SELF STUDY REPORT

FOR 1st CYCLE OF ACCREDITATION

AURORA'S TECHNOLOGICAL AND RESEARCH INSTITUTE

PARVATHAPUR UPPAL HYDERABAD 500098 www.atri.edu.in

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

AURORA CONSORTIUM

Aurora Educational Society was started in 1989 and made a humble beginning with Aurora Degree College. In 1995, a Post graduate College was established which offered two programmes, namely, Masters in Computer Applications and Masters in Business Administration. In 1998, Aurora touched new heights when it established its Engineering college on a sprawling campus of 580 acres at Bhongir. It was a bold venture in the area of higher education. Not long after, seven more engineering colleges came up, followed closely by four postgraduate colleges. Today, Aurora happens to be one of the largest educational groups in the state of Telangana, with approximately 30,000 students on its rolls and more than 1800 faculty and 1200 administrative staff.

THE INSTITUTE

Aurora's Technological and Research Institute (formerly known as Karshak Engineering College) is one of the eight Engineering colleges under the umbrella of the Aurora group of Institutions. It was established under the aegis of the Karshak Vidya Parishad in the year 1999 in Kamareddy, Nizamabad district and now functions at its permanent location at Parvathapur, Uppal (post), Ranga Reddy District.

The Institute is located at Parvathapur Village, Uppal area which is about 5 km from the Hyderabad –Warangal National highway and well connected by public transport system. The institute is surrounded by a lush green environment. The landscape and garden are beautifully maintained to refresh the mind of the students and teachers. The entire campus is smoking free & plastic free to ensure an eco-friendly and pollution free environment.

Vision

ATRI seeks to be a center of higher learning that can provide the best learning experience, the most productive learning community, and the most creative learning environment in engineering education and to be recognized as one of the best engineering colleges in India.

Mission

To provide excellent education in Engineering and Technology.

To create environment for quality research and dissemination of knowledge.

To develop entrepreneurship and managerial abilities through world-class engineering and management education.

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1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

- Strict adherence to the curriculum and completion of syllabus on time in accordance with JNTUH guidelines and academic calendar.
- Efficient teamwork in achieving vision and mission of the college.
- Qualified and dedicated faculty members promoting research and innovation and encouraging student excellence.
- Good reputation and brand name as one of the top ten Engineering colleges as acclaimed by all its stakeholders.
- Remarkable Extension activities conducted by NSS, Street cause and Nature club
- Best transportation facilities with buses plying to all parts of the city
- Centrally located and accessible college campus in close proximity to the city
- Effective internal communication through CUG mobiles and emails
- Active Support systems in the form of various committees, clubs and cells
- Student friendly atmosphere providing accessibility to faculty and management
- Finest student discipline monitored through disciplinary committee and Physical Director.
- Excellent teaching learning practices, using innovative methods
- Faculty sponsorships for workshops, conferences, seminars and publications to promote research activities
- Ragging-free campus with display of posters, banners and continuously monitored by vigilance squad
- Continuous parent teacher interaction by conducting regular
- Well-equipped Digital Library with access to printed books, E-books Journals, E-journals, rare books, manuscripts and online resources.
- Democratic governance through decentralization of responsibilities and delegation of duties
- Dynamic and visionary leadership of the Secretary, Principal and Management
- Promoting E-learning through NPTEL and NDL online sources
- Diverse faculty beneficiary schemes like EPF, ESI, relocation expenses, transport and mobile phone allowance, sponsorship for publications and conferences.
- Involvment of students and staff in Community service activities

Institutional Weakness

- Partial utilization of services of alumni members
- Moderate procurement of funding schemes from AICTE/DST/etc.
- Introduction of fewer add-on courses in interdisciplinary areas
- Placement opportunities in core companies

Institutional Opportunity

- Increased professional club memberships for faculty and students in IETE, IEEE, CSI, ISCA
- Promoting community outreach programmes like village adoption, literacy programme and skill development training
- Secure partnerships and MoUs with National/International institutions
- Initiating collaboration with national laboratories

- Expanding E-learning resources for faculty and students for knowledge enhancement
- Accreditation and autonomous status from affiliating bodies
- Creation of "Centers of Excellence" and "Skills Development Centers" in all departments.
- To collaborate with industries, institutions and universities inside and outside India for joint research and continuing education.

