



SELF STUDY REPORT

FOR

1st CYCLE OF ACCREDITATION

VIGNAN'S LARA INSTITUTE OF TECHNOLOGY AND SCIENCE

VIGNANS LARA INSTITUTE OF TECHNOLOGY AND SCIENCE VADLAMUDI
CHEBROLU MANDAL GUNTUR DISTRICT ANDHRA PRADESH.

522213

www.vignanlara.org

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

Vignan's Lara Institute of Technology & Science (VLITS) is a nonprofit organization established in 2007 at Vadlamudi under the flagship of Vignan Group of Institutions. The Vignan group has 22 Schools, 7 Junior colleges, 1 PG & Degree college, 1 B.Ed. college, 1 Law college, 3 Pharmacy colleges, 6 Engineering colleges and 1 University in the states of Andhra Pradesh and Telangana. The Group serves education in all levels to 60,000 students every year. VLITS is governed by a team of highly educated members with rich experience in academia and industry to realize the vision and mission of the institution. The chairman of the institution Dr. Lavu Rathaiah is a pioneer and visionary educationalist with more than 40 years of vast experience in teaching and administration.

VLITS is approved by AICTE and permanently affiliated to Jawaharlal Nehru Technological University Kakinada (JNTUK), Kakinada, Andhra Pradesh. It has been promoting quality technical education and nourishing intellectual culture to develop students with holistic personality. The institution has lush green campus of 10.56 acres of land with 32993 sq. mts built up area. The institution is currently offering 10 UG programmes (B.Tech-CSE, CSE(AIML), CSE(AI), CSE(DS), AIML, IT, ECE, EEE, Mechanical and Civil) with an intake of 900 students. Out of which, 5 UG programmes have been accredited by NBA. The institution also offers 5 PG programmes (M.Tech-CSE, Embedded Systems, Power Electronics & Electrical Drives, Thermal Science & Energy Systems and MCA) with an intake of 141 students. The institution is certified by ISO 9001-2015 and secured 2(f) status of UGC.

Vision

To evolve into a Centre of Excellence in Science and Technology for producing globally acclaimed professionals who are psychologically strong, emotionally balanced and guided by social consciousness and ethical values.

Mission

- *To strive for excellence in teaching-learning and evaluation through innovative practices.*
- *To equip students with problem solving abilities through industrial interaction, novel, and high-end laboratory work.*
- *To maintain a supportive and vibrant campus environment through co-curricular and extra-curricular activities for the all-round development of students into confident professionals and responsible team leaders.*
- *To sensitize students on societal issues and encourage them to explore solutions for the problems identified.*

The institution continues its journey towards its vision and mission by consistently upgrading its facilities, systems, and policies to produce 80-85% of academic results and 80% of campus placements.

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

1. The institution has *permanent* affiliation from *JNTUK, Kakinada* and is recognized under *UGC(2f) and DSIR*
2. Institution has good will in providing quality education to the rural students and led by an educationalist *Dr. L. Rathaiah, Chairman Vignan Group of Institutions*
3. Governing Body is highly cooperative and supportive with educationalist in academia and industrialists as members
4. *Five diversified UG programs (B.Tech-CSE, IT, ECE, EEE and MECH)* of the institution are accredited by *NBA in 2022 for 3 years and ISO 9001: 2015 certified*
5. Conducting value-added, skill-development courses and additional certification programs in cutting edge technologies
6. Committed and dedicated faculty members with higher qualification and rich experience
7. *314* research articles published by the faculty in indexed journals
8. *40 MoUs* for student internships, projects, and placements
9. Well-equipped laboratories with good infrastructure
10. High number of placements in reputed MNCs with high packages
11. Students friendly, ragging free and eco-friendly campus

Institutional Weakness

1. Being an affiliated institution, limited scope for autonomy in designing the academic syllabus.
2. Limited scope of research due to non-reorganization as research centre by the university.

Institutional Opportunity

1. More placement opportunities for the students in view of the upcoming industries in Andhra Pradesh
2. Enhancing multidisciplinary courses after obtaining autonomous status
3. Encourage more number of young faculty members to acquire higher qualifications through interdisciplinary research
4. Adding more number of research collaborations with industries and R&D organizations
5. Scope for more number of consultancy with more number of industries.
6. NABL Accreditation for Laboratories

Institutional Challenge

1. Training the students of rural background in social and professional etiquette, communication, technical and other skills for employability.
2. Getting more consultancy assignments from the industries outside the state
3. Attracting more students towards conventional branches
4. Competition from technical institutions and universities in the near vicinity

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

Every program is designed with professional core courses, professional electives, open electives, humanities, basic science, management, laboratory, and skill-oriented courses. The curricula of UG and PG programmes have been enriched by offering value added courses, seminars, guest lectures, workshops, symposiums, co-curricular and extra-curricular activities. *Internal Quality Assurance Cell (IQAC)* prepares a well-defined academic calendar incorporating the above said activities.

Conventional teaching practice of chalk & talk is used along with ICT facilities for better comprehension of the subject content as per the designed lesson plan. Faculty are advised to employ instructive innovations through presentations, course work, group discussions, brainstorming sessions, workshops, seminars, and industry visits to expose students in multidisciplinary areas.

HoD and class review committee regularly monitors the delivery of curriculum as per the lesson plan. The internal assessment is done as per the academic regulations of affiliating university. IQAC ensures quality of the content and its delivery through an internal audit. The institution has been implementing revised *Outcome Based Education (OBE)* system in all programmes.

The institution has offered *207 Value-added programs* in the last five years. Mandatory courses such as Professional Ethics & Human Values and Environmental Science/studies are integrated into the curriculum to inculcate the ethical/human values, gender sensitivity and understand the natural resources, ecosystem, its diversity, and environmental impact. Additionally, the institution conducted *104* activities on Swachh Bharat Abhiyan, Blood donation camp, health check-up camp, hygiene and health workshop, environment awareness camp and *15 programs on women rights, human rights, children rights, gender justice, equality and sensitization* to infuse the gender sensitivity and human values.

All students have undergone social relevant project/internship/major project in the latest completed academic year. Feedback from students, faculty, employers and alumni is collected for overall development of students and subsequent year planning for their better performance. Additionally, students' feedback is taken to enhance the teacher's performance, lecture quality, and effective course content delivery.

Teaching-learning and Evaluation

Every year, admissions are carried through *APEAPCET, APECET for UG and GATE, APPGECET, APICET* for PG programmes as per the norms of Government of Andhra Pradesh. In last five years, *87%* of students took admission in this college against the *AICTE sanctioned seats*. *90%* of seats are filled against *SC, ST and OBC* categories.

Every year, full time teachers are recruited against the sanctioned posts by the governing body to fulfill *FSR 1:15 for UG and 1:12 for PG* programs. On an average every year *16.65%* faculty are maintained with Ph.D/NET/SET/SLET qualification. In the current academic year, out of *232* faculty members, *60* faculty have Ph.D/NET/SET/SLET qualification and *88* faculty members are pursuing Ph.D in reputed universities.

The institution has *ICT-enabled classrooms* and well-established laboratories to adapt the student-centric teaching learning process. Experiential Learning through industrial *internships and web-based/physical*

training such as *CodeChef*, *PCB design*, *ANSYS*, etc. has been implemented. The students actively involved in participatory learning such as seminars, group discussions, project works, hackathons etc. 63 research articles were published by the students in journals. Furthermore, *PET and BEC* courses are offered to improve communication skills. *Community Service Project* is made mandatory for all the students to solve the real time, societal, environmental, and engineering problems.

In each semester, there shall be two internal examinations for theory course and an internal assessment with continuous evaluation for laboratory course. The faculty members evaluate internal examination scripts according to scheme of evaluation. Students verify their marks and affix signatures on answer scripts. If there is any discrepancy in evaluation, it is solved in student's presence. Beyond this stage, it is rectified by appointing a two men committee. *JNTUK* conducts semester end examination. Evaluation of answer scripts is carried out at *JNTUK spot centers*. If any discrepancy is noticed in *JNTUK results*, the students may apply for *recounting/revaluation/challenge* valuation.

The *POs, PSOs and PEOs* of *UG and PG* programs are stated and displayed on institution website, classrooms, laboratories, notice boards, published in syllabus book, course files, lab manuals and disseminated through student induction programme, FDPs, Conference, workshops, and parent meetings. The attainments of *COs, POs and PSOs* are calculated and compared with the target values. Corrective measures are taken when attained values are less than the targeted values.

Research, Innovations and Extension

The institution has Research & Development committee to promote research and innovation culture among the faculty and students. The institute received sum of *Rs 72.46 Lakhs from DST*. In addition to this, around *Rs 61 Lakhs* grant was received from non-government agencies. The institution established *Vignan Lara Incubation Center (VLIC)*, *Entrepreneur Development Cell (EDC)*, *Intellectual Property Right Cell (IPR)*, *Institution's Innovation Council (IIC)* for creating awareness, innovation, and technology transfer to the stakeholders. The institution also participated in *NIRF and ARIIA ranking*, Govt. of India.

19 IPR, 20 Entrepreneurship Development, 15 Research Methodologies, 12 Innovation activities were organized. Smart India Hackathon was conducted in collaboration with *IIT, Bombay* to promote startups culture in the campus. In last five years, *2 patents* were granted and *14 patents* were published. Out of *14 patents published, 2 were submitted to KAPILA* for financial assistance. *52* innovative ideas were approved by *YUKTI-National Innovation Repository (NIR)* and '*Xgenie soft*' *PVT Ltd* was incubated through *VLIC*.

For promoting research activities, the college is providing cash incentives and awards for publication of research articles in referred journals & funded projects. In addition to this, financial assistance is given to the faculty for attending conferences and FDPs. In last five years, *314* research articles were published in referred journals, *75 books/book chapters* were published by the faculty. As a result of this, *h-index of the institution* has reached to *14*.

The institution organized *104 extension activities* to inculcate human values and solve societal problems. More than *75% of students* carried out different community service activities in the neighboring rural areas and adopted villages to benefit the society through *NSS, NCC and Unnat Bharat Abhiyan (UBA)*. For this, *21 Awards and Appreciation certificates* were received from various organizations.

The institution has signed *40 MoUs* with industries for workshops, internship, field trip, placement training and

collaborating research activities for the students and faculty.

Infrastructure and Learning Resources

The institution has an eco-friendly green campus of 10.56 acres with a built-up area of 32,993 sq.m. which includes 48 ICT enabled classrooms, 6 ICT enabled AC seminar halls, 12 tutorial rooms, 53 well-established laboratories, 5 research labs and an open-air auditorium. Infrastructure facilities provided for indoor and outdoor games are table tennis and carrom boards, volleyball, basketball, foot ball, badminton, kabaddi, throw ball, tennikoit courts and a cricket ground with qualified physical director. Fire-extinguishers are placed in all laboratories and prominent places. A 250 kVA generator and 140 kVA UPS supports the continuous power supply. Roof top solar power plant was installed with 200 kW to save Rs.1.3 lakhs per month. An additional power of 1500 kVAh is supplied to APCPDCL. Ramp, lift and separate washroom are provided to the Divyang students. Parking facility, transport facility, cafeteria, guest house, round the clock health center and separate hostel facility for boys/girls are available. Rainwater recharging system, reverse osmosis plant, biogas production of 70 kg/day and sewage water treatment plant of 600 kL/day were practiced.

The automated air-conditioned central library consists of 5839 book titles, 24,133 volumes, 8905 e-books, 6083 journals, 20 computers, and a photocopier. It also has SC and ST book banks with 312 titles and 3551 volumes of books. There is a regular subscription to e-resources viz. IEEE, J-Gate, ASME, ASCE, DELNET, EBSCO-books, Shodhsindhu and a free digital resource such as National Digital Library. The average expenditure of the library towards books, journals is Rs 32.64 lakhs. On average, the number of students and faculty members used the library was 844 and 65 respectively.

Institution has 865 LAN connected computers with a student computer ratio of 3.45:1 and an internet facility of 500 Mbps. The institution has a policy of IT infrastructure development to update IT facilities, provide internet facilities and does the maintenance and repairs. For development of IT infrastructure, Rs. 268 Lakhs was spent over the last five years. The percentage of expenditure on infrastructure augmentation and maintenance of infrastructure was 25.43% and 14.75% respectively.

Student Support and Progression

The institution is student-centric and encourages the interactive learning. Faculty counselors support the students to get the scholarship and freeships from the government and non-government agencies, by which 70% of students benefited. Bridge courses, value-added courses, induction programs, soft skills, life skills and computing skills were conducted along with academic, co-curricular and extra-curricular activities.

Faculty mentors the students for achieving their academic and career goals and gives guidance for competitive exams, career and organizes diversified activities through various cells for all round development. Thereby, 91% of the students got qualified in state/national/international level examinations. The institution has a transparent mechanism for implementing the guidelines of statutory/regulatory bodies, addressing the student grievances. Appropriate committees resolve the issues of sexual harassment and ragging cases.

Institution offers training in pre-placement, career, GMAT, GRE, TOFEL and civil services which helped in the improvement of prerequisite skills, resume preparation, group discussions, JAM and interviews. As a result, 80% of students got placed in MNCs/ took admission to post-graduate courses in reputed national and foreign universities.

