth and development of our institution.

Statutory committees like Boards of Studies, Academic Council, Finance Committee, and other non-statutory committees involving faculty are constituted to help the administration.

The College Advisory Board (CAB) with the principal as the chairperson, frames the rules and regulations under the guidance of the Governing body and Academic council of the institution.

Perspective Plans:

The Principal of the Institution, who is also a member of the Trust Board of the Institution, discusses the broad components of the Perspective Plan of the Institution and it is then finalized in consultation with the Governing Body. The Strategic Plan for the institution was developed in the year 2015 for a duration of 6 years.

Participation of the teachers in the decision-making bodies:

In the linear structure, Vice-Principal, Deans and Heads of the Department are next in the hierarchy. The Vice-Principal will assist the principal in administrative activities. The deans are senior Professors with significant authority over a specific academic unit or area of concern or both. They help the principal in implementing various administrative and academic processes and provide feedback and suggestions.

The HODs are next in hierarchy and are responsible for effective implementation of Teaching-Learning process and Curriculum development and all other day to day responsibilities of running the department.

The professors, Associate Professors, Assistant Professors are next in the hierarchy. All these members act as conveners of the non-statutory committees and assist the principal on routine administration and academic processes. Faculty plays a proactive role in the academic and administrative activities of the institution.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional Information	https://lbrce.ac.in/administration_pages/org_anogram.php

6.1.2 - Effective leadership is reflected in various institutional practices such as decentralization and participative management

The institution practices participative management and decentralization in all activities with a balance between transparency and confidentiality. Each of the functionaries has specific roles and responsibilities confining to the policies of the institution.

Case study: Curriculum Design

The Institution follows the guidelines issued by the regulatory bodies such as UGC, AICTE, affiliated university JNTUK, Kakinada and Andhra Pradesh State Council of Higher Education (APSCHE) while designing the curriculum of all UG and PG programs offered by the institution. A series of all faculty meetings are conducted to decide about the specifications of the Course Outcomes (COs) and their correlation with specified Programme Outcomes (POs) and defined Programme Specific Outcomes (PSOs). The set of courses which require modifications (deletion/addition) are prepared and compared with programme curriculum adopted at other leading academic institutions in India and abroad. The curriculum design process of the institution is as follows.

a). Module Coordinator Committee (MCC)

MCC receives inputs on curriculum revision from Class review committee (CRC). The Module Coordinator committee prepares the content of all respective courses including new courses and change of course content.

b). Department Academic Committee (DAC)

It comprises of HOD and some senior faculty members of the department. The Program Coordinator initiates the curriculum design process by collecting the attainments of Course Outcomes, Program Outcomes and Program Specific Outcomes from the Program Assessment Committee (PAC). The inputs from various stakeholders such as Faculty, students, parents, Alumni and Employer will be considered for curriculum revision. DAC suggests the new and advanced courses to be introduced in the curriculum, establishment of new labs and skill upgradation facilities based on the requirement of the industry.

c). Board of Studies (BoS)

BoS comprises of senior Faculty of the department, members from Alumni, Industry, Academia, University nominee and functions with HOD as chairperson. It reviews and ratifies Course structure, curriculum and course content.

d). Academic Council (AC)

Academic Council comprises of HODs of all departments, Industry, Academia, University nominee, faculty nominated by principal and functions with principal as chairman. It discusses and ratifies the institution level all academic issues.

All the faculty members are actively involved in Teaching-Learning process implementation.

File Description	Documents
Upload strategic plan and deployment documents on the website	View File
Upload any additional information	No File Uploaded
Paste link for additional Information	https://lbrce.ac.in/administration_pages/org_anogram.php

6.2 - Strategy Development and Deployment

6.2.1 - The institutional Strategic/ Perspective plan has been clearly articulated and implemented

The institution has prepared a Strategic Plan in the year in 2015 for a duration of 6 years. The strategic goals of this Plan are classified into plans regarding

- Good governance
- Teaching-learning process
- Research and Development
- Internal Quality Assurance System through IQAC
- Institution - Industry Interaction
- Financial management
- Staff Development & Welfare
- Student Development and Participation
- Alumni Interaction
- Community Services and Extension Activities
- Accreditations and Rankings

An important plan is regarding student development and participation which is described below:

To impart the requisite technical knowledge and relevant skills the following practices are initiated and implemented.

- To disseminate adequate programming skills, a thorough training is arranged for the faculty members by E-BOX, WIPRO, CISCO, AWS and Blueprism. These trained faculty members are expected to impart necessary problem-solving skills to students in scheduled manner.
- Certification programs and trainings are arranged on emerging technologies through established skill development centers such as CM's Skill Excellence Centre-APSSDC, DASSAULT SYSTEMS-3DEXperience Centre (CATIA Software) and ANSYS skill development centre, Applied Robot Control (ARC) Lab.
- Certification programs by external agencies are also arranged through Skill Development Centres established in the institution.
- Special training on programming skills on Code-Vita is arranged by internally trained faculty.
- The important technical aspects are emphasized by every teacher in the class room with more focus on conceptual clarity in all theoretical as well as practical aspects.
- Guest lectures and training programs related to latest technologic innovations are arranged for a good number of core subjects in every branch of engineering.
- Personality development programs and soft skill development classes are organized from time to time to improve soft skills of the students.

The outcome of the above plan resulted in the following.

The highest package in the A.Y.2020-21is improved to 10LPA . The placements in the A.Y.2019-20 are 524. The major recruiters are given below

- 08 students got placed in TOPPR
- 49 students got placed in CTS
- 04 students got placed in HCL
- 10 students got placed in SPANDANA SPHOORTY FINANCIAL LTD
- 03 students got placed in IBM
- 20 students got placed in TCS Code Vita
- 70 students got placed in TCS NINJA
- 29 students got placed in WIPRO TALENT NEXT
- 18 students got placed in WIPRO NLH

- 23 students got placed in INFOSYS
- 08 students from ASE department got placed in Ziegler Aerospace Ltd. in 2020
- 02 students got placed in Hundai Motors
- 05 students got placed in BYJUS
- 09 students got placed in Royal Enfield, KIA Motors, TVS Motors through training imparted by ARC trained faculty.

File Description	Documents
Strategic Plan and deployment documents on the website	View File
Paste link for additional information	https://www.lbrce.ac.in/college docs/strategic plan/Strategic%20Plan%202018-2023.pdf
Upload any additional information	No File Uploaded

6.2.2 - The functioning of the various institutional bodies is effective and efficient as visible from the policies, administrative set-up, appointment and service rules, procedures, etc.

- @. The Institution has a well-structured administrative setup. The governing body is the highest decision-making body, which gives constructive suggestions to the management for effective decision making in line with the Vision, Mission of the institution. A suitable organogram is in place for deciding the administrative hierarchy of the institution.
- @. Various statutory and non-statutory committees are constituted for implementing an orderly functioning of the Institution under the guidance of the Principal. Following are the Statutory and Non-Statutory committees of our institution.
- @.

- Governing Body
- Academic Council
- Boards of Studies
- Finance Committee
- Planning and Evaluation Committee
- Grievance Redressal Committee
- Examination Committee
- Admission Committee
- Library Committee
- Internal Complaints Committee
- Student Council and Welfare
- Sports and Games Committee
- Academic Audit Committee

- Anti-Ragging Committee
- Discipline Committee
- SC/ST Committee
- NSS Committee
- NCC Committee

The Committees convene meetings periodically and discuss about issues related to academic and administrative activities.