Institutional Challenge

- Environmental pollution in the vicinity
- Enormous competition from other Engineering colleges
- Frequent changes in educational and financial policies
- Lack of uniform fee structure across the colleges
- Poor intermediate education in the state reflecting in the poor performance of Engineering students

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

ATRI follows the curriculum prescribed by the affiliating university, JNTUH for all the courses offered by the college. Within the limitations of the prescribed framework, curriculum analysis committee identifies gaps in concurrence with industry needs and syllabus of the competitive exams. Governing council of the college and Board of Studies endorse the changes to implement bridge courses, adjunct courses and add-on courses proposed.

Curriculum implementation is effectively carried out through session plans and handbooks. Weekly syllabus completion reports track the progress of syllabus completion. Teaching diaries are maintained by all the faculty members. Course files and PPTs are shared with the students. Continuous internal evaluation is carried out regularly in theory and laboratory sessions. Tutorial and remedial classes are conducted regularly after taking feedback from the students twice in a semester.

Contents beyond classrooms are taught through seminars and guest lectures. Lot of emphasis is placed in the curriculum on subjects like Gender Sensitization, Human Values and Professional Ethics, Disaster management, Environmental Science etc in tune with the fast changing world for developing social awareness and conscience. Gender sensitization creates a positive outlook in students about gender roles, gender equality and women empowerment. HVPE promotes understanding of importance of right attitude to work. Awareness on Environment sustainability is created by implementing programmes like Haritha Haram, waste management and optimal utilization of natural resources available in the surroundings. Poster presentations, role-plays, skits, essay writing, case studies, debates, PPTs and videos are used to encourage collaborative learning and promote learner diversity.

Teaching-learning and Evaluation

Teaching-learning process is given utmost importance by training the faculty in preparing course files with comprehensive teaching material in digital format. The institution also conducts remedial classes, bridge courses, communication skills development programs, pre-placement training, group discussions etc., for the

holistic development of students.

Experiential methods like project work, demonstrations, internships and industrial visits are executed in practical subjects. Participative learning is encouraged through workshops, seminars and expos. Latest methods like difference reduction, heuristics, etc. are followed to promote student centric learning. Innovative and creative methods like cross-over learning, incidental and real-life learning, behavioral modeling and play project augment student learning. NPTEL videos supplement the learning resources and EDMODO as the learning management system.

Student continuous evaluation is carried out in theory and lab subjects as per the norms of the university. To suit the capabilities of diverse learners, methods like Diary writing, Viva, Quizzes, Assignments, Seminars, Comprehension/Listening Test, Oral Tests, Surveys, Paper Presentations are included. Evaluation is transparent as internal assessment marks are communicated to the students and answers are discussed in the class. All the complaints and grievances related to examination procedures are handled and addressed within two to three working days. All the circulars related to examinations are promptly communicated by the exam cell. Strict adherence to exam timetables and upload deadlines is ensured.

Course and programme outcomes for all the subjects are disseminated to all the stake holders including students. Course, faculty and exit surveys are conducted to assess the attainment of POs and COs.

Research, Innovations and Extension

The Institution has a core Research and Development Cell to promote and monitor the progress of research activities on campus. The Dean-R&D along with all the HoDs and senior faculty members from all the constituent departments guide and monitor the research activities. The institution has a stated Code of Ethics book to check malpractices and plagiarism in research. Reports of the seminars conducted on Intellectual Property Rights are available on the website. The Research and Development Centre along with career development cell is actively involved in acquiring MoUs with industries and enterprises like ICT, ORACLE, AMAZON WEB SERVICES, PALO ALTO and DELL-EMC. A project expo is conducted every year and best projects from each department are given prizes. Research facilities are provided to facilitate in-house project work for the students.

Extension activities to nurture corporate social responsibility and holistic development in students are conducted through NSS unit. These include programmes like adoption of a government school and Qutbullapur village, Aids awareness, Swach Bharath, Road safety, Haritha haram and many medical camps. Nature club and Street Cause collaborate in conducting environment awareness programmes. ATRI-WOW chapter has been established in collaboration with ITC for the effective waste management. Entrepreneurship development cell and Research development cell regularly organize workshops and seminars. Water Testing Services by Water Testing Centre of Aurora Research Labs is extended to the neighborhood community to create awareness about safe drinking water.