NSS, NCC, sports and cultural activities resulted in increasing the social responsibility, skills, and competencies. The students participated in 287 events and received 170 awards for their performance in sports, cultural activities at university, state and national level.

The passed-out students are in association with 'Vignan's Lara Alumni Association'. They provide support to the existing students and participate in the overall institutional developments including academics, placements and higher studies. Institute organizes the alumni meet regularly. Nearly 120 alumni have visited so far to share their knowledge on cutting edge technologies through guest lectures, institute interfacing programs and help the students to know the recent trends of corporate companies.

Governance, Leadership and Management

Vision of the institution is to sculpt the students into renowned professionals with psychological strength, emotional balance, social awareness, and ethical values. The governing body comprising of the eminent personalities from academia and industry for the overall development and continuous growth of the institution towards vision and mission. The approved plans are executed by the Principal through academic and administrative bodies.

Strategic plan framed by the governing body is to achieve autonomy, *UGC 12 (B)*, *NIRF ranking*, funded projects, establishing Centers of excellence and development of infrastructure. It is executed and monitored through IQAC and concerned Committees. Institution implements e-governance in examination, administration and finance. The admitted student's data such as personal information, fee payment, mode of admission etc. are available in the 'Vignan Lara Internal Management System'.

The staff members are getting welfare benefits such as health insurance, EPF facility, transport facility at subsidized fees, ESI, marriage, and maternity leaves. The children of staff studying in the Vignan's Group of Institutions get 50% concession in tuition fee. The performance of faculty in administration, research and academics is considered for faculty appraisal. 719 staff/students received cash incentives for NPTEL certification courses. Incentives are also given for *SCI/SCOPUS* publications, and funded projects. Rewards are given to the academic toppers and best outgoing students.

On campus FDPs, professional development programs, administrative training programs are conducted by which 95% of the staff got benefited. During last five years, 65% of faculty members have received 100% of the expenditure spent for their participation in FDPs, STTPs and Workshops etc. The required financial resources are mobilized through tuition fee, consultancy, sponsorship, and research grants. The funds are utilized optimally for purchases through competitive quotations and avoiding publicity expenditure. Financial transactions of the institution are regularly audited by an internal audit firm and an external audit once a year by an ICAI certified audit firm to ensure transparency in financial management. IQAC supervises and ensures the quality of institution by conducting academic and administrative audit. Minority Cell, Committee for SC/ST, Grievance Redressal Committee, Anti Ragging Committee, Internal Complaints Committee, OBC Cell etc. are established to support students.

Institutional Values and Best Practices

Presence of 35% of women employees and 36% of girl students emphasize the importance of women in the institution. 4 guest lectures, 6 seminars and 5 workshops were organized on 'Gender Equity' and 'Women

Empowerment' to infuse the value of respect for women and instill the value of non-discriminatory behavior. Facilities like waiting hall, hostels, lady doctor, are provided apart from NCC girls battalion.

To promote the spirit of nationalism and patriotism, all commemorative days were celebrated. Celebrating all religious festivals promote the culture and maintain harmony. The institution initiates sufficient measures to protect and maintain an eco-friendly environment. Roof top solar power plants were installed for power generation. *LED* lamps were used across the campus to save the energy. Solid wastes are collected and segregated as biodegradable, non-biodegradable, and toxic waste. Kitchen waste is converted into biogas through a biogas plant and used for cooking in hostels. Remaining biodegradable waste is dumped to decompose and non-biodegradable sanitary wastes are disposed using incinerators. Widespread plantation is done to keep the campus green and sustain the environment. Rainwater recharge pit is available, and Wastewater is treated in sewage treatment plant and used for gardening. Swachh Bharat scheme is adopted to keep the entire campus clean. To maintain pollution free campus, student vehicles are not allowed into the campus. The e-waste generated is given to the authorized dealers to recycle and reuse it. Energy audit and green audit are conducted annually.

Lift, ramp, and special bathrooms are provided for Divyangjan. Social and health awareness programs are organized to infuse the value of social responsibility among the students.

The best practices of institution are Digital Learning and Faculty Empowerment & Motivational Strategies. The institution uses this digital learning process along with the traditional learning for future readiness of students and builds them to face all the real-world problems. FDPs are organized to acquire skills and techniques in art of teaching, understand the student's psychology, and provide awareness in student counseling. Institutional distinctiveness is shown through transforming the rural, social and economically backward students for global competence.

2. PROFILE

2.1 BASIC INFORMATION

| Name and Address of the College | |
|---------------------------------|--|
| Name | VIGNAN'S LARA INSTITUTE OF TECHNOLOGY AND SCIENCE |
| Address | Vignans Lara Institute of Technology and Science Vadlamudi Chebrolu Mandal Guntur District Andhra Pradesh. |
| City | Guntur |
| State | Andhra Pradesh |
| Pin | 522213 |
| Website | www.vignanlara.org |

| Contacts for Communication | | | | | |
|----------------------------|---------------------|-------------------------|------------|--------------|--------------------------|
| Designation | Name | Telephone with STD Code | Mobile | Fax | Email |
| Principal | K. Phaneendra Kumar | 0863-2381238 | 9441063389 | 0863-2381239 | principal@vignanlara.org |
| IQAC / CIQA coordinator | P. Bhaskara Rao | 0863-2381233 | 9866327785 | 0863-2381239 | deaniqac@vignanlara.org |

| Status of the Institution | |
|---------------------------|----------------------------|
| Institution Status | Private and Self Financing |

| Type of Institution | |
|---------------------|--------------|
| By Gender | Co-education |
| By Shift | Regular Day |

| Recognized Minority institution | |
|--|----|
| If it is a recognized minority institution | No |

| Establishment Details | | | | |
|--|--|---|---------------------------|----------------|
| State | University name | Document | | |
| Andhra Pradesh | Jawaharlal Nehru Technological University, Kakinada | View Document | | |
| Details of UGC recognition | | | | |
| Under Section | Date | View Document | | |
| 2f of UGC | 31-12-2014 | View Document | | |
| 12B of UGC | | | | |
| Details of recognition/approval by stationary/regulatory bodies like AICTE, NCTE, MCI, DCI, PCI, RCI etc (other than UGC) | | | | |
| Statutory Regulatory Authority | Recognition/Approval details Institution/Department programme | Day, Month and year (dd-mm-yyyy) | Validity in months | Remarks |
| AICTE | View Document | 03-07-2022 | 12 | |

| Recognitions | |
|--|----|
| Is the College recognized by UGC as a College with Potential for Excellence (CPE)? | No |
| Is the College recognized for its performance by any other governmental agency? | No |

| Location and Area of Campus | | | | |
|------------------------------------|--|------------------|-----------------------------|---------------------------------|
| Campus Type | Address | Location* | Campus Area in Acres | Built up Area in sq.mts. |
| Main campus area | Vignans Lara Institute of Technology and Science Vadlamudi Chebrolu Mandal Guntur District Andhra Pradesh. | Rural | 10.56 | 32993 |

2.2 ACADEMIC INFORMATION

| Details of Programmes Offered by the College (Give Data for Current Academic year) | | | | | | |
|---|---|---------------------------|----------------------------|------------------------------|----------------------------|--------------------------------|
| Programme Level | Name of Programme/Course | Duration in Months | Entry Qualification | Medium of Instruction | Sanctioned Strength | No.of Students Admitted |
| UG | BTech,Computer Science And Engineering | 48 | Intermediate or Diploma | English | 60 | 60 |
| UG | BTech,Computer Science And Engineering | 48 | Intermediate or Diploma | English | 180 | 179 |
| UG | BTech,Computer Science And Engineering | 48 | Intermediate or Diploma | English | 60 | 60 |
| UG | BTech,Computer Science And Engineering | 48 | Intermediate or Diploma | English | 60 | 48 |
| UG | BTech,Computer Science And Engineering | 48 | Intermediate or Diploma | English | 60 | 59 |
| UG | BTech,Information Technology | 48 | Intermediate or Diploma | English | 60 | 60 |
| UG | BTech,Electronics And Communication Engineering | 48 | Intermediate or Diploma | English | 180 | 162 |
| UG | BTech,Electrical And Electronics Engineering | 48 | Intermediate or Diploma | English | 90 | 56 |
| UG | BTech,Mechanical Engineering | 48 | Intermediate or Diploma | English | 90 | 19 |

| | | | | | | |
|----|---|----|--|---------|----|----|
| UG | BTech,Civil Engineering | 48 | Intermediate or Diploma | English | 60 | 13 |
| PG | Mtech,Computer Science And Engineering | 24 | B.Tech or B.E. or MCA | English | 36 | 0 |
| PG | Mtech,Electronics And Communication Engineering | 24 | B.Tech or B.E. | English | 18 | 1 |
| PG | Mtech,Electrical And Electronics Engineering | 24 | B.Tech or B.E. | English | 18 | 0 |
| PG | Mtech,Mechanical Engineering | 24 | B.Tech or B.E. | English | 9 | 0 |
| PG | MCA,Master Of Computer Applications | 24 | Degree of 3 years duration with "Mathematics" as one of the subjects at Intermediate or Degree level | English | 60 | 60 |

Position Details of Faculty & Staff in the College

| Teaching Faculty | | | | | | | | | | | | |
|---|------------------|--------|--------|-------|----------------------------|--------|--------|-------|----------------------------|--------|--------|-------|
| | Professor | | | | Associate Professor | | | | Assistant Professor | | | |
| | Male | Female | Others | Total | Male | Female | Others | Total | Male | Female | Others | Total |
| Sanctioned by the UGC /University State Government | 0 | | | | 0 | | | | 0 | | | |
| Recruited | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yet to Recruit | 0 | | | | 0 | | | | 0 | | | |
| Sanctioned by the Management/Society or Other Authorized Bodies | 30 | | | | 54 | | | | 148 | | | |
| Recruited | 21 | 9 | 0 | 30 | 42 | 12 | 0 | 54 | 93 | 55 | 0 | 148 |
| Yet to Recruit | 0 | | | | 0 | | | | 0 | | | |

| Non-Teaching Staff | | | | | | |
|---|-------------|--|---------------|--|---------------|--------------|
| | Male | | Female | | Others | Total |
| Sanctioned by the UGC /University State Government | | | | | | 0 |
| Recruited | 0 | | 0 | | 0 | 0 |
| Yet to Recruit | | | | | | 0 |
| Sanctioned by the Management/Society or Other Authorized Bodies | | | | | | 202 |
| Recruited | 116 | | 86 | | 0 | 202 |
| Yet to Recruit | | | | | | 0 |

| Technical Staff | | | | |
|---|-------------|---------------|---------------|--------------|
| | Male | Female | Others | Total |
| Sanctioned by the UGC /University State Government | | | | 0 |
| Recruited | 0 | 0 | 0 | 0 |
| Yet to Recruit | | | | 0 |
| Sanctioned by the Management/Society or Other Authorized Bodies | | | | 56 |
| Recruited | 46 | 10 | 0 | 56 |
| Yet to Recruit | | | | 0 |

Qualification Details of the Teaching Staff

| Permanent Teachers | | | | | | | | | | |
|------------------------------|------------------|--------|--------|----------------------------|--------|--------|----------------------------|--------|--------|--------------|
| Highest Qualification | Professor | | | Associate Professor | | | Assistant Professor | | | Total |
| | Male | Female | Others | Male | Female | Others | Male | Female | Others | |
| D.sc/D.Litt/LLD/DM/MCH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ph.D. | 21 | 9 | 0 | 20 | 6 | 0 | 0 | 0 | 0 | 56 |
| M.Phil. | 0 | 0 | 0 | 2 | 1 | 0 | 2 | 1 | 0 | 6 |
| PG | 0 | 0 | 0 | 20 | 5 | 0 | 91 | 54 | 0 | 170 |
| UG | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Temporary Teachers | | | | | | | | | | |
|------------------------------|------------------|--------|--------|----------------------------|--------|--------|----------------------------|--------|--------|--------------|
| Highest Qualification | Professor | | | Associate Professor | | | Assistant Professor | | | Total |
| | Male | Female | Others | Male | Female | Others | Male | Female | Others | |
| D.sc/D.Litt/LLD/DM/MCH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ph.D. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M.Phil. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PG | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UG | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Part Time Teachers | | | | | | | | | | |
|------------------------------|------------------|--------|--------|----------------------------|--------|--------|----------------------------|--------|--------|--------------|
| Highest Qualification | Professor | | | Associate Professor | | | Assistant Professor | | | Total |
| | Male | Female | Others | Male | Female | Others | Male | Female | Others | |
| D.sc/D.Litt/LLD/DM/MCH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ph.D. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M.Phil. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PG | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UG | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Details of Visting/Guest Faculties | | | | | |
|---|-------------|---|---------------|---|--------------|
| Number of Visiting/Guest Faculty engaged with the college? | Male | | Female | | Total |
| | | | | | |
| | 0 | 0 | 0 | 0 | 0 |