Policies for the functional aspects of the Institution:

The Institution has a set of well-defined rules, policies and regulations defined within the framework of UGC, AICTE, State Government and Affiliating University. The Governing Body approves these policies. The service rules are formulated and these rules are periodically reviewed, updated and displayed on the college website.

- Grievance Redressal Policy
- Service Rules
- Code of Conduct
- Student Policy
- Energy Policy
- Environmental Policy
- Examination Policy
- Incubation & Start-up Policy
- Research Promotion Policy
- Industrial Consultancy Policy
- Library Policy
- IT Policy
- Maintenance Policy
- Training and Placement Policy
- Budget Policy
- Disabled-friendly, barrier free environment Policy

The details of one committee and two procedures are given below as examples:

1.The Grievance Redressal Committee is constituted to consider all the individual grievances of students and staff. The students and faculty with a genuine grievance may approach the grievance redressal committee to submit his/her grievance in writing to the Convener, Grievance redressal committee of LBRCE. The web-based grievance redressal mechanism is also in place through the college website. The students with a grievance can post the complaint to appropriate authority, namely Class Coordinator, HOD, or Principal. The grievance is placed before the Grievance Redressal Committee for

resolving the issue amicably. The grievances are addressed systematically and impartially with the involvement and cooperation of the respective department, maintaining strict confidentiality and in a time-bound manner.

2.All the recruitments are made transparent duly advertising the posts in leading dailies/online and conducting interviews involving external experts from NITs/ IITs/ Universities/Premiere Institutions.

3.Promotions are accorded as per the norms taking the faculty qualifications and their contributions into consideration. Performance-Based Assessment System is in place, and promotions are offered to the faculty members who fulfil the key performance indicators.

File Description	Documents
Paste link to Organogram on the institution webpage	https://lbrce.ac.in/administration_pages/organogram.php
Upload any additional information	No File Uploaded
Paste link for additional Information	Nil

6.2.3 - Implementation of e-governance in areas of operation: Administration Finance and Accounts Student Admission and Support Examination

A. All of the above

File Description	Documents
ERP (Enterprise Resource Planning) Documen	View File
Screen shots of user interfaces	View File
Details of implementation of e-governance in areas of operation	View File
Any additional information	No File Uploaded

6.3 - Faculty Empowerment Strategies

6.3.1 - The institution has effective welfare measures for teaching and non-teaching staff and avenues for their career development/ progression

Welfare measures for teaching staff

- EPF facility
- Accident Policy Coverage of Rs.1 Lakh.
- Group Health Insurance Coverage of Rs.1.00 Lakh
- Providing Personal loans with corporate guarantee
- Salary advance to the needy staff
- Free/Concessional Transportation
- Free medical facility for common ailments
- Medical Leave
- Special Leave to for faculty to deliver guest lectures and to attend International Conferences/ Workshops/ FDPs/ STTPs/ Certification programs.
- Study Leave
- Financial assistance to attend International Conferences/ Workshops/ FDPs/ STTPs/ Certification Programs
- Advanced and licensed software are provided for enhancing the professional skill sets of the faculty.
- Creating facilities to pursue research activities with modern facilities
- Faculty are provided incentives for publications of textbooks for publishing professional/academic/technical articles in relevant engineering discipline.
- Seed money grant for pursuing minor research activities and supporting for experimental setup to pursue PhD.

Welfare measures for non-teaching staff

- Plots for Construction of Houses
- Gratuity
- 50% Tuition Fee Concession for Supporting Staff Children
- EPF facility
- Health Insurance Coverage of Rs.1.00 Lakh
- Accident insurance policy for drivers
- Financial assistance to technical staff to attend industrial training programs
- Free Medical Facility for Common Ailments
- Medical Leave
- Special Leave
- Salary Advance to the Needy Staff
- Providing Personal loans with corporate guarantee

The following career development facilities are made available for teaching and non-teaching staff

- **Availability & Accessibility of Software**

The Faculty members are provided with advanced software at the institute; helps them to enhance skills and knowledge in respective domains. Faculty members are using these software facilities for the purpose of research publications, doctoral work and applying for funding projects.

Laboratory facilities for the Career Development:

Domain specific research laboratories are available for every department and were made accessible to all the faculty members for executing innovative project works, model making and for their research oriented works.

Skill Development Facilities for the faculty:

The institution has MoU with APSSDC and trains the faculty at schedules time and the fields of cutting edge technologies as initiated by APSSDC. The institution financially supports the faculty who are interested to learn advanced courses through NPTEL, Courseera etc.

Skill Development Facilities for non teaching staff:

For the purpose the enhancing the software as well as technical skills, institution periodically arrange for the training programs both by internal and external agencies. The non-teaching staff are also recommended to attend technical training programs organized by other technical institutions.

Yoga Classes:

For the effective functioning and emotional balance of our staff Yoga Classes are arranged every evening at the campus.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

6.3.2 - Number of teachers provided with financial support to attend conferences / workshops

and towards payment of membership fee of professional bodies during the year

13

File Description	Documents
Upload any additional information	View File
Details of teachers provided with financial support to attend conference, workshops etc during the year (Data Template)	View File

6.3.3 - Number of professional development / administrative training programmes organized by the Institution for its teaching and non-teaching staff during the year

20

File Description	Documents
Reports of the Human Resource Development Centres (UGC HRDC/ASC or other relevant centres)	View File
Upload any additional information	View File

6.3.4 - Number of teachers who have undergone online/ face-to-face Faculty Development Programmes during the year: (Professional Development Programmes, Orientation / Induction Programmes, Refresher Courses, Short-Term Course, etc.)

221

File Description	Documents
Summary of the IQAC report	View File
Reports of the Human Resource Development Centres (UGC ASC or other relevant centers)	View File
Upload any additional information	No File Uploaded

6.4 - Financial Management and Resource Mobilization

6.4.1 - Institution conducts internal and external financial audits regularly

In every financial year the college will conduct internal audit through departmental staff as well as external audit by the

statutory Auditors. The Finance Manager reviews the monthly transactions. While verifying entries, if any mistakes/ short comings identified/noticed the same could be rectified in the same month by the concerned departments. The internal financial audit is conducted at every quarter. The external statutory auditors shall visit the college office twice in a year for vouching audit and submitting the final audit report.

After completion, the final statutory audit report shall be submitted to the Governing body for approval. After approval, the financial accounts, documents could be used for all statutory purposes.

The mechanism of resolving audit objections are given below:

Internal Audit committee meet separately with an external and Internal auditor to discuss matters that the committee or auditors believe should be discussed privately. The committee reviews proposed audit approaches and handle coordination of the audit effort with internal audit staff. The findings of the Auditors are referred to the Audit Committee of the Institution. The Audit Committee goes through the findings and submits its remarks/responses to chairman of the Finance committee. The audit report along with the response of the Audit Committee is reviewed by the Finance Committee. So far, there have been no major short comings/findings.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	https://lbrce.ac.in/quicklinks_pages/auditstatements.php

6.4.2 - Funds / Grants received from non-government bodies, individuals, and philanthropists during the year (not covered in Criterion III and V) (INR in lakhs)

0

File Description	Documents
Annual statements of accounts	No File Uploaded
Details of funds / grants received from non-government bodies, individuals, philanthropists during the year	View File
Any additional information	No File Uploaded

6.4.3 - Institutional strategies for mobilisation of funds and the optimal utilisation of resources

The institution developed a strategy for mobilizing resources and ensures transparency in the financial management of the institution. It primarily depends on the Quality enhancement and the reputation of the Institution. Competent faculty with a higher qualification, State of art laboratories and good placement record enabled fixation of better fee by the Govt. Fee Regulatory Authority. Research funding and Consultancy from Govt. and Non-Govt. organizations and donations from philanthropists depends on the maintenance of quality standards. Thus quality enhancement in the institution is facilitating the generation of funds from different sources.