Infrastructure and Learning Resources

ATRI has infrastructure facilities with required number of classrooms, seminar halls, laboratories, tutorial rooms, staff rooms, office rooms, common rooms and student activity rooms as per the norms. The seminar halls and classrooms are equipped with LCD projectors, public address system, collar mikes, computers and

furniture. ICT tools are used for teaching learning activities.

ATRI library is well equipped with a huge collection of books and journals. Library is automated with DELNET, INFLIBNET and OPAC systems. National Digital Library membership facility is available under single window search. Access to E-books and E-resources are available in the digital library. Access to Rare books and manuscripts is provided in the digital library. Resource books, journals, references, newspapers, newsletters and magazines are available in the reading hall. Syllabus books, Question papers are also available for reference.

The institution has a huge playground and equipment for games like Basket Ball, Cricket, Volley Ball, and Hand Ball etc. Indoor sports like Table Tennis, Caroms and Chess offer good recreation activities. Yoga sessions are conducted periodically.

IT infrastructure facilities are provided and maintained as per the norms and prescriptions of the JNTUH. Maintenance of buildings, furniture, equipment in laboratories, electrical connections, plumbing, supply of drinking water, computers and Wi-Fi networks, landscaping, gardening etc. are outsourced through an Annual maintenance contract. Security is outsourced to professional agency-Sentinel Security Services. Institution has a compound wall and security guards are placed at all critical locations on the campus. Name boards and signboards are displayed for the convenience of visitors.

Student Support and Progression

Student Activity Council is constituted every year with III and IV year students to create a link between the students and the administration, the students and the faculty, the students and the community and among the students themselves. SAC members are elected by the Class Representatives (CR) of all the branches of Engineering and MBA by voting system. It is the backbone of all the committees and a symbol of democratic governance and decentralization.

The committee aims for the overall improvement of academics, co-curricular and extra-curricular activities. It takes the initiative for organizing several activities on campus and off campus as well. It helps students share ideas, interests, and concerns with the teachers and the Director.

There are various clubs functioning on campus to nurture the creativity and talents in students. For eg: Photography, Literary, Cultural, Nature, Department Clubs and Professional Society Chapters in all the branches. Competitions are conducted regularly to support extracurricular and co-curricular activities within the college and at intercollegiate level.

ATRI alumni association is active and contributes by constantly supporting and providing help in areas like career mentoring to the students, helping the academic council in designing new courses, creating a network with employers, Improving student recruitment efforts and in increasing efforts in collecting funds. Abhidheya programme is specially designed to strengthen this bond with the alumni where employers and management also take part. Alumni portal is available on the college website along with a registration form. Alumni updates are posted on the website regularly.

Governance, Leadership and Management

Democratic governance, decentralization, delegation of duties and responsibilities form the core of administrative system at ATRI as teachers and students are involved in decision making of various academic practices. The college has an effective Governing Council consisting of senior academicians, industry professionals and research consultants, along with management members, Principal and faculty members. The culture of participative management is promoted in every aspect.

The management, Principal, faculty, students, Industry experts and alumni are members of IQAC which monitors effective functioning of college in academics, research and administration. The administrative and other functions of various bodies are documented and circulated to the concerned employees. Service rules and procedures, recruitment, promotional policies as well as grievance redressal mechanism are mentioned clearly in the Staff Service Rule Book. Student Rule book and Anti-plagiarism guidelines are available on the college website. Various committees, clubs, centers and cells which form the support system conduct meetings regularly and implementation of the resolutions is supervised by the coordinators.

Several welfare measures are implemented for teaching and non-teaching staff. Structured self–appraisal is collected from the faculty comprising of points on teaching capabilities, participation in research and development, administration and extension activities in addition to the student and peer feedback collected online. The audit of accounts and submission of income tax returns are being carried out regularly each year. Many gender equity programmes are conducted by Women Empowerment cell in collaboration with Telangana Mahila Jagruthi.

Institutional Values and Best Practices

ATRI champions the cause of gender sensitivity by providing facilities such as Safety and security through CCTV surveillance, Counselling on women's issues and Common rooms. Effective waste management measures include proper disposal of solid and liquid waste through ITC-WOW Hyderabad Chapter. E-Waste management is outsourced as per GOI norms. The campus emanates many green practices. Students and staff use bicycles and public transport. Ramps and railings for disabled students are provided near all entry points and doorways. The institution aims to become Plastic free and paper free campus. Green landscaping with trees and potted plants is maintained throughout the campus.