Provide the Following Details of Students Enrolled in the College During the Current Academic Year

| Programme | | From the State Where College is Located | From Other States of India | NRI Students | Foreign Students | Total |
|-----------|--------|---|-------------------------------|--------------|---------------------|-------|
| UG | Male | 410 | 1 | 0 | 0 | 411 |
| | Female | 249 | 0 | 0 | 0 | 249 |
| | Others | 0 | 0 | 0 | 0 | 0 |
| PG | Male | 23 | 0 | 0 | 0 | 23 |
| | Female | 42 | 1 | 0 | 0 | 43 |
| | Others | 0 | 0 | 0 | 0 | 0 |

Provide the Following Details of Students admitted to the College During the last four Academic Years

| Category | | Year 1 | Year 2 | Year 3 | Year 4 |
|----------|--------|--------|--------|--------|--------|
| SC | Male | 86 | 104 | 123 | 120 |
| | Female | 35 | 42 | 62 | 44 |
| | Others | 0 | 0 | 0 | 0 |
| ST | Male | 12 | 15 | 18 | 15 |
| | Female | 8 | 1 | 4 | 0 |
| | Others | 0 | 0 | 0 | 0 |
| OBC | Male | 215 | 252 | 210 | 187 |
| | Female | 111 | 120 | 98 | 73 |
| | Others | 0 | 0 | 0 | 0 |
| General | Male | 121 | 194 | 195 | 207 |
| | Female | 138 | 171 | 161 | 134 |
| | Others | 0 | 0 | 0 | 0 |
| Others | Male | 0 | 0 | 0 | 0 |
| | Female | 0 | 0 | 0 | 0 |
| | Others | 0 | 0 | 0 | 0 |
| Total | | 726 | 899 | 871 | 780 |

Institutional preparedness for NEP

| | |
|---|--|
| 1. Multidisciplinary/interdisciplinary: | <p>As per the revised curriculum, all programs are designed by introducing multidisciplinary/interdisciplinary courses. The institution is offering good number of value-added courses in multidisciplinary areas. Moreover, the students are being encouraged to take up the Kaushal Augmentation and Restructuring Mission of AICTE (KARMA) certificate courses in the interdisciplinary areas. As the college is preparing to offer more of multidisciplinary subjects, it tries to markup the courses along with unit learning outcomes that define the distinct knowledge, skill, attitude, and values. Vignan's Lara Institute of Technology & Science is one of the institutions in Vignan group having 6 engineering colleges and 1 deemed to be university. With this backup, it is very much prepared to have multidisciplinary and interdisciplinary approach in academic, research and other activities. Once the autonomy is attained, the institution is prepared to have MOUs with other institutions and industries to promote research and consultancy. To transform the institution into multidisciplinary institution, the Departments in various subjects such as Languages, Pure and Applied Sciences, Mathematics, Literature, Music, and Sports will be initiated after obtaining autonomy. The institution will offer all the programmes with choice-based credit system including the projects in the areas of community engagement and service, environmental education, and values-based education towards the fulfillment of the attainment of holistic and multidisciplinary education.</p> |
| 2. Academic bank of credits (ABC): | <p>The institution has registered in National Academic Depository (NAD) for Academic Bank of Credits (ABC) as per NEP. At present university does not allow ABC system. Once the institution gets an autonomy, provision will be given to the students to avail the benefit of multiple entries and exit during the chosen programme for both skill and general education components. The multiple entry and exit enable the student to seek the employment after any level of certificate/diploma/degree and join back as and when feasible to upgrade his/her qualifications/skill competencies either to move higher in the job profile or in the higher education system. To offer multidisciplinary programmes in collaboration with Vignan group of institutions</p> |

| | |
|--|---|
| | <p>successfully, all the students of the institution will be guided to register into ABC after completion of student induction programmes in respect of various career opportunities to develop internationalization of education and joint degrees between Indian and foreign institutions and to enable the credit transfer. The institution has been following the outcome-based education and the faculty are encouraged to design their own curricula and pedagogical approaches with the successful institutional collaborations after the autonomy.</p> |
| 3. Skill development: | <p>The students are provided with 207 skill-oriented courses. Apart from these courses, students have been trained in different multidisciplinary skill-oriented programmes offered by Andhra Pradesh State Skill Development Corporation (APSSDC). The institution is preparing to offer skill-based courses (Practical classes in laboratories/workshops, internships, apprenticeships, and hands on training) to meet the industry requirements with 60% weightage of total credits as per the guidelines and the provisions enumerated in MHRD Skill Assessment Matrix for Vocational and Advancement of Youth (SAMVAY).</p> |
| 4. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course): | <p>Essence of Indian Traditional Knowledge and Environmental Sciences are mandatory courses as per the curriculum and are being offered to all the students both online and offline. The institution has a high focus on preservation and promotion of India's rich cultural heritage among all students through music, dance, and drama clubs. The institution is planning to introduce MOOCs courses in the areas of Indian knowledge system like life sciences, environment and natural sciences, health care, yoga, law, jurisprudence, economics, social sciences, psychology, philosophy, management, linguistics, oral traditions of India, knowledge hidden in Sanskrit, Tamil etc.</p> |
| 5. Focus on Outcome based education (OBE): | <p>The institution is implementing outcome-based education with clearly stated Programme Outcomes, Programme Specific Outcomes, Course Outcomes and Program Educational Objectives. All courses are designed with Course Objectives and Course Outcomes according to revised Blooms taxonomy. Apart from the domain-specific skills, learning outcomes at all levels ensure social responsiveness and ethics, as well as entrepreneurial skills, so that</p> |

| | |
|---|---|
| | <p>the student can contribute proactively to economic, environmental, and social well-being of the nation. The Course Objectives are also aligned to the PO-PSO philosophy. The objective of course outcome is to set out standard, competency, benchmarks, and attainment of targets by following a systematic structure of education and specific approach to instructional practice. CO-PO attainments of all programmes are measured, and continuous follow-up action is taken for improving the performance of students towards all targeted POs. Institution is already undertaking social projects and conducting research on social activities, extension activities along with academic projects towards achieving sustainable development goals in the neighborhood villages.</p> |
| 6. Distance education/online education: | <p>The existing course structure of every program has given flexibility to choose the elective courses from MOOCS. Due to COVID 19 pandemic, our institution has adopted the digital platforms for conducting classes and meetings. The institution will offer various distance education programmes to promote Indian language, heritage, and culture such as Languages, Music, Literature, Linguistics, Theatre, Architecture, Philosophy, Yoga and Agriculture.</p> |

Extended Profile

1 Students

1.1

Number of students year wise during the last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 2981 | 3044 | 2907 | 2958 | 3091 |

| File Description | Document |
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| Institutional data in the prescribed format | View Document |

2 Teachers

2.1

Number of teaching staff / full time teachers during the last five years (Without repeat count):

Response: 381

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| Institutional data in the prescribed format | View Document |

2.2

Number of teaching staff / full time teachers year wise during the last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 232 | 237 | 238 | 238 | 238 |

3 Institution

3.1

Expenditure excluding salary component year wise during the last five years (INR in lakhs)

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 1651.86 | 1098.44 | 1281.54 | 1060.97 | 1181.35 |

4. Quality Indicator Framework(QIF)

Criterion 1 - Curricular Aspects

1.1 Curricular Planning and Implementation

1.1.1 The Institution ensures effective curriculum planning and delivery through a well-planned and documented process including Academic calendar and conduct of continuous internal Assessment

Response:

Vignan's Lara Institute of Technology & Science offers **6 UG** and **5 PG** programmes adhering to academic curriculum and syllabi of affiliating university *Jawaharlal Nehru Technological University Kakinada (JNTUK)*, Kakinada.

Curriculum Planning and Delivery:

The curriculum has been enriched through *Value-Added programmes, seminars, guest lectures, workshops, co-curricular/extra-curricular activities* for overall development of students to achieve the vision and mission of the institution.

Academic calendar is prepared by *JNTUK* and *Internal Quality Assurance Cell (IQAC)* prepares its own well-defined academic calendar in line with it by considering the above mentioned courses, activities, instruction days, internal examinations, assignments, and end semester examinations.

Each program is strongly designed with professional core courses, professional course electives, open elective courses, engineering science courses, basic science courses, humanities and social science, skill-oriented courses, internship, project work, laboratory courses and mandatory courses.

The lesson plan for each theory course is prepared by the faculty with an indication of teaching methodologies for effective planning and content delivery. These are verified by a senior faculty and concerned Head of the Department (HoD) prior to the student's distribution before commencement of the class work. *One tutorial hour per week* is conducted for every analytical course to support the students for clarifying their doubts. The teachers effectively deliver the lecture through *ICT facilities* available in all the classrooms.

In each department, **80%** of faculty members prepared the curriculum-based video lectures for effective delivery. Each laboratory course is conducted *3 hours per week* to gain the practical knowledge which enables the students for execution of mini and major projects.

Class review committee monitors the delivery of curriculum as per the lesson plan and conducts meeting with class representatives twice a semester to ensure the delivery of syllabus as per the lesson plan. Student's feedback is also in place to strengthen the teaching learning process.

Conduct of Continuous Internal Assessment:

The internal assessment of theory, laboratory courses and major project is carried out as per the academic regulations of *JNTUK*.

The performance of a student in *theory course is evaluated for 100 marks*. The distribution of these marks shall be **70 for external and 30 for internal evaluation**. Theory courses are assessed by conducting **2 Mid-term examinations**. Each Mid-term examination consists of a *Descriptive test for 15 marks, online objective test for 10 marks, and Assignment for 5 marks*.

The laboratory course is internally evaluated which consists of day-to-day evaluation for **5 marks, 5 marks for record, and an internal examination for 5 marks**.

In final year, the students work on a major project which is assessed internally by *Project Review Committee for 60 marks in three reviews*.

Impact

- **207 Value-Added programmes** were introduced
- All the faculty members are completing their syllabus as per the schedule with a proper healthy planning.
- **287 co-curricular/extra-curricular** activities were organized
- **83%** of students graduated within stipulated time.
- **80%** of students got placed in reputed companies/took admission for higher studies in standard national and international universities during *last five years*.

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1.2 Academic Flexibility

1.2.1 Number of Add on /Certificate/Value added programs offered during the last five years

Response: 207

| File Description | Document |
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| Institutional data in the prescribed format | View Document |

1.2.2 Percentage of students enrolled in Certificate/ Add-on/Value added programs as against the total number of students during the last five years

Response: 98.14

1.2.2.1 Number of students enrolled in subject related Certificate/ Add-on/Value added programs year wise during last five years

| | | | | |
|---------|---------|---------|---------|---------|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| 2946 | 2990 | 2849 | 2900 | 3017 |

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1.3 Curriculum Enrichment

1.3.1 Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum

Response:

The cross-cutting issues related to *Professional Ethics, Gender, Human Values, Environment and Sustainability* have been integrated into the curriculum to enhance professional competencies and inculcate general competencies like ethical values, human values, environment sensitivity etc. for the holistic progress of students.

1. Professional Ethics and Human Values

“*Professional Ethics & Human Values*” has been introduced as a mandatory course to all the students of engineering programs to give basic insights and inputs to the students to inculcate human values to grow as responsible human beings with proper personality. The students study this course in any one of the semesters. As an integral part of the curriculum, *Community Service Project* is compulsory for each student through which the societal problems are addressed, and human value is enhanced. Professional ethics instils the student to maintain ethical conduct and discharge their professional duties. It provides the student the sensitivity and global outlook in the contemporary world to fulfil the professional obligation effectively.

2. Gender Sensitivity

To reinforce the gender equality, a topic “*Gender Bias*” was introduced in the course *Professional Ethics & Human Values* in all programs. In order to promote *women's rights, human rights, children's rights, and gender justice, and gender equality, gender sensitization, 15 programs* were organized in the institution. As per the regulations of JNTUK, it is mandatory for every student to get registered in *NCC or NSS. One hundred and four activities (104)* such as *Swatch Bharat Abhiyan, Blood donation camp, health check-up camp, hygiene and health workshop, environment awareness camp etc.*, were conducted by *NSS and NCC* in the nearby villages and campus. Exposure to real-world problems is made possible through the vast range of community outreach programmes.

3. Environment and Sustainability:

Environmental Studies/Science has been introduced as a mandatory course to all the students of engineering programs to address environmental and sustainability challenges. Further, students gain conscious of ecological and environmental challenges related to water, land, and air through this course. The courses such as *Environmental Engineering, Environmental Pollution & Control, Wastewater Management, Renewable Energy Systems, Industrial Wastewater Treatment, Environmental Impact Assessment and Management, Disaster Management and Mitigation, Water Resources Engineering, Urban Hydrology and Engineering Geology* are offered in the curriculum to enrich the knowledge of students in environmental and sustainability.

Impact:

- Gender equality was well maintained to the satisfaction of all students.
- More than **75%** of students participated in extension activities.
- Ragging free campus is ensured.
- Plagiarism of research articles published by the students and staff was not reported.