The following are the different ways of mobilizing the funds in the Institution.

1. Tuition fee

The major source of revenue generation is tuition fees collected from students. The appropriate fee is fixed, as per the norms, by Fee Regulatory Authority of Govt. of Andhra Pradesh depending on the accreditation of programs by NBA and NAAC and also the reputation of Institution and amount spent for the development of Institution.

2. Sponsored research and Consultancy

Funds are also mobilized through sponsored research projects from National funding agencies such as DST, UGC, AICTE, DRDO, ISRO, etc. and Non-Government agencies. Revenue generation through consultancy and material testing from Government and Non-Government sectors is another source of income to the Institution.

Optimal utilisation of resources:

An annual budget is prepared to ensure optimal utilisation of financial resources, based on the estimates received from the departments and functional units of the Institution. The Governing

Body approves the Budget of various departments and sections of the institution for the Financial Year. Audit is performed periodically to ensure whether the budget is optimally utilized or not. The resources in the form of facilities and equipment are maintained to ensure optimum performance. Annual maintenance contract is in position for the equipment and software.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional Information	https://lbrce.ac.in/admission_pages/feestructure.php

6.5 - Internal Quality Assurance System

6.5.1 - Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing quality assurance strategies and processes visible in terms of incremental improvements made during the preceding year with regard to quality (in case of the First Cycle): Incremental improvements made during the preceding year with regard to quality and post-accreditation quality initiatives (Second and subsequent cycles)

At LBRCE, the IQAC has contributed significantly for institutionalizing the quality assurance strategies and process in terms of

- Periodical conduct of external AAA
- Timely submission of AQAR
- Conduct of SSS
- Analysis of feedback from all stakeholders on quality related institutional processes
- Dissemination of information on quality parameters to all stakeholders
- Conduct of workshops, seminars on quality related themes
- Conduct of Pedagogy Training for improvement of teaching-learning
- Participation in institutional Accreditations and rankings.

The IQAC initiatives have resulted in the following two institutionalized practices as described below:

I. Academic and Administrative Audit (AAA):

The IQAC initiated Academic and Administrative Audit (AAA) for the purpose of ensuring implementation of Outcome Based Education (OBE) across all the programs of institution as well to identify the

efficacy of the resources required in the effective implementation. AAA is conducted with the members from premier institutions once in an academic year. The suggestions given by the peer team will reflect the standard of the question papers in the light of Bloom's learning levels, course outcomes. The attainment of course and program outcomes and the action taken for the continuous improvement will be examined and qualitative report will be submitted IQAC cell which intern provides suggestions to the respective department in consultation with the Dean of Academics. The external audit team conducts a comprehensive audit covering all the aspects of institution in accordance to the criteria specified by accreditation and Institute Ranking Framework authorities like NBA, NAAC and NIRF etc. The suggestions given by the external team are discussed with the principal and action plan is prepared and implemented in the coming academic years. The efforts in this direction helped the institution to raise its bar in terms of ranking. Recently MoE conferred our institution with BAND-EXCELLENT in ARIIA 2021 under private/Self Financed institutions. Five of our departments are accredited by NBA under Tier-I.

ii). Initiatives to enhance skill set of the students

- Dedicated training programs for improving in terms of Soft Skills, Programming Skills and Technical Skills have been arranged for specific targeted students resulting in better placements. Dedicated centre for Career guidance and Training Team to train on programming and technical skills have been made available.
- Practical exposure through industrial visits, 04 weeks of case studies and 02 weeks of Industrial training is made mandatory in the new regulations to understand the ongoing technologies in the industry.
- English Communication Skills lab facility as well as addition of SPOORTHY-The Literary Club and Foreign Language certifications (German & Spanish) resulted in improvement of student communication skills.
- One significant improvement based on the comments of peer team is addition of professional societies, Institutional clubs and departmental technical clubs.
- Establishment of Industry Institution Interaction Cell and advanced labs
- Activities of Centre for Innovation, Incubation and Entrepreneurship have been strengthened and resulted in Two Start-Ups.
- Media Centre and 12 Smart Classrooms with interactive panels have been established.

- All classrooms, laboratories and Seminar Halls are ICT enabled.
- Internet bandwidth has been improved from 880Mbps to 1160 Mbps.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	https://lbrce.ac.in/igac/index.php

6.5.2 - The institution reviews its teaching-learning process, structures and methodologies of operation and learning outcomes at periodic intervals through its IQAC as per norms

IQAC deployed standard structure and methodologies for the review of teaching learning process and learning outcomes at periodic intervals. Regarding the review of teaching learning process, the IQAC has setup the following practices at our institution.

(i) Internal Academic Audit:

In a semester, every department is audited thrice in every semester by two auditors from other departments nominated by the Chairperson of IQAC (Principal). The auditors will verify the following parameters and submit the compliance to IQAC / Dean of Academics.

- Course Objectives and Course Outcomes (COs).
- Course articulation matrix (Mapping of COs, POs and PSOs).
- Lesson Plan Schedules.
- Details of learning material as well as e-content developed by the faculty.
- Posting of attendance in attendance registers.
- HODs weekly review in lesson plan and in attendance register.
- Syllabus coverage as per the schedule or not.
- I-Mid, II-Mid and End Semester Question Papers and Scheme of valuation.
- Action Taken Reports (ATRs) on I-Mid and II-Mid marks.
- Posting of Internal Marks in attendance registers.
- Semester End Examination result analysis and ATRs.
- COs attainment computations.
- Gap analysis between COs attainments and Target levels & ATRs.

(ii) Pedagogy Techniques for Effective Teaching Learning:

We have developed a strategy to retain the employees for relatively long period by clearly defining their roles and responsibilities and

evaluate their performance by specifying Faculty Performance Index (FPI) on 10-point scale. This FPI is measured after completion of every semester with 60% weightage from student feedback analysis, 25% weightage from pass percentage in the course taught, and 15% weightage for all contributions at departmental, institution level and R&D.

The appraisal policy is as follows:

- FPI \geq 9 - Self Appraisal
- FPI $<$ 9 and FPI \leq Appraisal by HOD
- FPI $<$ 8 Counselling by HOD & Principal followed by completing academic assignments to improve the performance, like preparing course material, answers for assignments, notes for important topics in further academic load allocated.
- Based on the FPI, Best Teacher awards are given on the eve of Teachers' Day celebrations
- Online student feedback for faculty is being practiced in all departments. Feedback is collected in middle and the end of semester to assess teaching proficiency of the faculty. Feedback comprises of punctuality, syllabus coverage, clarity of presentation, motivational abilities and maintaining the discipline in the class, etc.

IQAC directs all the HODs to select a set of teachers with FPI below 8 and conducts training programs for improving their teaching learning skills. The set also includes newly recruited less experienced teachers.

A training is given by experienced senior faculty members of the institution. After the training the faculty members are evaluated for teaching learning skills by conducting demo lectures. Some example methodologies and scenarios for model demo lectures are given below.