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1.3.2 Percentage of students undertaking project work/field work/ internships (Data for the latest completed academic year)

Response: 100

1.3.2.1 Number of students undertaking project work/field work / internships

Response: 2981

| File Description | Document |
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| Institutional data in the prescribed format | View Document |

1.4 Feedback System

1.4.1 Institution obtains feedback on the academic performance and ambience of the institution from various stakeholders, such as Students, Teachers, Employers, Alumni etc. and action taken report on the feedback is made available on institutional website (Yes or No)

Response: Yes

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Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1 Enrolment percentage

Response: 87.39

2.1.1.1 Number of students admitted year wise during last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 726 | 899 | 871 | 780 | 772 |

2.1.1.2 Number of sanctioned seats year wise during last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 921 | 921 | 930 | 930 | 930 |

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Institutional data in the prescribed format

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2.1.2 Percentage of seats filled against seats reserved for various categories (SC, ST, OBC, Divyangjan, etc. as per applicable reservation policy during the last five years (Exclusive of supernumerary seats)

Response: 90.69

2.1.2.1 Number of actual students admitted from the reserved categories year - wise during the last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 467 | 514 | 515 | 439 | 441 |

2.1.2.2 Number of seats earmarked for reserved category as per GOI/ State Govt rule year wise during the last five years

| | | | | |
|---------|---------|---------|---------|---------|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| 521 | 521 | 526 | 526 | 526 |

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2.2 Student Teacher Ratio

2.2.1 Student – Full time Teacher Ratio (Data for the latest completed academic year)

Response: 12.85

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 using ICT tools

Response:

All facilities for implementing student centric teaching learning are available with the institution. The institution has a total of **48 ICT-enabled classrooms**, **12 tutorial rooms**, **53 well established laboratories**, **5 research labs** and **6 ICT-enabled seminar halls** for teaching and learning. Student-centric methods described below were practiced for improving the learning experience.

Experiential Learning: In the curriculum, courses like *IoT lab*, *embedded system*, *python programming*, etc. are introduced, where the students learn through experiencing tools. Apart from curriculum, the students are also involved in the following activities to get hands on experience.

- **6 weeks industry internship program** is mandatory.
- Branch specific training on emerging technologies such as *Codechef*, *PCB design*, *ANSYS*, etc.
- Providing experiments beyond the curriculum in laboratory course to gain first-hand skills.
- Developing models/prototypes in all departments and exhibiting in the technical fest/workshop.
- *Industrial visits* to expose the students towards experiential learning apart from the curriculum.
- Additional workshops to gain hands-on experience in solving real-time problems.

Participatory Learning: The students involved actively in the following activities for achieving the preferred outcomes.

- Seminars, group discussion, debate, and project expo.
- Tech Fest (Srujanankura), cultural programs, and quizzes.
- Online events such as hackathons, and hacktolara to gain working experience on real-life problems.

Problem-solving Methods: Faculty members identify the problem-based topics and guide the students to bring out the solutions. Guest lectures are also organized to the students to get expertise in problem-solving skills. Students are also guided to participate in competitions such as:

- Community Service and Social relevant projects are made mandatory.
- Problem-based assignments
- Model presentations for complex problems
- Real-time problems-based Quiz
- Major projects to give solution for societal, environmental, and engineering problems.

Outcomes:

- 63 research articles were published by the students in journals.
- Students developed the following models based on knowledge gained through experiential learning.
 - *Automatic Hand Sanitizer Dispenser* commercialized through *Xgenie soft Pvt. Ltd.*
 - *Automatic Watering Plant using Arduino.*
 - *IoT-based farm protection from a wild animal attack.*
 - *Variable speed lamina cutting machine with Arduino board.*
- Participatory methodology helps in achieving higher grades in their academics.
- Problem-solving methodologies resulted in the improvement of the student's critical thinking ability.

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2.4 Teacher Profile and Quality

2.4.1 Percentage of full-time teachers against sanctioned posts during the last five years

Response: 100

2.4.1.1 Number of Sanctioned posts / required positions for teaching staff/ full time teachers year wise during the last five years:

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 232 | 237 | 238 | 238 | 238 |

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2.4.2 Percentage of full time teachers with NET/SET/SLET/ Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. during the last five years (consider only highest degree for count)**Response:** 16.65**2.4.2.1 Number of full time teachers with NET/SET/SLET/Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. year wise during the last five years**

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 60 | 42 | 40 | 33 | 22 |

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2.5 Evaluation Process and Reforms**2.5.1 Mechanism of internal/ external assessment is transparent and the grievance redressal system is time- bound and efficient****Response:****Transparency of Internal/External Assessment****Theory courses**

The performance of the student in theory course is evaluated for **100 marks**. The distribution of marks shall be **30** for internal and **70** for external evaluation. For theory subjects, during a semester, there shall be two mid-term examinations. Each midterm examination consists of (i) one online objective examination (**10 marks**) (ii) one descriptive examination (**15 marks**) and (iii) one assignment (**5 marks**).

The faculty members evaluate Mid and Assignment scripts according to scheme of evaluation. The students verify their marks and affix signatures on answer scripts. In case, the students find discrepancies they bring it to the notice of the respective course faculty to do needful as per the scheme in their presence. Later, the internal marks of all courses are displayed on the respective Department notice board. Again, if any discrepancy is noticed by the student at this stage, it is brought to the notice of respective HoD, who constitutes a two-member committee with a senior faculty and concerned course faculty to resolve the issue.

End-semester examinations are conducted by the affiliating university and evaluation of answer scripts is done in *JNTUK* spot centres. If any discrepancy is noticed in the results released by *JNTUK*, they apply for recounting/ revaluation/ challenge valuation as per university norms.

Laboratory courses:

The laboratory course is evaluated for **50 marks**. The distribution of marks shall be **15** for internal and **35** for external evaluation. The internal **15 marks** shall be awarded as follows: day to day work-**5 marks**, Record-**5 marks** and the remaining **5 marks** to be awarded by conducting an internal laboratory test. The end examination shall be conducted for **35 marks** by the teacher concerned and external examiner appointed by controller of examinations, *JNTUK*. If any student observes discrepancies in the internal evaluation, it will be solved by the concerned faculty. Again, if any discrepancies observed on the marks displayed on the department notice board, Head of the Department constitutes a two-member committee to resolve the issue.

Grievance Redressal System for Internal/External Assessment:

If the students find discrepancies in the internal assessment of both theory and laboratory courses, they bring it to the notice of concerned faculty to rectify. Even, the discrepancy is not resolved at faculty level, students can approach the respective HoD. Then, HoD constitutes a committee to resolve the issue in **3 working days**. The recounting of marks awarded/revaluation of answer book of semester end examination is done by the university faculty and result will be declared within two weeks. Particularly, the challenge revaluation is done jointly by an expert from the affiliating university and subject faculty from the concerned affiliated college in presence of the student. The university releases these results within **15-45 days** from the date of application.

Impact:

- Due to transparency in the continuous internal assessment, grievances are considerably less.
- The grievances related to external assessment were addressed to *JNTUK* and rectified within the time bound.

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2.6 Student Performance and Learning Outcomes

2.6.1 Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the institution are stated and displayed on website and attainment of POs and COs are evaluated

Response:**Display of POs and COs:**

The institution has adopted outcome-based education for all *UG* and *PG* programs. The POs, PSOs and PEOs of *UG* and *PG* programs are stated and displayed on institution website, classrooms, laboratories, notice boards, published in syllabus book, course files, lab manuals and disseminated through student

induction Programme, FDPs, Conference, workshops, and parent meetings.

The course coordinator states the COs of each course prescribed by the affiliating university. The COs are mapped with POs and PSOs at different levels (low, medium, and high). The attainments of COs, POs and PSOs are calculated for all the programmes.

Attainment of COs, POs and PSOs:

- Course outcomes are mapped to various POs and PSOs based on their significance.
- Assessment of COs is accomplished through a student's performance in both internal and external assessments.
- Rubrics used for calculation of COs are based on semester end examinations and internal examinations with 70% and 30% weightages respectively.
- Target values of CO and PO attainments are set by the department advisory committee.
- COs attainment of all courses are calculated.
- PO attainment is done through direct and indirect assessments with **80%** and **20%** weightages respectively.
- In the direct assessment, marks obtained by the students in internal and external examinations are considered.
- Students, teachers, employers, and alumni feedback are considered to carry out indirect assessment.
- The calculated COs and POs according to the procedure are compared with the target values. If the attained values are less than targeted value, the corrective measures are taken by introducing seminars, guest lectures, workshops, value-added courses.

Outcomes:

- Continuous monitoring of PO attainments is in practice.
- 5 UG programmes (CSE, ECE, EEE, IT and MECH) are *accredited by NBA* in the year 2022.

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2.6.2 Pass percentage of Students during last five years

Response: 83.2

2.6.2.1 Number of final year students who passed the university examination year wise during the last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 660 | 641 | 619 | 707 | 627 |

2.6.2.2 Number of final year students who appeared for the university examination year-wise during the last five years

| | | | | |
|---------|---------|---------|---------|---------|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| 770 | 738 | 736 | 834 | 833 |

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| Institutional data in the prescribed format | View Document |

2.7 Student Satisfaction Survey**2.7.1 Online student satisfaction survey regarding teaching learning process****Response:**

| File Description | Document |
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Criterion 3 - Research, Innovations and Extension

3.1 Resource Mobilization for Research

3.1.1 Grants received from Government and non-governmental agencies for research projects / endowments in the institution during the last five years (INR in Lakhs)

Response: 133.54

3.1.1.1 Total Grants from Government and non-governmental agencies for research projects , endowments, Chairs in the institution during the last five years (INR in Lakhs)

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 33.82 | 24.03 | 20.69 | 11.02 | 43.98 |

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Institutional data in the prescribed format

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3.2 Innovation Ecosystem

3.2.1 Institution has created an ecosystem for innovations and has initiatives for creation and transfer of knowledge

Response:

The institution has a well-defined research policy to encourage the research and innovation activities among the faculty and students through Research and Development Committee.

The institution has established *Vignan's Lara Incubation Centre, Entrepreneurship Development Cell, Intellectual Property Rights Cell and Institution's Innovation Council* for innovation and technology transfer.

Vignan's Lara Incubation Centre (License No. HIBIAAP003328)

The Incubation Centre was established in the year 2017 to incubate the ideas of students and faculty in the cutting-edge technologies like *Internet of Things, Fibrous Composites, Data Science, VLSI and High-Performance Computing*. This Centre is registered under Ministry of Education (MoE), Govt. of India in the year 2022. One start-up "*Xgenie soft PVT Ltd*" commenced in the year 2020.

Entrepreneurship Development Cell (ED-Cell)

The ED Cell is headed by a faculty coordinator with 25 student members to execute various

entrepreneurship activities like motivational talk by successful founder, Women entrepreneurs, and start-ups. Financial and Technical support is given to the incubates.

Intellectual Property Rights Cell (IPR Cell):

- The IPR Cell was established in 2016. **19 IPR** activities were conducted for the students and faculty members.
- An MoU is signed with *Tesla Innovation filing*, *Rural Care innovators LLP* and *Dr. IP Essence* to perform IPR activities.

Institution's Innovation Council (IIC):

- IIC has been established in the year 2022 to encourage innovation through multitudinous modes, leading to an innovation promotion in the campus under the guidelines of MoE, Govt. of India.
- **320** students submit their innovation details in *YUKTI-National Innovation Repository (NIR)* with faculty guidance.
- Vignan's Lara Innovation and Start-up Policy (*VLISP-2022*) was formulated for students and faculty as per guidelines of *National Innovation Startup Policy (NISP)*, MoE, Govt. of India.

Impact/Achievements

- The institution received the Best *Entrepreneurship Development Cell Award* by JNTUK, Kakinada in 2019.
- **2** patents were granted. **14** patents were published out of which **2** were submitted to *Kalam Program for Intellectual Property Literacy and Awareness (KAPILA)*, MoE, Govt. of India for financial support.
- Received appreciation certificate from *National Intellectual Property Awareness Mission (NIPAM)*, MoE, Govt. of India for IPR activity.
- An ECE student *Mr. D.Yeswanth (Regd. No. 18FE1A0427)*, has started software development company "*Xgenie soft PVT Ltd*" with registration number (LIN) *AP-11-38-011-085256* in Guntur, Andhra Pradesh.
- Final year mechanical engineering students developed a *Coconut Husk* removing machine.
- **6** Students became entrepreneurs in the last five years.
- **10** faculty members were recognized as Innovation Ambassadors and Institute received '*Star Status*' for Innovation and Startup in campus from *IIC, MoE, Govt. of India*.
- **2** students bagged "*Idea Contest Winners*" in the national level entrepreneurs' program.
- Institution has participated in *NIRF* and *ARIIA* ranking, Govt.of India.
- **12** students and one faculty participated in Nanotech Hackathon, Indian Nano-electronics User Program (INUP-i2i) at *IIT, Bombay* and **2** students were selected for final round.