- Introduction of a course in the first day of your class.
- Introduction of Course Outcomes (COs) in the first week of a semester.
- A regular class before a mid examination as per the time table.
- A class after a mid examination. (After evaluation of answer scripts).
- You are in a class and there is force to continue the next immediate hour.
- While taking attendance, you came to know that more students are absent in your previous topic, now they are present.

- While teaching a class, few students are making noise.
- Some students are irregular to your class, now they present in the class.
- HOD told you to take extra class (Last hour), but students are not interested to listen your subject.
- How to mentor your students in a counselling class.
- After I-Mid examination, you are taking a class by knowing your feedback, which is low.
- Power interruptions while your class presentation (PPT) is going on.
- Semester results are announced, and more students failed in a particular course, which is a prerequisite of your current course
- In your class only 50% students are attended / present.

In addition to the above pedagogy techniques for effective teaching learning, IQAC is suggesting these faculty members to register for Online Certification Courses such as SWAYAM, COURSEERA and MIT. They are also encouraged to attend Faculty Development Programs/STTPS organized by premier institutions for further improving teaching learning skills.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	https://lbrce.ac.in/iqac/iqacaaa.php

6.5.3 - Quality assurance initiatives of the institution include Regular meeting of the IQAC Feedback collected, analysed and used for improvement of the institution Collaborative quality initiatives with other institution(s) Participation in NIRF Any other quality audit recognized by state, national or international agencies (such as ISO Certification)

A. Any 4 or all of the above

File Description	Documents
Paste the web link of annual reports of the Institution	https://lbrce.ac.in/igac/igacaqar.php
Upload e-copies of accreditations and certification	View File
Upload details of quality assurance initiatives of the institution	View File
Upload any additional information	No File Uploaded

INSTITUTIONAL VALUES AND BEST PRACTICES

7.1 - Institutional Values and Social Responsibilities

7.1.1 - Measures initiated by the Institution for the promotion of gender equity during the year

a). Safety and Security:

The safety and security of girl students is a prime concern of our institution. The institution aims to groom students to be self-reliant, respectful for cultural diversity, aware of their social and civic responsibilities and gender sensitive. These have the highest regard for women safety, security, and environmental consciousness. Keeping the above in mind the following practices are being implemented.

- A secure parking lot nearer to Academic Blocks is earmarked for girl students.
- Separate Canteen space for girl students.
- Every Department has a girl's waiting room with required amenities.
- Separate and secured hostels are available for girl students within the campus.
- Class room arrangement is made in such a way that girl students are comfortable.
- Wi-Fi enabled reading room is established in the women's hostel and also in the library.
- Women's grievance cell is functioning which takes care of issues of grievances and welfare of the women.
- Internal Complaints Committee (ICC) is also operating in the institution to safeguard the girl students.
- Security wing with 23 guards are placed in the campus and hostels.
- Every year there is a celebration of women's day and inspiring

women personalities are invited to share their life experiences.

- Timely medical assistance for girl students is available
- The institution has installed 150 Closed Circuit (CC) cameras to monitor the security and safety.

b). Counselling:

Both general and individualised counselling has been accorded to the students. Health awareness programs for girl students are arranged in Hostels and during the induction program. Counselling programs are arranged for women safety by Saheli-The Girls Club which is associated with ICC aims to empower women and girl students. It plans for diversified social and economic activities involving women.

Whenever any grievance or complaint arises, the students are directed to approach ICC or specifically designated women faculty case by case. All such matters are kept highly confidential. The institution takes utmost care in dealing with the said matters of counselling the girl students. The institution endeavours to look after the total personality development of students leading to elevated self-confidence, positive self-image, mutual respect, etc through Co-Curricular and extra -Curricular activities and comprehensive counselling inclusive of girl students.

c). Common Room:

Every Department has an exclusive waiting hall for girls with wash room facilities. There are 14 common rooms available on the campus. All such waiting halls are well ventilated and adequately furnished such that the students who happen to fall sick or those that require taking a little span of rest for certain specific reasons can do so. In cases of medical requirement, members of faculty in the vicinity attend to the students for arranging medical facilities. The students are provided with basic medicines and first aid facilities. Female attendants are made available in the said waiting halls.

File Description	Documents
Upload any additional information	View File
Paste link for additional Information	Nil

7.1.2 - The Institution has facilities for alternate sources of energy and energy

A. Any 4 or All of the above

conservation: Solar energy Biogas plant
Wheeling to the Grid Sensor-based energy
conservation Use of LED bulbs/ power-
efficient equipment

File Description	Documents
Geotagged Photographs	View File
Any other relevant information	No File Uploaded

7.1.3 - Describe the facilities in the institution for the management of the following types of degradable and non-degradable waste (within a maximum of 200 words)

The institution has Prakruthi-The Environmental Club to promote awareness on environmental issues such as protection, conservation, preservation, restoration. LBRCE signed a Memorandum of Understanding (MoU) with ITC to recycle and reuse the paper and cardboard waste generated in the campus.

Solid waste management:

The main aim of solid waste management is reducing and eliminating adverse impacts of waste materials on human health and environment. Composting provides a means of accomplishing all three R's (Reduce, Reuse, Recycle). In the institution, the greenery is nurtured by the natural manure produced in the institution.

Metal and wooden waste is stored and given to authorized scrap agents for further processing. Sanitary napkins are disposed of using the incineration process. The old records and books left in campus and hostels are collected and sent to ITC-WOW organization for further action.

The biological reusable waste is processed as organic manure for the plants in campus, while other solid waste generated in the campus is dumped in the community bin of Mylavaram municipality.

Liquid Waste Management:

Drinking water facility is arranged in all buildings of the campus. Wastage of drinking water is restricted through proper monitoring. Proper drainage system is found in all buildings of the campus

- Sewage from campus is collected through a proper drainage system and is let out into municipal sewers.
- Sewage from the girl's hostel is treated in septic tanks and

the effluent is stored in a storage tank, while the excess is reverted to growing trees in the vicinity.

- Sprinklers are used to develop the lawns/greenery in the campus.
- All the buildings are provided with an open sewer system.

E-Waste Management:

The e-waste generated from hardware which cannot be reused is being disposed to third party recyclers. The low configured computers are donated to nearby schools and institutions.

An effective system of segregation, collection, storage and eco-friendly disposal of waste is put in place. The condemned equipment, damaged computers and waste compact discs are disposed through outside agencies.

Waste Recycling System:

The amount of garbage sent to landfill for composting the organic matter is reused rather than being dumped. Wet waste from the canteen and hostels is collected and converted into compost.

The compost plant for solid waste management was placed in the campus. A Plastic shredder is used to splinter the plastic into tiny pieces that makes waste management smoother. With this process the recycling of the plastic waste in domestic areas, industries get cheaper by Shredding, while processing and transportation.

Hazardous chemicals management:

Keeping in view of student safety as well as environmental protection, the Department of Chemistry fixes the concentrations of solutions to very low levels. Necessary precautions are taken to store chemicals safely in a separate room.

Stakeholders from Academic Departments and laboratories are made responsible for disseminating information on hazardous materials that are being used.

File Description	Documents
Relevant documents like agreements/MoUs with Government and other approved agencies	View File
Geotagged photographs of the facilities	View File
Any other relevant information	No File Uploaded

7.1.4 - Water conservation facilities available in the Institution: Rain water harvesting Bore well /Open well recharge Construction of tanks and bunds Waste water recycling Maintenance of water bodies and distribution system in the campus

A. Any 4 or all of the above

File Description	Documents
Geotagged photographs / videos of the facilities	View File
Any other relevant information	No File Uploaded

7.1.5 - Green campus initiatives include

7.1.5.1 - The institutional initiatives for greening the campus are as follows:

- 1. Restricted entry of automobiles**
- 2. Use of bicycles/ Battery-powered vehicles**
- 3. Pedestrian-friendly pathways**
- 4. Ban on use of plastic**
- 5. Landscaping**

A. Any 4 or All of the above

File Description	Documents
Geotagged photos / videos of the facilities	View File
Various policy documents / decisions circulated for implementation	View File
Any other relevant documents	No File Uploaded

7.1.6 - Quality audits on environment and energy undertaken by the institution

<p>7.1.6.1 - The institution's initiatives to preserve and improve the environment and harness energy are confirmed through the following:</p> <ol style="list-style-type: none"> 1. Green audit 2. Energy audit 3. Environment audit 4. Clean and green campus recognitions/awards 5. Beyond the campus environmental promotional activities 	<p>A. Any 4 or all of the above</p>										
<table border="1"> <thead> <tr> <th data-bbox="86 705 550 757">File Description</th> <th data-bbox="557 705 1471 757">Documents</th> </tr> </thead> <tbody> <tr> <td data-bbox="86 766 550 898">Reports on environment and energy audits submitted by the auditing agency</td> <td data-bbox="557 766 1471 898" style="text-align: center;">View File</td> </tr> <tr> <td data-bbox="86 907 550 1003">Certification by the auditing agency</td> <td data-bbox="557 907 1471 1003" style="text-align: center;">View File</td> </tr> <tr> <td data-bbox="86 1012 550 1108">Certificates of the awards received</td> <td data-bbox="557 1012 1471 1108" style="text-align: center;">View File</td> </tr> <tr> <td data-bbox="86 1117 550 1171">Any other relevant information</td> <td data-bbox="557 1117 1471 1171" style="text-align: center;">No File Uploaded</td> </tr> </tbody> </table>	File Description	Documents	Reports on environment and energy audits submitted by the auditing agency	View File	Certification by the auditing agency	View File	Certificates of the awards received	View File	Any other relevant information	No File Uploaded	
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Reports on environment and energy audits submitted by the auditing agency	View File										
Certification by the auditing agency	View File										
Certificates of the awards received	View File										
Any other relevant information	No File Uploaded										
<p>7.1.7 - The Institution has a disabled-friendly and barrier-free environment: Ramps/lifts for easy access to classrooms and centres Disabled-friendly washrooms Signage including tactile path lights, display boards and signposts Assistive technology and facilities for persons with disabilities: accessible website, screen-reading software, mechanized equipment, etc. Provision for enquiry and information: Human assistance, reader, scribe, soft copies of reading materials, screen reading, etc.</p>	<p>A. Any 4 or all of the above</p>										

File Description	Documents
Geotagged photographs / videos of facilities	View File
Policy documents and brochures on the support to be provided	View File
Details of the software procured for providing assistance	No File Uploaded
Any other relevant information	No File Uploaded

7.1.8 - Describe the Institutional efforts/initiatives in providing an inclusive environment i.e. tolerance and harmony towards cultural, regional, linguistic, communal, socio-economic and other diversities (within a maximum of 200 words).

The institution has always been in the forefront of sensitising students to the cultural, regional, linguistic, communal and socioeconomic diversities of the state and the nation. In pursuit of achieving this goal, LBRCE is undertaking various initiatives such as conducting the birth anniversary of eminent personalities as well as National Festivals. NSS, NCC and Club activities provide an inclusive environment by bringing students and teachers with diverse backgrounds. These initiatives help in developing tolerance harmony towards cultural, regional, linguistic, communal, and socioeconomic diversities. Making the courses on Constitution of India and professional ethics mandatory to all UG programs is another initiative which contributes to the above goal.

Under PMKVY scheme, LBRCE has conducted 400hrs training programs on domestic data entry operators for rural unemployed lady members. Twenty-five members are trained among whom 23 have become eligible for certification. Among these 23, twenty-one have cleared the program and received certificates from NSDC-AICTE.

Yoga classes are conducted for people in adopted village Ganapavaram to create awareness on health. Masks are distributed to MPUP school children for protection from Covid-19 and clay Ganesh Idols are distributed to improve the eco-friendly environment. Exam Kits are distributed to 10th class students in Girls High School, Mylavaram.

Awareness program is conducted on Single Plastic Usage and Swachh Bharat in Ganapavaram Village. Awareness is created on the use of computers and installation of operating systems to the teachers of MPUP School at Pondugala.

Awareness on DISHA App by S.P, Krishna Dt. is conducted and an

awareness program on Helmet Usage and Prevention of Road Accidents is also conducted to the public of Ganapavaram.

Eye camps are regular practice by LBRCT and in the process with collaborations from Rotary Eye Hospital, Vuyyuru extend surgery and distribute glasses, medicines to 40 patients in every eye camp. General medical camps, Orthopaedic camps are arranged at adopted villages and medicines are distributed in association with Primary Health centre, Sowjanya Hospitals, Vijayawada. A protected Water Supply is provided to rural areas of Mylavaram as part of LBRCT activities.

Two important national festivals, Republic Day and Independence Day are celebrated every year. All teaching, non-teaching staff and students participate and pledge for the betterment of the nation.

The institution always encourages the students to organise and participate in different Programs organised by our institution, other institutions at university and other government or nongovernment organization levels. This also sensitizes our students towards cultural, regional, linguistic, communal and socioeconomic diversities.

Kruthi - The Fine Arts and Cultural Club has been established to provide a platform for the students to bring out hidden talents. This club provides facilities and organizes cultural events that provide harmony for our students there by contributing towards the specified goal.

NCC provides various local and national camps for their cadets to explore the diversities. The activities include exploring history and geography, learn about economy and good practices as well as cultural heritage, festivals, customs and traditions of the states.

File Description	Documents
Supporting documents on the information provided (as reflected in the administrative and academic activities of the Institution)	View File

7.1.9 - Sensitization of students and employees of the institution to constitutional obligations: values, rights, duties and responsibilities of citizens:

Individuals with different backgrounds viz., cultural, social, economic, linguistic, and ethnic diversities comprise our citizens

and they are governed and guided by the Constitution irrespective of caste and religion. Accordingly, it becomes necessary to sensitize students and employees about values, rights, duties and responsibilities of citizens. The expected awareness regarding values, rights, duties and responsibilities of citizens is declining among the students day by day. Accordingly, an effort is required by the institutions in this regard. The corresponding implementations by our institution are given below.

The students are inspired by participating in various programs on culture, traditions, values, duties, and responsibilities from prominent invited guest speakers. The institution establishes policies that reflect on core values. Code of conduct is prepared for students and staff which is to be obeyed by everyone. Moreover, institution conducts awareness programs on the ban on plastics, cleanliness, Swachh Bharat, etc. there by promoting value system among students.

The institution designed the curriculum with mandatory courses like "Professional ethics and human values", "Constitution of India" as a small step to inculcate constitutional obligations among the students.

Guest lectures are regularly organized by departments to deliver lectures by prominent people on ethics, values, duties, and responsibilities. Topics on Ethical Values, rights, duties, and responsibilities are included in the Elocution activities and debates as part of department association activities. Induction program for first year students also gives us an opportunity for our principal in inculcating values, rights, duties, and responsibilities.