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3.2.2 Number of workshops/seminars/conferences including on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship conducted during the last five years**Response:** 54**3.2.2.1 Total number of workshops/seminars/conferences including programs conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship year wise during last five years**

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 17 | 9 | 10 | 9 | 9 |

| File Description | Document |
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| Institutional data in the prescribed format | View Document |

3.3 Research Publications and Awards**3.3.1 Number of research papers published per teacher in the Journals on UGC care list during the last five years****Response:** 0.82**3.3.1.1 Number of research papers in the Journals notified on UGC CARE year wise during the last five years**

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 54 | 38 | 75 | 56 | 91 |

| File Description | Document |
|---|-------------------------------|
| Upload supporting document | View Document |
| Institutional data in the prescribed format | View Document |

3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years**Response:** 0.2**3.3.2.1 Total number of books and chapters in edited volumes/books published and papers in**

national/ international conference proceedings year wise during last five years

| | | | | |
|---------|---------|---------|---------|---------|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| 6 | 24 | 13 | 3 | 29 |

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3.4 Extension Activities**3.4.1 Extension activities are carried out in the neighborhood community, sensitizing students to social issues, for their holistic development, and impact thereof during the last five years.****Response:**

The institution organized **104** extension activities in the adopted villages namely *Chinaware, Edlapalle and Valiveru* involving **480** students through *NSS, UBA and NCC* to inculcate human values and solve societal problems. The population of these villages are **4058, 4400** and **5638** respectively. A survey was conducted in the adopted villages under UBA scheme with the financial support of MoE, Govt. of India and identified societal problems such as lack of knowledge on *waste disposal, health care, less literacy, unemployment, and technology usage in farming*. To create awareness on these issues, more than **75%** of students actively involved in the following community service activities.

- **3** *Educational camps* were conducted in government schools of the adopted villages. A total of **6** faculty members and **125** students involved in teaching computer education.
- **25** farmers attended awareness program on *coconut husk removal machine*.
- Hands-on training programme on *welding* was conducted in the campus for **12** unemployed people under KARMA, AICTE.
- **8** *Health camps* and **42** *awareness* programs on health issues were conducted.
- **16** *Swachh Bharat programs* on sanitation in the campus and adopted villages to provide a non-polluting healthy environment.
- **3** Awareness programs conducted on *Save Energy and Save Water*.
- Demonstration on *solid waste management, smart irrigation system, organic farming and energy saving using LED lamps*.
- Basic necessities such as *food, stationery, and clothes* are distributed to the children and destitute at Guntur, Tenali and Narasaraopet.
- NSS organized a *blood donation camp* in association with “Rainbow” and “Needs” Blood Banks once a year to save human lives.
- Organized *RT-PCR test camp and COVID-19 vaccination drive* for **1154** students and staff.
- **2** *Free Eye and medical camps* were organized.
- Awareness programs on *Road Safety and pollution*.
- Demonstration on *firefighting equipment*.

- **12** calendar days such as *World Environmental Day, Earth Day, No Plastic Day, World Population Day, World Soil Day* etc. are celebrated by planting trees.
- *Yoga training* programs were organized.

Impact/ Achievements

- The awareness program and health camps conducted in various villages helped **1876** women to safeguard themselves from different problems such as *violence against women, depression, anaemia, diabetes, cancer, etc.*
- Tree plantation program led to a healthy green environment.
- School students gained confidence through computer literacy.
- Under “*Save Water and Save Energy*” the villagers used wastewater for gardening purpose and started using *LED* lamps.

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3.4.2 Awards and recognitions received for extension activities from government / government recognised bodies

Response:

The institution has a well-thought-out mechanism to execute extension activities in the adopted villages (*Chinaware, Edlapalle and Valiveru*) involving the students in societal centric services through *NCC, NSS and UBA* to make good and committed citizens with social consciousness.

The institution received the following Awards and Appreciation Certificates for the extension activities from different non-government recognized bodies for the last five years.

- “**Appreciation Certificates**” from Mahatma Gandhi National Council of Rural Education, MoE, Govt. of India for organizing green activities on *World Environmental Day*.
- “**Life Saver Awards**” from ‘Needs’ and ‘Rainbow’ Blood Banks for donating **100** units of blood .
- “**Top Achievers Award - 2022**” by *HCL* for procuring placements.
- “**Seva Puraskar Award**” for creating awareness on Save Energy and Save Water to the local community and students from *Seva Bharati*.
- “**Outstanding Volunteer Contribution Awards**” for tree plantation and creating awareness on “Save Energy and Save Water”.
- “**Service Excellence Award**” from *DISA Foundation* for extension services and “**Service Recognition Awards**” from “*Harvest India*” for contribution to the society.
- *NCC 10 (A) Girls Battalion* received “**Best Cadet Awards**” and **Gold Medal** for firing 22 Rifle from *10 (A) Girls Battalion* in Annual Training Camp (ATC-1).

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3.4.3 Number of extension and outreach programs conducted by the institution through NSS/NCC/Red cross/YRC etc., (including the programmes such as Swachh Bharat, AIDS awareness, Gender issues etc. and/or those organised in collaboration with industry, community and NGOs) during the last five years

Response: 104

3.4.3.1 Number of extension and outreach Programs conducted in collaboration with industry, community, and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., year wise during the last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 22 | 17 | 22 | 19 | 24 |

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3.5 Collaboration

3.5.1 Number of MoUs, collaborations/linkages for Faculty exchange, Student exchange, Internship, Field trip, On-the- job training, research and other academic activities during the last five years:

Response: 264

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Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

4.1.1 Availability of adequate infrastructure and physical facilities viz., classrooms, laboratories, ICT facilities, cultural activities, gymnasium, yoga centre etc. in the institution

Response:

The institution is situated on an eco-friendly lush green campus of **10.56 acres** with good infrastructural facilities spread over two blocks with the built-up area of **32,993 sq. m.**

Classrooms, laboratories, and seminar halls with ICT facilities:

- All **48 classrooms** are well-ventilated, *ICT enabled*, with *Wi-Fi, LAN, projector facilities* and each an average area of **110.5 sq. m.**
- **12 tutorial rooms** to conduct assignments and group discussions.
- **53 well-established laboratories** and **5 research labs**, each an average area of **100 sq. m.**
- The classrooms and laboratories' actual areas are higher than the statutory body norms.
- *Lift facility* is provided for all blocks.
- **6 air-conditioned seminar halls** to conduct curricular, co-curricular, and extra-curricular activities.

Cultural activities:

The institution also encourages cultural activities for all-around development of the students. On an average, **230 competitions** were conducted on singing, dance, rangoli, skits, painting, and mime per academic year at an *open-air theatre* of **1500 sq. m area.**

Gymnasium, yoga center, sports:

- Separate gym is available for boys and girls.
- Yoga center facility is provided to students and staff.
- Indoor game facilities:
 - **10 Carrom boards**
 - **10 Chess boards**
 - **04 Table tennis boards**
- Outdoor game facilities:
 - **4 Volleyball courts**
 - **2 Basketball courts**
 - **1 Football court**
 - **2 Badminton courts**
 - **2 Kabaddi courts**
 - **2 Throw ball courts**
 - **2 Tennikoit courts**

Amenities for Divyangjan:

- *Ramp facility*

- *Lift facility*
- *Separate washrooms*

Cafeteria:

- A *cafeteria* with a seating capacity of **500** members.

Parking:

- Parking facility for staff and students.

Power supply and fire safety:

- **250 kVA** generator along with *UPS* of **140 kVA**.
- *Solar systems* with **200 kW** capacity
- Institute saves on an average **Rs. 1.3 lakhs** per month by utilizing the solar power.
- Every month, about **1500 kVAh** solar power is supplied to *Andhra Pradesh Central Power Distribution Company Limited (APCPDCL)*.
- *Fire-extinguishers* are placed in all **53** laboratories and prominent places.

Hostel facility:

- The institute has a separate hostel for boys and girls to accommodate **500** boys and **400** girls respectively.

Water facility:

- A *reverse osmosis plant* of **1000 liters per hour** capacity.

Rainwater recharging system, biogas production and sewage treatment:

- *Rainwater recharging system* is practiced in the institution in the volume of **2428 cubic meters**.
- *Biogas* of **70 kg/day** is produced from **1000 kg/day** of solid food waste from the campus.
- *Sewage water treatment plant* with a capacity of **600 kilo liters per day**.

Medical facility:

- Institution has an on-campus permanent "*Health Center*" with a doctor, nurse and an ambulance facility round the clock.

Transport:

- **25** college buses are available for staff and students from Guntur, Tenali, Ponnur, Repalle and Vijayawada.

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4.1.2 Percentage of expenditure, excluding salary for infrastructure augmentation during last five years (INR in Lakhs)

Response: 25.49

4.1.2.1 Expenditure for infrastructure augmentation, excluding salary during the last five years (INR in lakhs)

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 734.75 | 300.25 | 270.48 | 99.86 | 194.21 |

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4.2 Library as a Learning Resource

4.2.1 Library is automated using Integrated Library Management System (ILMS), subscription to e-resources, amount spent on purchase of books, journals and per day usage of library

Response:

A fully automated air-conditioned “Central library” is accommodated in **700 sq. m** area. It has **5839 book titles, 24,133 volumes, 8905 e-books, 99 print, 6083 online journals** in reference, issue sections, and **20 computers** in a digital library. Apart from the regular books, SC and ST book banks consist of **3551 book volumes** and **312 titles**.

Integrated Library Management System (ILMS): The institution’s library has a good Integrated Library Management Software (ILMS), namely *EZLIB* introduced in 2007. Its main features are as follows.

1. Key functions of the software
2. Circulation control
3. Account maintenance and Reports
4. System administration: It has the sub-features, viz. System settings, Library staff maintenance, Department library maintenance, Binding management, Stock verification, Bill maintenance, Fine maintenance, No due certification, and Barcode generation.

Backup and recovery: A simple click on 'Take Backup' will result in the backup of the data from the beginning and generate an MYSQL file and the same is used to retrieve the data.

1. Utilities: It has the features of scheduler, poll maintenance, mails, suggestion box, notices, and digital library.
2. OPAC: It has basic search and advanced search for BBSC (Book Bank SC) /BBST (Book Bank ST) /Bound Volumes/CDs/Comp Gift/Gift Books/Magazines/Material/Project Reports/Question Papers/VLITS.
3. Help: The help tab provides the information on various software features, viz. configuring Ezlib, system administration, cataloguing, account holder maintenance, circulations, utilities, OPAC, report generation, acquisitions, gatekeeper, and digital library.
4. The students and staff can update their profile, search books and journals by logging into Ezlib account with their credentials after connecting to the campus LAN using the link <http://ezlib>.

1. Subscription to e-resources

A learning process is enhanced several times through visualization of colored photographs, schematics, and researched data available in the electronic resources viz. *IEEE, J-Gate, DELNET, EBSCO, ASME, ASCE, shodhsindhu*, books, digital resource like *NDL* and remote access to the e-resources.

Journals and books:

- *30 ASME* and *35 ASCE journals* are accessible.
- *283 journals* available in the *IEEE* subscription.
- *4855 journals* are accessible in the *J-Gate*.
- *DELNET* provides access to *860 journals* and *2680 books* on different branches of engineering and sciences.
- *20 National online journals* were subscribed.
- *6225 e-books* on different titles are accessed using *EBSCO*.

2. Purchase of books and journals

- *Library Advisory Committee (LAC)* recommends books and journals for purchase in each financial year as per the requirement of the students to meet the JNTUK curriculum and research.
- The average expenditure of the library towards books, journals (e & print), magazines, periodicals is **Rs 32.64 lakhs**.

3. Library usage:

- The students and staff members access the library resources of books and journals for acquiring knowledge on various courses and research topics.
- Some of them also avail the resources of periodicals to update their general knowledge and awareness of current affairs.
- On an average every-day, **844** students and **65** faculty members used the library.

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4.3 IT Infrastructure

4.3.1 Institution frequently updates its IT facilities and provides sufficient bandwidth for internet connection

Response:

The institution upgrades IT facilities, provides internet facilities and act on the maintenance and repairs as per the policy of IT Infrastructure Development Committee (ITIDC) chaired by the head of the institute.

Policy of ITIDC:

- ITIDC is designed to provide students and faculty with full assistance in the usage of IT infrastructure.
- The ITIDC comprised of 1 system administrator, Head of Department of CSE as Convener and one senior faculty member from each department as a member and Principal.
- The committee receives requirements of computers, software, internet, repairs, maintenance, upgradation and disposal of the existing computer systems.
- According to the requirements, the committee conducts a meeting and discusses the feasibility and provides their recommendations to the Head of the Institution.
- Head of the institution finalizes the proposal after discussing with the purchase committee.

Budget spent on IT Facilities:

- For development of IT infrastructure, **Rs. 268 Lakhs** was spent over the last five years.

IT Facilities:

Computers

- **865** computers are available in various laboratories.
- Student-computer ratio is **3.45:1**, which is a better ratio as compared to statutory norms.

Network Bandwidth

- **500 Mbps** of network bandwidth is available on the campus.
- The network communication includes fiber-optic backbone by *Matrix E Services and BSNL*.
- A *MIKROTIK* router distributes the available bandwidth to various laboratories, departments, office, and sections.

Network Switches

- All computers are facilitated with wired network through **64** different **24-Port Gigabit Local Area Network Switches**.

Wi-Fi Access Points

- The internet is facilitated through both wired and wireless connections.
- **32** Wi-Fi access points are available.

Computers Configuration

- **520** computers have *Intel Core i5 processors*.
- Systems operate with *Windows 10 operating systems*.

Servers

- *1 Rack and 2 Blade Servers* with each of **6 TB** storage capacity.