Every year Republic Day is celebrated by organizing activities highlighting the importance of the Indian Constitution. Similarly, constitution day and Independence Day are also celebrated every year.

Major initiatives taken during the last five years:

Blood Donation

Every year the institution organizes blood donation camps in association with the Indian Redcross Society. The students and employees are sensitized on the importance of the activity and are encouraged to participate in saving the life of citizens of India.

Road Safety Rally

The students and employees are encouraged to participate in the activities of spreading awareness among citizens on social issues like road safety and wearing helmet to avoid accidents.

Cleanliness activities and Plantation drive.

During LAKSHYA- A National Technical and Cultural fest students and employees undertake distribution of 500 plants every year in addition to regular plantation drives initiated by the institution. Students consistently and regularly participate in the cleaning activities on several occasions.

Flood relief donations:

Generous Management, faculty and students of our LBRCE contributed positively and donated amount towards the victims of Floods.

Fund raising towards to Sainik Welfare

To serve the Nation, LBRCE came forward to collect funds from faculty and staff for the Armed Forces fund. The collected amount was sent to the District Sainik welfare Fund, Vijayawada.

File Description	Documents
Details of activities that inculcate values necessary to transform students into responsible citizens	View File
Any other relevant information	No File Uploaded

7.1.10 - The institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic sensitization programmes in this regard: The Code of Conduct is displayed on the website There is a committee to monitor adherence to the Code of Conduct Institution organizes professional ethics programmes for students, teachers, administrators and other staff Annual awareness programmes on the Code of Conduct are organized

A. All of the above

File Description	Documents
Code of Ethics - policy document	View File
Details of the monitoring committee composition and minutes of the committee meeting, number of programmes organized, reports on the various programmes, etc. in support of the claims	View File
Any other relevant information	No File Uploaded

7.1.11 - Institution celebrates / organizes national and international commemorative days, events and festivals

The college believes in celebrating events and festivals in college. It is an integral part of learning and building a strong cultural belief in a student. The College makes tremendous efforts in celebrating the national and international days, events and festivals throughout the year. College is committed to promote ethics and values amongst students and faculty to encourage the same, College organizes National festivals as well as Anniversaries for the great Indian Personalities.

In academic year 2020-21, we celebrated the following days like Independence Day, Abdul kalam Jayanthi, Parakram Diwas, , Engineers Day Celebrations, Gandhi Jayanthi ,Police Commemoration Day , National Unity Day (Birth Anniversary of Sardar Vallabh bhai Patel), National Youth Day , Mother Language Day Celebrations ,National Education Day , ,Birth Anniversaries of Dr. Sarvapalli Radhakhishnan, Swami Vivekananda birthday.

Name of the Program

Date

Independence Day

15-08-2020

Abdul Kalam Birth Anniversary

15-10-2020

Parakram Diwas

23-01-2021

Engineers Day Celebrations

15-09-2020

Gandhi Jayanthi

02-10-2020

National Unity Day

31-10-2020

National Youth Day

11-01-2020

Mother Language Day Celebrations

20-02-2021

Republic Day Celebrations

26-01-2021

File Description	Documents
Annual report of the celebrations and commemorative events for during the year	View File
Geotagged photographs of some of the events	View File
Any other relevant information	No File Uploaded

7.2 - Best Practices

7.2.1 - Provide the weblink on the Institutional website regarding the Best practices as per the prescribed format of NAAC

Web Link: <https://lbrce.ac.in/iqac/iqacbestpractices.php>

1. BEST PRACTICE-I

Title of the Practice:

Effective Implementation of Outcome Based Education (OBE) in Teaching-Learning Process

Objectives of the Practice:

- To address the learning levels of students and make teaching more student-centric.
- To guide the faculty towards better planning in teaching-learning methodologies.
- To augment effective knowledge transfer through core, elective courses in addition to integrated learning practices.
- To enhance critical thinking, problem solving skills among students.
- To enrich technical skills through modern tools usage.
- To improve self-learning capabilities through MOOCs.
- To enrich the curriculum that suits to current industrial needs.

The Context:

Good teaching practice has a key influence on student learning - a desired outcome and primary goal of higher educational institutions. Teachers strive to meet the principles of good practices in an effort to provide the best learning experience for their students. Accordingly, our institution has been implementing OBE in Teaching - Learning.

The Practice:

- The process of teaching-learning for effective content delivery is realized by involving Course Coordinator Committee (CCC), Module Coordinator Committee (MCC), Program Assessment Committee (PAC) and Department Academic committee (DAC).
- Preparation of course hand-outs and identifying Course Outcome (CO) targets as per the recommendations of Module Coordinator committee are worked out in addition to exploring the attainment gaps.
- Module coordinators play vital role in developing course contents, setting of CO targets, monitoring of attainment gaps, preparation of quality questions and suggesting best delivery methods suitable for specific courses.
- Every year DAC and PAC are reviewing POs and PSOs attainments of graduating batch. After analysis, for effective OBE

implementation the following actions are taken to strengthen the teaching-learning process.

- Delivery methods are adjusted according to COs attainment of respective courses.
- Curriculum revisions are done based on POs and PSOs attainments to meet the stakeholder expectations.
- Every department is preparing a calendar of events to strengthen the attributes of students based on learning outcomes.

II). In order to ensure the effective implementation of OBE, IQAC conducts academic audit thrice in every semester. The academic audit team verifies the following parameters and submit the compliance to IQAC Coordinator.

- Course Objectives and Course Outcomes (COs).
- Course articulation matrix (Mapping of COs, POs and PSOs).
- Lesson Plan Schedules.
- Details of learning material as well as e-content developed by the faculty.
- Posting of attendance in attendance registers.
- HODs weekly review in lesson plan and in attendance register.
- Syllabus coverage as per the schedule or not.
- I-Mid, II-Mid and End Semester Question Papers and Scheme of valuation.
- Action Taken Reports (ATRs) on I-Mid and II-Mid marks.
- Posting of Internal Marks in attendance registers.
- Semester End Examination result analysis and ATRs.
- COs attainment computations.
- Gap analysis between COs attainments and Target levels & ATRs.
- Implementation of LMS (lms.lbrce.ac.in)

III). IQAC evaluates Faculty Performance and provides necessary recommendations towards implementation of OBE.

- The effective implementation of teaching-learning process is reviewed by IQAC through a Faculty Performance Index (FPI) for every teacher as per specified procedure of the institute.
- IQAC informs all the HODs to select a set of teachers with FPI below 8 and conducts training programs for improving their teaching learning skills. It also includes newly recruited faculty those are having less than two years of teaching experience. After the training, the faculty members are evaluated for teaching-learning skills by conducting demo lectures including OBE implementation.

- Faculty members are encouraged to register for Online Certification Courses such as SWAYAM, COURSERA and MIT OER and to attend Faculty Development Programs/STTPS organized by premier institutions for further improving teaching learning skills.

IV). Certification and training programs on emerging technologies and soft skills are arranged for students through the following centres to strengthen the usage of Modern Tools.

- CM's Skill Excellence Centre-APSSDC
- DASSAULT SYSTEMS-3D Experience Centre (CATIA Software)
- ANSYS Skill development center
- Applied Robot Control (ARC) Lab.
- National MEMS Design Centre (NMDC).
- CISCO Network Academy.
- NI LABVIEW Centre of Excellence.
- Centre for Career Guidance and Training (CCGT).
- Training & Placement Cell conducts hands-on sessions for programming ability improvement by the internal faculty who got trained by E-BOX, WIPRO, CISCO, AWS and Blueprism.

Evidence of Success:

- 80.34 % of UG B.Tech students have successfully graduated and among them 48.27% of students have graduated without any backlogs
- 75.74 % of UG B.Tech students have graduated with First class with Distinction.
- Overall student satisfaction has been improved. The Student Satisfaction Survey on the Teaching-Learning is at a level of 3.68 on 4-point scale.
- 02 Start-ups are registered, and 13 prototypes have been developed.

Some of the achievements are listed below:

- ARIIA 2021 Rankings: "BAND EXCELLENT" (Private/Self Financed)
- Internshala Rankings 2021:
 - All India Ranking: 340
 - Zonal Rank: 134
- Outlook ICARE 2021 Magazine Survey:
 - 101-250 Rank Band
- Dataquest T Schools Survey 2021:

- 74 Rank (Among all Govt. and Private Colleges)
- 62 Rank (Among all Private Colleges)

- Dataquest Digital Index 2020 : 35th Rank
- AAA+ grade awarded by Careers 360 (2020)
- 2.5 STAR Rating to CIIE by MHRD Institution's Innovation Cell
 - Improved placement offers through skill centres (A.Y.2019-20: 524 to A.Y.2020-21: 756) and improvement in annual CTC.
 - Publications have been improved from 43(A.Y:2015-16) to 465 (A.Y:2019-20) in quality journals

Problems Encountered and Resources Required

Acceptance for OBE procedural changes is more than 95% by the faculty. However, adapting to the changes is observed to be slow.

2. BEST PRACTICE-II

Title of the Practice:

Ensuring holistic development of students

Objectives of the Practice:

- To nurture the technical skills through department specific professional bodies and technical clubs.
- To explore inherent skills of students through National Level Technical and Cultural Symposia
- To enhance student's physical and psychological competence by games, sports and yoga.
- To understand the importance community services and enhance social empathy by NSS activities.
- To make student a responsible citizen with ideal qualities like character, courage, comradeship, discipline, leadership, secular outlook, spirit of adventure.

The Context:

It is necessary that the student attains requisite knowledge in his/her branch of engineering as well as possess adequate soft skills and programming ability to become employable or an entrepreneur. Attending all the schedules of co-curricular, extracurricular and extension activities would undoubtedly make students well fit for any kind of responsibility.

The Practice:

I). Empowering of students to acquire technical and life skills through following student-centric platforms as part of Co-curricular activities.

- IEEE Student Chapter: The chapter has been very functional in exploring the knowledge levels of students by means of several technical competitions like quizzes, project expo, fast circuit, waste to health etc. In addition to these, guest lectures, workshops and training programs are conducted.
- ISHRAE Student Chapter: It facilitates conduction of numerous technological training programs offered to Mechanical engineering students.
- CSI Student Chapter: It focuses on enriching the technical knowledge of students in the latest programming languages including leadership qualities through different activities continuously.
- ISTE Chapter: It enables students to undergo training that suits to industrial emerging needs through specific skilled development programs. Identifying thrust areas and accordingly workshops / hands-on sessions are conducted that helps the students to get acquainting with latest technological developments.
- IETE Student Chapter: It facilitates in providing guidance and training to students to develop better learning skills and personality.
- IE (I): The objective to promote the pursuit of excellence in the field of engineering.
- Department Technical Clubs: The main aim of these clubs is to share the latest technological developments pertaining to their core subjects, performing competitions, and producing department technical magazines covering technical and non-technical aspects helps in getting contemporary issues. These clubs are found to be so crucial, and students have been involving actively in all activities. Each and every department has its own technical club.
- Centre for Innovation, Incubation and Entrepreneurship (CIIE) facilitates incubation of innovative ideas pertaining to socio-economic issues.
- Institutional Student Clubs: In order to improve the personality of students, different clubs are functioning in the institution:
 - Saheli-The Girls Club is a student club dedicated to the cause of bettering the lives of women and girl students. It organizes a variety of social and economic activities

involving women.

- Prakruthi - The Environmental Club aims to increase and promote awareness of environmental issues such as protection, conservation, preservation, restoration and help students and staff to adopt and adapt the idea and philosophy of sustainable development into their daily lives at college and out of it with an emphasis on educating and empowering them.
- Spoorthi - The Literary Club to organize plethora of literary & co-curricular activities to improve competencies among students and to get 'SPANDANA- the heart's beat' - the students' Magazine published every quarterly.
- Kruthi - The Fine Arts club provides a great platform to the students, to bring out their hidden talents by establishing fine arts club.

II). Enrichment of student's physical and mental competencies through extra-curricular activities.

- Sports and Games: It aims to develop students' physical competence and knowledge of movement and safety, and their ability to use these to perform in a wide range of activities associated with the development of an active and healthy lifestyle. The necessary sports facilities suitable for providing training are made available.
- Gymnasium: The objective is to get healthy in body and mind to live a longer and more fulfilled life.
- Yoga: It aims at developing concentration, memory power, will power and self-confidence. Good Health can be achieved by the regular practice of Yoga & Meditation.

III). Development of student's attitude towards social service by Extension Activities.

- NSS Unit: The institute promotes regular engagement of students, faculty and supporting staff with the neighbourhood community for holistic and sustained community development through NSS Unit. It enables students to understand practical problems of the common people in society and enhance social empathy. Further, it helps to realize the value of civic sense, public morality, efficient utilization of resources, good traffic sense, public safety and ethical living.
- NCC Girls Wing: It aims developing qualities of character, courage, comradeship, discipline, leadership, secular outlook, spirit of adventure and sportsmanship and the ideals of

selfless service among the youth to make them useful citizen

Evidence of Success:

- NSS Unit conferred with "National Service Scheme award" by Ministry of Youth Affairs and Sports, Govt. of India for the year 2019-20
- Recognized as "Beat Covid Campaign College" by Mahatma Gandhi National Council of Rural Education (MGNCRE)
- Program Officer Dr.P.Ashok Reddy received "National Service Scheme Award 2019-20" from Hon'ble President of India on 24-09-2021.
- Lt. V. Likhita, ANO received Gold Medal in PRCN COURSE SW- 108 held at OTA Gwalior, Madhya Pradesh from 26-07-2021 to 23-10-2021
- Received "Dassault Systems Project of the year 2020" for the Project "Healthy Washing Machine" from Sri. Ch. Madhusudhan Reddy garu, Chairman, APSSDC and Prof. D.V. Rama Koti Reddy garu, Executive Director, APSSDC.
- Ms. K. Naga Divya Sri, received "Best Student in Holder in Entire Andhra Pradesh" for Handwriting Competition held on the occasion of releasing DISHA App on 29th June 2021 from Prof. K.Hema Chandra Reddy garu, Chairman, APSCHE.
- Ms.K.Poojitha Gayathri(EEE) bagged 1st Place in Patriotic Poem event in NSS State Youth Festival Competitions -2020
- Sk.Vanhar Ali, participated in NSS National Youth Festival during 12-16, Jan 2020 at Uttar Pradesh
- Ms. G. Baby Sinduja got "Best Computer Science Engineering Student 2019" award by ISTE A.P Section State.
- Received a cash prize of 1 Lakh for participating in HEXAGON MSC virtual conference - 2020 conducted on 2nd - 3rd December 2020
- A project "Wearable Antennas for Health Care" was published in AICTE Chhatra Vishwakarma Award (CVA) booklet 2020
- Secured "Runners" position JNTUK, Kakinada Football (Men) Intercollegiate Tournament-2021.
- Mr.J.D.V. Prasad, Yoga Trainer, bagged "Gold Medal" in the 34th A.P. State Yogasana Championship - 2021.
- V.Akshara (II ECE) Participated in Second world Kuchipudi Dance Festival in Solo and Group dance held during 22nd to 24th October 2021 Organized by Kuchipudi Art Academy, Chennai.