Software

- The following subscribed software were installed on various computer systems.
 - *Microsoft Dream Spark*
 - *Creo 2.0*
 - *MATLAB R2013b*
 - *Xilinx 2016 Edition*
 - *Visual Studio Ultimate*
 - *Mentor Graphics HEP1*
 - *STAAD Pro*
 - *ANSYS 14.0*
 - *IBM Rational Rose*
 - *AutoCAD*
 - *ArcGIS*
- Along with the above the following free software
 - *Linux*
 - *Java*
 - *Python*
 - *C, C++ (Turbo)*
 - *Xampp*
 - *My SQL*
 - *Star UML*
 - *SQL Server*
 - *Putty*
 - *Apache Tomcat*
 - *Net Beam*
 - *Eclipse*

Antivirus

- *Kaspersky Antivirus software* was installed on the computers to detect and remove viruses.

Backup

- The institution maintains a backup of **15 TB** capacity for recovery.

Uninterrupted Power Supply (UPS)

- Every Computing Lab has a dedicated UPS of **10/20 kVA** capacity.
- On an average, the institute has an UPS capacity of **140 kVA**.
- **250 kVA** power generator.

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4.3.2 Student – Computer ratio (Data for the latest completed academic year)

Response: 3.45

4.3.2.1 Number of computers available for students usage during the latest completed academic year:

Response: 865

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4.4 Maintenance of Campus Infrastructure**4.4.1 Percentage of expenditure incurred on maintenance of infrastructure (physical and academic support facilities) excluding salary component during the last five years (INR in Lakhs)**

Response: 14.79

4.4.1.1 Expenditure incurred on maintenance of infrastructure (physical facilities and academic support facilities) excluding salary component year wise during the last five years (INR in lakhs)

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 219.99 | 127.15 | 193.57 | 197.30 | 190.16 |

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Criterion 5 - Student Support and Progression

5.1 Student Support

5.1.1 Percentage of students benefited by scholarships and freeships provided by the Government and Non-Government agencies during last five years

Response: 70.16

5.1.1.1 Number of students benefited by scholarships and freeships provided by the Government and Non-Government agencies year wise during last five years

| | | | | |
|---------|---------|---------|---------|---------|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| 2002 | 2088 | 2064 | 2197 | 2159 |

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5.1.2 Capacity building and skills enhancement initiatives taken by the institution include the following

1. Soft skills
2. Language and communication skills
3. Life skills (Yoga, physical fitness, health and hygiene)
4. ICT/computing skills

Response: A. All of the above

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5.1.3 Percentage of students benefitted by guidance for competitive examinations and career counseling offered by the Institution during the last five years

Response: 84.78

5.1.3.1 Number of students benefitted by guidance for competitive examinations and career counselling offered by the institution year wise during last five years

| | | | | |
|---------|---------|---------|---------|---------|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| 2836 | 2270 | 2266 | 2414 | 2915 |

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5.1.4 The Institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases

1. Implementation of guidelines of statutory/regulatory bodies
2. Organisation wide awareness and undertakings on policies with zero tolerance
3. Mechanisms for submission of online/offline students' grievances
4. Timely redressal of the grievances through appropriate committees

Response: A. All of the above

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5.2 Student Progression

5.2.1 Percentage of placement of outgoing students and students progressing to higher education during the last five years

Response: 80.18

5.2.1.1 Number of outgoing students placed and / or progressed to higher education year wise during the last five years

| | | | | |
|---------|---------|---------|---------|---------|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| 630 | 635 | 620 | 665 | 586 |

5.2.1.2 Number of outgoing students year wise during the last five years

| | | | | |
|---------|---------|---------|---------|---------|
| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
| 770 | 738 | 736 | 834 | 833 |

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5.2.2 Percentage of students qualifying in state/national/ international level examinations during the last five years (eg: JAM/CLAT/GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil Services/State government examinations)

Response: 91.38

5.2.2.1 Number of students qualifying in state/ national/ international level examinations (eg: JAM/CLAT/NET/ SLET/ GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/ Judicial Services/Public Prosecution services/All India Bar Exams/State government examinations) year wise during last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 152 | 91 | 196 | 154 | 107 |

5.2.2.2 Number of students appearing in state/ national/ international level examinations (eg: JAM/CLAT/NET/ SLET/ GATE/ GMAT/CAT,GRE/ TOFEL/ Civil Services/ State government examinations) year wise during last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 165 | 108 | 210 | 165 | 118 |

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5.3 Student Participation and Activities

5.3.1 Number of awards/medals for outstanding performance in sports/ cultural activities at University / state/ national / international level (award for a team event should be counted as one) during the last five years

Response: 170

5.3.1.1 Number of awards/medals for outstanding performance in sports/cultural activities at

national/international level (award for a team event should be counted as one) year wise during the last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 33 | 13 | 44 | 50 | 30 |

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5.3.2 Average number of sports and cultural programs in which students of the Institution participated during last five years (organised by the institution/other institutions)

Response: 57.4

5.3.2.1 Number of sports and cultural programs in which students of the Institution participated year wise during last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 31 | 55 | 99 | 35 | 67 |

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5.4 Alumni Engagement

5.4.1 There is a registered Alumni Association that contributes significantly to the development of the institution through financial and/or other support services

Response:

The institution has a registered Alumni Association named “Vignan’s Lara Alumni Association” with society registration number 322(2021). Mr. M.V. Sudarsan, Assistant Professor of EEE is the president of Alumni Association. The college has a well-connected alumni network, and it continuously cooperates in the academic and institutional development. The guest lectures and institute interfacing programs are arranged by the alumni to know the requirements of corporate companies. The Association also keeps a record of alumni pursuing higher education, details of their employment and entrepreneurship. The

members of alumni executive committee meet twice a year. The college conducts alumni meet every year. So far, **120** alumni have visited particularly to share ideas on various forums other than usual meetings.

Sharing of Knowledge on Cutting Edge Technologies

The alumni having expertise in the latest areas like *AI, ML, Data Science, DevOps, 3D printing, Robotics, Arduino programming, additive manufacturing, green buildings, and Block-Chain Technology etc.* interact with current students through interactive lectures and seminars to provide professional and technical guidance in the right way.

Guiding towards the Placement Activities and Higher Studies

The alumni encourage students to participate actively in various training programmes conducted by the college to get placement in various MNC's with good packages. They also suggest the students about different global coding platforms like *CodeChef, HackerRank, HackerEarth, GeeksforGeeks etc.* and their usage for placements in product-based companies. They advise the students for active participation in the national and international level coding competitions and encourage them towards the competitive exams like *GATE, GRE, IELTS, CAT, Civil Services, IES etc.* Some of the alumni who have undergone higher studies will guide the students regarding the prospects of higher studies like *M.Tech, M.S, MBA etc.*

Industry Interaction

The alumni bring internship offers and placements to the present students from the industries where they are currently working. They help the institution in collaborating through MoU's and getting permission for industrial visits.

Financial Support

The alumni supported the institution by donating *50 hardware kits, 110 books, white marker board, projector screen, 4 electric clocks, mini water cooler, water purifier etc.*

Impact

- The number of internships increased by **20%**.
- The average percentage of placements and higher studies increased to **80%**.

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Criterion 6 - Governance, Leadership and Management

6.1 Institutional Vision and Leadership

6.1.1 The governance and leadership is in accordance with vision and mission of the institution and it is visible in various institutional practices such as decentralization and participation in the institutional governance

Response:

Vision of the Institution:

To evolve into a Centre of Excellence in Science and Technology for producing globally acclaimed professionals who are psychologically strong, emotionally balanced and guided by social consciousness and ethical values.

Mission of the Institution:

- *To strive for excellence in teaching-learning and evaluation through innovative practices.*
- *To equip students with problem solving abilities through industrial interaction, novel, and high-end laboratory work.*
- *To maintain a supportive and vibrant campus environment through co-curricular and extra-curricular activities for the all-round development of students into confident professionals and responsible team leaders.*
- *To sensitize students on societal issues and encourage them to explore solutions for the problems identified.*

The institution caters the needs of rural students hailing from socio-economic backward regions. The Vision & Mission of the institution focuses on comprehensive transformation of students into competent techno professionals and responsible citizens of the society.

Governing Body: The eminent personalities from academia, industry, and society are present to plan for the overall development and continuous growth of the institution. The Governing Body meets twice in a year to review institutional policies, implementation of academic plans, outcomes, prospects, and challenges, decentralization of roles and responsibilities as per the organogram in accordance with the institutional Vision.

Decentralization and Participation in the Institutional Governance:

The approved plans by the Governing body are being executed by the Principal through academic and administrative bodies. Academic body consists of Deans, HoDs and stake holders through well-defined committees to cater all academic and progressive needs of the institution. An administrative body comprising of the administrative and finance officers, effectively implements the institutional administrative plans.

Principal holds meeting twice in a month with Deans and HoDs about planning and execution of smooth conduction of the class work, examinations, evaluation, training, placements, research, extra & co-curricular and other extension activities of the institution.

Departmental Meeting:

HoDs conduct meetings with faculty members on fortnight basis to implement the planned events through committees constituted with staff and students.

Statutory committees like *Grievance Redressal, SC/ST Cell, Anti-Ragging, Internal Complaints along with Institutional Committees such as Staff Selection, Academic Audit, Research & Development, Career Guidance, Training & Placements, Discipline, Purchase, Hostel* work in harmony and integration in line with the institutional Vision and Mission.

Academic Measures:

- Innovative practices for effective teaching-learning through well-established infrastructure (**48 ICT classrooms, 12 tutorial rooms, 53 laboratories, 6 Air-conditioned seminar halls and 5 research labs**).
- Established Global coding platforms, *Cambridge University certification programs*, online courses like, *NPTEL, MOOCs, Coursera etc.*,
- Collaboration with industries to provide real time knowledge through internships and projects.
- Organizing Extension activities.

Administrative Measures:

- Recruiting faculty members from reputed institutions.
- Infrastructure facilities for the students to excel in sports, co-curricular and extra-curricular activities.
- Collection and review of all stakeholders' feedback at regular intervals.
- Implementation of defined policies.

Impact:

- Decentralization resulted in operational excellence
- *JNTUK permanent affiliation, ISO Certification and NBA accreditation.*

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6.2 Strategy Development and Deployment

6.2.1 The functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment and service rules, procedures, deployment of institutional Strategic/ perspective/development plan etc

Response:

The institution is governed by policies, rules and regulations as approved by the Governing Body.

Governing body has delegated authorities at various levels of administration and academics for effective functioning.

The hierarchy in the institution's organogram consists of Governing body, Principal, Deans, HoDs, Administrative officer, finance officer and Staff.

Principal ensures the effective and efficient functioning of academics and administration as per the policies.

Dean-IQAC helps the institution in planning, execution, and monitoring of academic performance for increased quality consciousness & institutional best practices.

HoDs are responsible for implementation of teaching, assessment, and development of Departments.

The administrative officer looks after the regular office management and helps the Principal in comply with regulatory bodies.

Staff Selection Committee (SSC): The staff members are recruited as per AICTE norms. The process includes a recruitment notification, selection and recruiting the staff for teaching and non-teaching.

Student Welfare Committee (SWC): To arrange interactions with experts, provide information about various merit scholarships, competitive exams, and career opportunities.

Anti-Ragging Committee (ARC): Vigilant faculty and committed student members hold the responsibility of ragging free campus. Anti-ragging awareness activities to senior students and collaborative resolutions to minor issues are organized.

Women Empowerment Committee (WEC): To inspire and motivate the girl students and women faculty in pursuit of their excellence on legal, professional, occupational, and constitutional rights.

SC/ST/OBC Committee: To inform timely about scholarships, free trainings, counsel, and guide SC/ST/BC students and help them to manage both academic and professional issues by conducting meetings separately for students and staff.

Grievance Redressal Committee: To counsel both students and faculty who are in distress, understanding the cause and deciding upon the remedial actions. Deriving the harmony across the campus through proper liaisoning with all administrative, academic, and statutory committees.

Internal Complaint Committee: To sensitize girl students and women faculty on gender equality and need for empowerment. Promoting awareness on female occupational, legal, constitutional rights and statutory procedures to resolve issues if any.

Minority Cell: To encourage the minority community students and make them to do well with their curricular, co-curricular and extra-curricular activities. Students from the Christian, Muslim, Jain, and other communities are encouraged to achieve holistic development.

Deployment of Institutional Strategic Plan

The Institution has the following strategic plan for next 5 years.

- Achieving *UGC 12 (B), Autonomy, good NIRF Ranking.*
- Recruiting a greater Number of *Doctorates* from reputed institutions to promote the research through funded projects
- Enhancing the digital resources for self-learning, project based and value-added courses.
- Establishing Centres of Excellence in emerging areas.
- Development of infrastructure.
- Increasing the number of dream package offers.

Impact:

- **5 UG Programs (CSE, IT, ECE, EEE & Mech) accredited by NBA**
- **UGC 2 (f) recognition and ISO 9001-2015 certification**
- **14 patents published and 2 patents granted**
- **Approved NPTEL local chapter**
- **All classrooms are ICT enabled**
- **Established Global coding practice platforms**
- **Institutions h-index - 14**
- **40 MoUs with reputed industries**
- **Ragging Free & student friendly campus**

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6.2.2 Implementation of e-governance in areas of operation

1. Administration
2. Finance and Accounts
3. Student Admission and Support
4. Examination

Response: A. All of the above

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6.3 Faculty Empowerment Strategies

6.3.1 The institution has effective welfare measures and Performance Appraisal System for teaching

and non-teaching staff**Response:**

The institution has well defined welfare measures and performance appraisal system for **232 faculty** and **258 non-teaching staff** for their professional and personal development.

Welfare Measures for Teaching and Non-teaching Staff:

- *50% concession in the tuition fee to the wards of staff studying in the Vignan Group of Institutions.*
- *Medical, Marriage and Maternity leaves*
- *40% subsidy in transport fee.*
- *Free group health insurance.*
- *EPF facility.*
- *ESI facility for all non-teaching staff.*
- *On campus Primary health centre*
- *Free health treatment.*

Staff Performance Appraisal System: Teaching Staff

There is a conducive environment prevailing in the institution that paves way for the continuous growth and development of faculty members in teaching-learning, administration, and research arena. The staff members are assessed based on their performance through yearly self-appraisal system. Staff Performance Appraisal Committee constituted by the Principal reviews the performance of staff.

The faculty with minimum one year of service is eligible for performance appraisal assessment (**100 marks**) as follows:

- Academic performance includes *feedback for 20 marks and results for 20 marks.*
- Faculty who publishes **2** papers in *SCI/Scopus/UGC peer-reviewed journals* and get *DST projects* will be assessed for **35 marks**.
- Faculty involved in administrative duties will be assessed for **25 marks**.
- The faculty members are categorized based on their marks, i.e., **Category-A** (*greater than or equal to 80%*), **Category-B** (*greater than or equal to 50% and less than 80%*), and **Category-C** (*less than 50%*).

Incentives to the Faculty

- Faculty are rewarded with **Rs. 15,000** for *Category 'A' (greater than or equal to 90% marks)* and **Rs. 10,000** (*greater than or equal to 80% and less than 90% marks*).
- Faculty of *Category 'B'* is rewarded with a cash prize of **Rs. 5,000**.
- The faculty members of *Category C* are encouraged for *FDPs* to succeed in teaching learning and research on par with *Category 'A'* supporting financially.

Other Incentives

- Cash reward of **Rs. 5000/-** and certificate of appreciation for the faculty achieving *100% pass*.
- Cash reward of **Rs. 5000/-** and certificate for publishing research papers in *UGC/SCOPUS journals*.

- Cash reward of **Rs. 10,000/-** and certificate for publishing research papers in *SCI/SCIE journals*.
- *Monthly research incentive of Rs. 10000* for above **Rs 20 lakhs funded project** and **Rs 5000** for below **Rs 20 lakhs funded project** during the project period.

Performance Appraisal System: Non-teaching Staff:

A committee headed by the Principal along with finance and administrative officer evaluates the performance of all non-teaching staff by collecting confidential reports from respective Heads and provides annual increments.

- Non-teaching staff is assessed based on different parameters such as work attitude, skill, discipline, dedication, etc.
- The efficiency of the staff is scaled as follows: *O-Outstanding, A-Very Good, B-Good, C-Average, D-Not satisfactory*.

Incentives:

- *One additional increment* is given for staff of *A and B* categories.
- The staff members of *C and D* categories undergo skill up-gradation with financial support.

Impact:

- **314** research articles were published by the faculty.
- On an average, every year, **80** faculty members produced **100%** result in the handled subjects.
- **80%** of faculty fell into *Categories A and B* of the appraisal system.
- Non-teaching staff are motivated due to provision for additional increment

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6.3.2 Percentage of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies during the last five years

Response: 65.17

6.3.2.1 Number of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies year wise during the last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 157 | 156 | 155 | 153 | 150 |

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6.3.3 Percentage of teaching and non-teaching staff participating in Faculty development Programmes (FDP), professional development /administrative training programs during the last five years

Response: 95.35

6.3.3.1 Total number of teaching and non-teaching staff participating in Faculty development Programmes (FDP), professional development /administrative training programs during the last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 478 | 454 | 462 | 468 | 476 |

6.3.3.2 Number of non-teaching staff year wise during the last five years

| 2021-22 | 2020-21 | 2019-20 | 2018-19 | 2017-18 |
|---------|---------|---------|---------|---------|
| 258 | 255 | 252 | 253 | 251 |

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6.4 Financial Management and Resource Mobilization

6.4.1 Institution has strategies for mobilization and optimal utilization of resources and funds from various sources (government/ nongovernment organizations) and it conducts financial audits regularly (internal and external)

Response:

Proper planning of financial resources help in achieving the goals and strategic growth of the institution. Necessary funds will be accumulated from Government, associated organizations and people.

Major Financial Resources and Funds Mobilization:

- *Tuition Fee:* State government releases the tuition fee every academic year for eligible students admitted under convener quota.
- *Consultancy Revenue:* Funds from various Govt. and Non-Govt. agencies are used for researcher's honorarium, infrastructure up-gradation, establishment of incubation centres, research facilities and other amenities.
- *Industry and Alumni support:* Alumni contributions are utilized to provide additional amenities for students, faculty, also to encourage meritorious students towards research and societal projects
- *Research grants:* The grants received from Government funded organizations like *DST and AICTE* are utilized to carry out the research as per the norms and subsequently utilization certificate submitted to the government.
- *Funds through Sponsorship:* Support received from philanthropists and industrialists are used for establishing new laboratories, R&D facilities, scholarships and organizing different academic and co-curricular activities.

Strategies for optimal resource utilization:

- Purchases through competitive quotations for optimal prices.
- Focus on public relations/brand equity to avoid publicity expenditure.
- Monitoring and channelizing the energy systems productively to build green campus.
- Monitoring by IQAC

Internal Audit: All financial transactions of the institution are audited by an internal audit firm. They conduct regular audits and provide monthly audit reports to the Finance officer. Remedial measures are implemented by the Head of the institution meticulously. All the observations in audit reports are rectified by the Finance officer.

External Audit: The institution undergoes an external audit once a year by an ICAI certified audit firm. They certify the financial statements of the institution i.e., Statement of Income and Expenditure, Balance Sheet and its schedules for every financial year.

Impact:

- Thorough planning and execution helped the institution towards optimal utilization of resources, minimization of unwanted expenditure and substantial growth achieved.
- All transactions done through banks assured transparency.
- The institution did not have any objections or clarifications from Department of Income Tax or any other concerned authority since its inception.
- The accounting procedures are as per *ICAI guidelines*.
- The institution followed in comply with statutory regulations.
- Effective internal audit system minimized external audit suggestions

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6.5 Internal Quality Assurance System

6.5.1 Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes. It reviews teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals and records the incremental improvement in various activities

Response:

Quality assurance process in both academics and administration was started by IQAC of the institution in the year 2017. IQAC is committed to enhance the quality of teaching learning and administrative processes to meet the standards of the institution. IQAC prepares the institutional calendar highlighting the institutional working days, co-curricular and extra-curricular activities.

Quality assurance strategies and processes institutionalized by IQAC are streamlined and strengthened every year with incremental improvements by incorporating the initiatives as follows:

- Conducting yearly academic audit and ensuring the attainment of OBE
- Collecting stakeholder feedback on TLP and ensuring proper action taken
- Ensuring ICT enabled learner-centric teaching learning process
- Coordinating online courses, certification programs and quality training programmes
- Ensuring publication of quality research articles by the faculty
- Facilitating infrastructure for digital learning
- Accreditation by NBA, NAAC, NIRF, ISO certification, ARIIA ranking
- Energy audit and green audit

Best practices by IQAC are

1. Academic and Administrative Audit (AAA)

The academic audit is conducted at the end of every semester by an internal audit team and at the end of the academic year by external audit team. The administrative audit is conducted at the end of financial year. IQAC verifies lesson plan of every course, practicals/tutorials, list of books, assignments, activities beyond the syllabus, study materials, digital content, teaching-methodology of each lecture and give suggestions for quality improvement based on the verified reports. AAA verifies the course file of each course and suggests improvement.

IQAC monitors the co-curricular activities such as guest lectures, value added courses, tutorial classes, remedial classes, counselling, industrial visits, association activities, external participation, training and placement, collaborations, FDPs, e-learning resources, research, career guidance, workshops, seminars, conferences to enhance the quality in holistic development of students.

2. Teaching- learning and Pedagogic Initiatives

IQAC organized teaching and learning initiatives by eminent academicians. The continuous efforts of IQAC converted the teaching learning process from traditional teacher-centric to student-centric approach by using flexible learning methodologies, web-based learning, and e-resources.

Some of the initiatives taken are:

- Organized guest lectures and expert sessions by prominent academicians on various teaching-learning and pedagogic methods.
- Adapting to ICT enabled and interactive teaching learning methods.

Outcomes of the best practice:

- Progressive results in academics and placements in reputed companies.
- Student and faculty achievements in NPTEL courses and publications in indexed journals.

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6.5.2 Quality assurance initiatives of the institution include:

- 1.Regular meeting of Internal Quality Assurance Cell (IQAC); Feedback collected, analysed and used for improvements**
- 2.Collaborative quality initiatives with other institution(s)/ membership of international networks**
- 3.Participation in NIRF**
- 4.any other quality audit/accreditation recognized by state, national or international agencies such as NAAC, NBA, ISO Certification etc**

Response: A. All of the above

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Criterion 7 - 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 and Institutional initiatives to celebrate / organize national and international commemorative days, events and festivals during the last five years

Response:

The institution has **36%** of girl students and **35%** of women employees. The following measures were implemented to promote gender equity and women empowerment to provide a healthy inclusive atmosphere in the campus.

Women Empowerment Committee (WEC) was established in the institution with women faculty and girl students as members and is headed by a senior female faculty member.

The responsibilities of the *WEC* are

1. To sensitize girl students on gender equality
2. To motivate and inspire girl students in their pursuit for excellence.
3. To promote awareness among girl students on occupational, legal, and constitutional rights.
4. To educate girl students on women health issues and takes respective measures.

Activities Organized for the Promotion of Gender Equity:

1. Diversified programs were conducted on following aspects for women empowerment.

4 Guest lectures on

- Save the girl child
- Avoidance of violence against women
- Legal rights for women
- Cancer prevention for women

6 Seminars on

- Gender equity - Universal problem
- Reservation for women in education
- Girls' education
- Women safety and security
- Dress attire and behavioural aspects
- Women leadership

5 Practical workshops on

- Self-Defense
- Stress Management

- Importance of *DISHA app*. and its Utilization.
- Awareness program on eve-teasing
- Impact of stress on women health

Specific Facilities for Girls:

- An exclusive National Cadet Corps (NCC) wing (*10A Girls Battalion Guntur*) with **80** girl students to emphasize girls' inner potentials.
- Waiting halls with comfortable rest facilities.
- Separate hostels are available with CCTV surveillance.
- Availability of a lady doctor
- Senior women faculty members for more guidance and support.

Celebrations of Commemorative Events:

The institution organizes national and international commemorative days, events, and festivals to promote a spirit of nationalism and patriotic fervour among students and faculty.

Few of them are

1. *Independence Day* (15th August): To promote spirit of patriotism and enlighten the need of respect towards the nation.
2. *Republic Day* (26th January): To emphasize the need of respecting the Constitution and providing awareness on fundamental rights and duties.
3. *Gandhi-Jayanti* (2nd October): To recall the great activities performed by the father of the nation and inculcate good habits like truthfulness, non-violence and determination.
4. *National Youth Day* (12th January): In remembrance of *Swami Vivekananda* birthday, who is considered as youth ICON to sensitize inner power and promote rational thinking
5. *Science Day* (28th February): To commemorate the discovery of Raman Effect, for which *Sir C V Raman* was conferred with the Nobel Prize is celebrated by organizing science quizzes and technical events.
6. *Teacher's Day* (5th September): Role of a teacher in building the nation and sensitizing the students on honoring our culture of "*Acharya Devobhava*".
7. *Engineer's Day* (15th September): To commemorate the great works of engineers and encourage innovation.
8. To inculcate good culture and heritage among students and staff, the college celebrates various festivals such as *Pongal, Holy, Dussehra, Krishnastami, Christmas, Ramadan etc.* in the campus.

Impact:

- Gender discrimination issues are not reported.
- Inculcated ethical and moral values

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7.1.2 The Institution has facilities and initiatives for

1. Alternate sources of energy and energy conservation measures
2. Management of the various types of degradable and nondegradable waste
3. Water conservation
4. Green campus initiatives
5. Disabled-friendly, barrier free environment

Response: A. 4 or All of the above

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7.1.3 Quality audits on environment and energy regularly undertaken by the Institution. The institutional environment and energy initiatives are confirmed through the following

1. Green audit / Environment audit
2. Energy audit
3. Clean and green campus initiatives
4. Beyond the campus environmental promotion activities

Response: A. All of the above

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7.1.4 Describe the Institutional efforts/initiatives in providing an inclusive environment i.e., tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and Sensitization of students and employees to the constitutional obligations: values, rights, duties and responsibilities of citizens (Within 500 words)

Response:

Students and faculty are from various socio-economic backgrounds. To establish an inclusive environment, the institution organizes various co-curricular and extra-curricular activities, which result in mutual tolerance and communal harmony.