Problems Encountered and Resources Required

Strict adherence to the regular academic schedule of teaching-learning, time constraints have affected the participation of

students in Co-Curricular, Extra-Curricular and Extension activities.

File Description	Documents
Best practices in the Institutional website	https://lbrce.ac.in/igac/igacbestpractices.php
Any other relevant information	Nil

7.3 - Institutional Distinctiveness

7.3.1 - Highlight the performance of the institution in an area distinct to its priority and thrust (within a maximum of 200 words)

"Giving Back to the Society and Environment"

The LBRCE is run by LBRCT which is well known for its philanthropic attitude in all its activities. The major thrust in all these activities is to improve the rural society in and around Mylavaram. Any such social upliftment requires a focus on different dimensions. Providing technical education of good standards to the young students at affordable level specifically happens to be one such important dimension. With this view LBRCE was established in the year 1998. Not only providing technical education but also many other dimensions are taken into consideration during the progress of LBRCE. Through these following activities some dimensions are taken care.

- Employability enhancement programs
- Fee concession to economically weaker students
- Financial support to incubate innovative ideas
- Generous Welfare measures for supporting staff
- Generous rural development activities
- Adoption of nearby village

In accordance with institution Vision and Mission spreading education to rural areas is given a high priority by LBRCT. We are very happy that every year more than 30% of students admitted belong to Mylavaram and Rural surroundings. Many of these students also are encouraged by LBRCE at the time of admission through fee concession if student is financially weak. The quality of technical education offered at LBRCE is enriched through Employability enhancement programs. This leads to better placement and higher studies for

these rural students. This in turn contribute towards rural development.

We believe that institution life is not all about academics, games, friends, and fun. It is also about learning to interact with other people, being aware of social, environmental and gender issues, and inequities in the society. We provide an opportunity to every student to make the society in which he/she lives, a better place and to grow as a better individual. The LBRCE has committed itself to the task of inculcating social values and responsibilities in its students.

In line with its vision of working towards the socio-economic development of the country, LBRCE has taken utmost care to give back to the society. Several student committees are formed to carry out the duties towards society. The Two-week and one-week long and intense induction programs give the freshmen an insight into the institution's values and vision. Ensuring participation in all these programs gives ample opportunity for LBRCE students to contribute for the cause of "Giving back to the Society".

Along with other sports, cultural and technical activities, the NSS unit plans activities like tree plantation and field visits to expose the students to the pressing issues in our nearby society.

As a special thrust, societal development is also instilled on a large scale into the students through the active NSS unit which undertakes various services to inculcate social values. Throughout the year, the NSS unit undertakes a plethora of events ranging from street plays, cleanliness drives, tree plantation drives, donation drives, waste management drives, Science fair, gender equity activities, field visits and many more. Inspirational programs for school children are conducted regularly by NSS unit to create awareness on technological advancements and impact of science and technology on society.

LBRCE is having a policy of adopting one nearby village every year to extend support to the nearby villages regularly to make them aware of certain basic skills and amenities. Further, we consider health care is of top priority in our society. Hence, we frequently conduct medical checkups, drainage cleaning, exploring issues with open defecation, smoking, consumption of alcohol etc. In addition, utmost focus is given to 10th class students along with school dropouts by means of exploring the importance of education in the present context.

The institution ensures that the social values and feeling of giving back to the society is not limited to the NSS unit only. In addition to the activities by NSS, many students do come up with ideas to contribute to society too. We encourage them to go forward by supporting them in executing their ideas. The students have conducted donation drives for flood affected people recently.

The institution has established PRAKRUTHI-The Environmental club through which various environmental protection activities have been initiated such as, Plantation Drives, Distribution of saplings, Awareness programs on environmental issues. Paper usage for official communications in the campus is very much reduced and all such communications at present are through SMS, mails and digital displays.

Many students are encouraged by all departments to take up useful student projects that can contribute towards rural development. Many such projects are implemented during last five academic years with financial support. The institution CIIE has arranged for training on "Azolla Grass & Mushroom Cultivation and Sugarcane Peeler Machine" for rural youth.

Support in terms of furniture, computing systems, equipment and technical support is extended by LBRCE to schools and institutions around Mylavaram.

"Those who have the ability to act, have the responsibility to act." Abiding by this principle, LBRCE has committed itself and taken on priority the task of social upliftment. To begin with, several vocational training programs have been taken up regularly. Data Entry Operator training program through PMKVY to the rural woman is a prominent one. LBRCE is playing an inspirational role in social upliftment in this way and many faculty members are also encouraged to contribute to this cause extensively.

LBRCT also has many other activities listed below and the trust has spent crores of rupees for following charity activities there by contributing towards rural development in a major way.

- Old Age Pensions disbursed monthly for rural old folk
- Eye Camp conducted every week, meeting the expenses of surgery, Medicines and glasses.
- Health Camps are arranged in adopted villages
- Protected water Supply to nearby villages
- Construction of School Buildings, Public Utility Structures and Temples

File Description	Documents
Appropriate link in the institutional website	https://lbrce.ac.in/nss/index.php
Any other relevant information	No File Uploaded

7.3.2 - Plan of action for the next academic year

Governance

- Reforming administrative procedures through e-governance
- Conducting Academic and Administrative Audit
- Evaluation of Institute performance and benchmarking by participating in various ranking frameworks
- Reforming financial planning
- Conducting Internal/ External financial Audits
- Providing financial assistance to the faculty for attending FDPs/STTPs/Conferences

Teaching - Learning

- Strengthening Teaching -Learning process through Internal Academic Audit
- Reforming Faculty Self Appraisal Form
- Strengthening the OBE Implementation
- Ensuring the quality of Mid and Semester End question papers
- Organizing pedagogy techniques for effective teaching-learning
- Strengthening Industry-institute interaction
- Improving the class room ambience
- Effective usage of ICT tools and e- learning resources

Research and Development

- Undertaking Major Projects and consultancy works
- Strengthening of research facilities in advanced labs
- Improving seed money facility and incentives for research
- Increasing the number of journal and conference publications
- Encouraging faculty to apply for financial assistance from the outsources to organize the Seminars/ Conferences/ and research projects.
- Conducting International/National Conference

Skill Set Improvement

- Improving faculty competencies through FDPs/STTPs/Workshops/Certification Courses/Conferences.
- Planning to introduce series of programs like short term courses, workshops and certification courses in tune with the institution Mission to improve technical skill set.
- Encouraging students to participate in various events to ensure holistic development of personality
- Enhancing soft skills and Programming Skills
- Conducting Annual Technical Symposium (LAKSHYA) and activities in various clubs and professional society chapters
- Strengthening Alumni interactions
- Organizing various sports and Cultural events
- Adopting nearby village to address societal issues by involving good number of students
- Providing vocational training /job oriented training as per local needs
- Extending educational support to nearby educational institutions