- The institution celebrates community festivals like *Makara Sankranti, Ugadi, Dussehra, Varalakshmi-vratam, Karthikavanasamaradhana, Ganeshchaturthi, Krishnashtami, Christmas and Ramadan.*
- *Rangoli and Kite flying competitions* are organized during *MakarSankranti*, which promotes a friendly atmosphere among the students and faculty.
- *Christmas, Ramadan etc.* are celebrated for enhancing good cultural harmony between the students.
- *Karthikavanasamaradhana* is another important group activity organized by the institution to eliminate regional and communal barriers among the employees and their families.

- The institution organizes several events and cultural programs such as *Ethnic wear, Kolatam, Bonfire* to foster harmony among the fellow students and to sustain the traditions and customs of our culture.
- Dr.Medasani Mohan, Sahasravadhani addressed the students and faculty on the occasion of *Matrubhashadinotsav* (2018) held in the Institute and emphasized the need of speaking in mother tongue and promoting our culture and heritage to future generations.

Sensitization of students and employees to the constitutional obligations:

The institution takes many efforts by planning various events to educate students and staff about fundamental rights, duties, and responsibilities of citizens.

- *Constitution Day* is celebrated on 26th November to provide awareness about the significance of the constitution and the need of honouring and abiding the constitution.
- On 25th January, students and teachers took part in a *pledge towards voting* on “*National Voters Day*”. Seminars and workshops are organized to provide more awareness regarding the importance and value of vote in democracy.
- Every year on 26th January, *Republic Day* is commemorated by holding events such as *essay writing, elocution, debate, and mock parliament* to the importance of constitution.
- *Independence Day* is celebrated on 15th August of every year to recall the sacrifices of freedom fighters to get independence and show the right path to keep the nation in a healthy and wealthy state.
- Eminent personalities like Sri Madabhusha Sridhar, Former commissioner of Information act, Former CBI Joint Director, Sri. V.V.Laxminarayana addressed on *Republic Day and Independence Day*.
- The *Constitution of India and Indian Traditional Knowledge* is part of academic work which helps them to sensitize their importance in regular activities.
- Courses like *Professional Ethics and Human values, Intellectual Property Rights (IPR)* assure a good professional.
- *NSS, NCC and SAC* organized *Blood donation camps and Literacy programs* in the surrounding villages to promote human values.

Impact

- More than **90%** of students involved in socio economic activities like donations to *orphanages, old age homes, free medical camps and Swachh Bharat* events through *NSS and UBA*.
- All eligible students enrolled as voters.
- Inculcate the Indian tradition and culture.

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7.2 Best Practices

7.2.1 Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual

Response:

BEST PRACTICE-1

Title: Digital Learning Methodology

Digital learning is the latest emerging technology in the knowledge-gaining process. The institution uses this learning process along with the traditional learning process to make the students with future readiness and to face all the real-world problems.

Objectives are:

- To increase the students' understanding capability.
- To motivate the students as self-learners.
- To formulate the learning process anywhere and anytime
- To create the opportunity for learning from pioneer institutions through online guest lectures and webinars
- To build a research-oriented environment for the students

The Context:

The institution aims to generate and improve a culture of innovation, develop a self-support spirit among the students and encourage budding engineers to learn through the digital resources. It also attempts to train and equip them with the knowledge and connect them to the real world's problems. Due to the digital learning initiatives, an increased number of students choosing the right career is observed post their course completion.

The Practice:

Online Learning

- Students are learning through online platforms like *NPTEL, Coursera, etc.*
- The faculty members learn through online courses to upgrade themselves in cutting edge technologies.
- The aspirants become globally competitive.

Blended Learning

- Blended Learning is used as an integrated online education to imbibe conventional and virtual learning methods.
- It provides access to global resources and materials that meet the students' level of knowledge and interest.
- Self-pacing for slow and advanced learners reduces stress and increases satisfaction.

E-learning

- Lecture notes, course material, PPTs and videos are shared online for student reference.

ICT Facility

- To make the teaching-learning process simple and more effective through audio visuals.
- The realization of the course content is straight forward.
- Classroom dynamics and learning rate are improved.

Evidence of Success:

- **719** students and staff members completed their *NPTEL courses* in various domains in the last two academic years.
- Faculty developed **3,000** hours of quality video lectures for **75** subjects.
- **700** students were qualified in competitive examinations (*GRE/GMAT/GATE etc.*) out of **766** appeared.

Problems Encountered and Resources Required:

Problems Encountered:

- Faculty members must devote extra hours to prepare digital content beyond conventional notes preparation.

Resources Required:

- High-speed Wi-Fi facility.

BEST PRACTICE-2

Title: Faculty Empowerment and Motivational Strategies

Introduction

Human resources play a vital role to fulfil the vision of the academic institutions. The institution strongly believes this fact and recruits the qualified teaching and non-teaching staff. Although, they are qualified and experienced, they need empowerment and continuous motivation to excel their duties. To fulfil this, faculty development programs (FDPs) and motivational strategies are adopted.

Objectives:

- To provide the skills and techniques in the art of teaching.
- To identify various levels of understanding capabilities of students and train them according to their potential levels.
- To impart the philosophy and work culture of the institution.
- To train the faculty for effective student counselling and mentoring.
- To motivate the faculty for continuous improvement in their performance.

Context:

The knowledge levels of fresh and young teachers may be extremely well in their domains and low in the skills of knowledge transfer. Thus, FDPs are arranged to train the faculty in all respects before being involved in the teaching learning process. These programs and below said motivational strategies help in continuous faculty quality upgradation.

The Practice:

Faculty empowerment strategies

A well-designed in-house faculty development programs are organized to encourage and empower the newly recruited faculty along with regular faculty members. The resource persons are distinguished academicians from reputed organizations and Vignan's Group of Institutions. In this program, the faculty are addressed to know

1. Academic and administration duties.
2. Blackboard, ICT, and dais management.
3. Preparation of lecture notes, models, and teaching aids.
4. Question paper setting as per revised Bloom's Taxonomy.
5. Evaluation of theory and lab examinations according to scheme of evaluation.
6. Significance of outcome-based education and implementation.
7. Inculcating the culture of Research and development.

Faculty are encouraged to complete *NPTEL*, *Coursera* and *Udemy* certification courses in advanced technologies and motivated to participate in FDPs organized by the reputed institutions. Special invited lectures are arranged to train the faculty towards technical writing and methodology for submitting projects and patents.

Faculty Motivational Strategies

- With respect to the performance appraisal, *Category 'A'* faculty are rewarded with a *cash prize of Rs. 10,000 to Rs 15,000* and *Category 'B'* with cash prize of *Rs. 5,000*.
- Cash reward of *Rs. 5000/-* and certificate of appreciation for the faculty achieving *100%* pass and *NPTEL certifications*.
- *Cash reward of Rs. 5000 to Rs.10000* and a certificate for publishing research papers in *Scopus/SCI journals*.
- *Monthly research incentive of Rs. 10000* for *above 20 lakhs funded project* and *Rs 5000* for *below 20 lakhs funded project for project period*.
- Provided registration fees to attend FDPs, workshops, conferences along with paid on duty leave.

Evidence of success:

- **88** faculty are pursuing Ph.D in reputed universities.
- **40** FDPs were organized
- **771** faculty members attended FDPs at reputed organizations.
- **69%** faculty members received cash rewards based on their appraisal.
- Faculty members produced **100%** result in **17%** of subjects during last five years and the respective faculty were rewarded.

Problems Encountered:

Availability of competent resource persons for long durations to the rural location.

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7.3 Institutional Distinctiveness**7.3.1 Portray the performance of the Institution in one area distinctive to its priority and thrust within 1000 words****Response:****Transforming the Rural, Social, and Economically Backward Students as Globally Competent Professionals**

Raw materials are processed and converted into useful products by various methods. In the due course of time, several hurdles may occur. Nevertheless, the continuous process will always be productive.

The development of the nation is possible through the proper utilization of human resources with advanced technologies. In 21st century, with the growth of micro and nucleus family culture, it is essential to inculcate ethical and moral values from young age which is the prime duty of educational institutions. Learning opportunities shall be given to everyone, irrespective of their location, community, and financial status. With this motto, Vignan's Lara Institute of Technology & Science was established by a renowned Educationalist, Dr. Lavu Rathaiah, Doctor of Philosophy in Psychology to provide education with high standards along with social consciousness, ethical values, and good emotional quotient.

The students admitted in last five years at this college are categorized into students with *rural background (68%)*, *socially backward (58%)* and *economically weaker (70%)*. The distinctive feature of the institution is transforming rural, social, and economically backward student into a good knowledgeable and successful individual in academics and profession also. Various academic and personality development programs are designed and implemented in the institution to fulfil the necessary requirements of highly skilled professionals.

During the time of bridge course, more attention is focused to identify the strengths and weaknesses of each student by an effective counselling system. Oral and written communication skills, problem solving ability, creative and lateral thinking behaviour, intra and interpersonal skills, hobbies etc., are identified. Students will go through the *SWOT analysis* by the concerned counsellor and the necessary measures are suggested to overcome difficulties in their course of study. Many of the students are from rural areas with an agricultural background. Two third of these students belong to the first generation of their family who are pursuing technical education at graduate level. Usually, they have poor communication skills.

Producing globally accepting professionals and improving their communication skills is a part of vision of the institution. Hence, to overcome the identified gaps, IQAC has implemented an initiative to train the students in this direction by promoting *Cambridge University* Certification courses named as *PET* and *BEC* examinations.

From the second year onwards, all the students are trained for enhancing basic programming skills in *advanced C and Data Structures, Python programming* training, in addition to regular course works. These additional skills are very much essential in the present scenario for job opportunities of IT industry, where students are offered with attractive annual packages irrespective of the branch of engineering.

The institution organized **15 coding competitions** in association with *HackerEarth*. Every month, students are participating in *CodeChef* long challenge event. **1030** students got star ratings. They are also practicing programming codes on *Geeks for Geeks platform*.

The *Student Activity Council (SAC)* was established to coordinate and organize various cultural, literary, and fine arts activities. It is headed by a faculty coordinator to plan and execute various activities in every academic year. The SAC activities will promote team spirit, leadership qualities and managerial skills.

Students are encouraged to participate in the National level technical quiz competitions, symposiums, paper and poster presentation, model and prototype development exhibitions and other related activities. The Institution itself hosts every year a technical expo as a national level event named as *SRUJANANKURA*. Students from all branches exhibit their talents in the preparation of project models and live projects in huge numbers. Institution gives financial support for good projects. Students actively involves in this event as participants, coordinators, and event promoters. These events not only explore the technical knowledge of the students, but also provide a platform to work with participants from different regions. Project works carried out from conventional branches like Mechanical, Civil and Electrical engineering provide solutions to the societal issues of neighbouring villages of the college.

In addition to the regular academics and training programs, the institution also encourages certification courses offered by *coursera, SWAYAM-NPTEL* etc. The students who receive *NPTEL* certifications in *GOLD* and *SILVER* levels are given *cash prizes* by the management. In honour and respect to the parents, every year the parents of placed students are felicitated. On the other hand, it also brings motivation in other students to work hard and get success in their career.

Impact:

- Overall percentage of progression of students has increased
- **80%** of the students got placed on campus/took admission for higher studies in the reputed national and foreign universities.
- Students of this institution bagged **5 University Gold medals**.
- The institution also stands in first five positions in academic results among **195** affiliated colleges of JNTUK, Kakinada due to collective effort of students because of adopting good teaching learning practices, continuous monitoring of academics and individual progression in curricular and co-curricular activities.

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5. CONCLUSION

Additional Information :

- Vignan's Lara Institute of Technology & Science accomplished *15 years of academic excellence (2007 to 2022)*.
- Institution stood in top five positions in academic results among all JNTUK affiliated colleges.
- Recognized by *AP Knowledge Mission* as "A" Grade institution.
- Introduced global coding platforms like *HackerRank, HackerEarth, GeeksforGeeks and CodeChef* to strengthen coding skills of students.
- *Under Unnat Bharat Abhiyan (UBA)* program, the college adopted five villages and received appreciation certificate.
- Nodal Centre for conducting *Cambridge University PET and BEC* examinations
- Incentives for the research outcomes by the faculty
- Rewarding faculty and students with cash prizes for *NPTEL* courses in the multidisciplinary areas.
- Institution organizes state level *JNTUK* sports tournaments
- Recognized Centre for *GATE and AP State Government* examinations
- Conducting open house Project expo to encourage innovative ideas of the students
- Recognized as *SIRO* by *DSIR*
- Conducting Wipro TalentNext program by certified faculty to provide job opportunities.

Concluding Remarks :

The institution has been transforming *80% of rural and economically weaker students* every year to globally acclaimed professionals with psychological strength and emotional balance realizing the vision and mission of the institution. The institution has begun its journey offering *3 UG* programs and grown to offer presently *10 UG and 5 PG programs* which shows relentless efforts. Though, beginning of the institution was humble in *2007*, it has now emerged as *NBA accredited with five UG* programs. The institution has established a real environment for additional growth, with remarkable infrastructural facilities built over the years. The college has multi-capable young students and well qualified, experienced, competent, and dedicated staff members to gear up any kind of academic challenge. The proof of excellence is the continuous placement record, sponsored research projects, and high reputation in the academic community. The Management has an extensive vision and strategies to achieve all-round development of the institution for producing technocrats to serve the society.