To accomplish the vision and translate it into reality, ATRI established ITL (Interactive Teaching learning) methodology to inculcate high motivation, communication skills, knowledge sharing, team spirit, freedom of expression and employability skills in students.

Taking cue from the latest concept 'Flipped classrooms' (which is a blended learning approach, where face-to-face interaction is mixed with independent study) various methods were identified to facilitate the student centric learning. They are Case studies, Group discussions, Debates, Quizzes, Student seminars and Role-plays.

The ITL methods are implemented by dividing students into learning groups as per the requirements of each activity. Objectives of each method, guidelines and parameters for evaluation are communicated to the students. Performance of students in each learning group is evaluated individually.

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the College			
Name	Aurora's Technological and Research Institute		
Address	Parvathapur Uppal Hyderabad		
City	Hyderabad		
State	Telangana		
Pin	500098		
Website	www.atri.edu.in		

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal	Amit Gangopadhya y	040-20050999	9100999999	040-2765456 8	director@atri.edu.i
IQAC Coordinator	Srikanth Jatla	040-27201005	9100000111	040-2720100 6	jsrikanth@aurora.a c.in

Status of the Institution	
Institution Status	Private

Type of Institution	
By Gender	Co-education
By Shift	Regular

Recognized Minority institution	
If it is a recognized minroity institution	No

Establishment Details		
Date of establishment of the college	28-07-1999	

University to which the college is affiliated/ or which governs the college (if it is a constituent college)

State	University name	Document
Telangana	Jawaharlal Nehru Technological University	View Document

Details of UGC recognition		
Under Section	Date	
2f of UGC		
12B of UGC		

Details of recognition/approval by stationary/regulatory bodies like AICTE,NCTE,MCI,DCI,PCI,RCI etc(other than UGC)					
Statutory Recognition/App Regulatory Authority Report nt programme Recognition/App Day,Month and year(dd-mm-yyyy) Name of the programme Page 1 and 1 and year(dd-mm-yyyy) Remarks months					
AICTE	<u>View Document</u>	30-04-2017	12		

Details of autonomy		
Does the affiliating university Act provide for conferment of autonomy (as recognized by the UGC), on its affiliated colleges?	Yes	
If yes, has the College applied for availing the autonomous status?	No	

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?	Yes	
If yes, name of the agency	ICT Academy	
Date of recognition	08-01-2018	

Location and Area of Campus				
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.
Main campus area	Parvathapur Uppal Hyderabad	Urban	7.24	25414

2.2 ACADEMIC INFORMATION

Details of Pro	ogrammes Offe	red by the Col	lege (Give Data	a for Current	Academic year)
Programme Level	Name of Pr ogramme/C ourse	Duration in Months	Entry Qualificatio n	Medium of Instruction	Sanctioned Strength	No.of Students Admitted
UG	BTech,Comp uter Science And Engineering	48	Intermediate in MPC or equivalent	English	180	111
UG	BTech,Electr ical And Electronics Engineering	48	Intermediate in MPC or equalivalent	English	60	33
UG	BTech,Mech anical Engineering	48	Intermediate in MPC or equivalent	English	60	32
UG	BTech,Civil Engineering	48	Intermediate in MPC or equivalent	English	60	45
UG	BTech,Electr onics And C ommunicatio n Engineering	48	Intermediate in MPC or equivalent	English	168	135
UG	BTech,Infor mation Technology	48	Intermediate in MPC or equivalent	English	60	37
PG	MBA,Master Of Business Administrati on	24	UG Degree	English	60	22

Position Details of Faculty & Staff in the College

	Teaching Faculty											
	Profe	Professor			Asso	Associate Professor			Assistant Professor			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government			1	0		1		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/Soci ety or Other Authorized Bodies				9		7		31				203
Recruited	4	5	0	9	17	14	0	31	108	95	0	203
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				117				
Recruited	63	54	0	117				
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				42				
Recruited	29	13	0	42				
Yet to Recruit				0				

Qualification Details of the Teaching Staff

	Permanent Teachers										
Highest Qualificatio n	Profes	ssor		Associate Professor		Assistant Professor					
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0	
Ph.D.	4	5	0	3	1	0	1	0	0	14	
M.Phil.	0	0	0	1	1	0	1	2	0	5	
PG	0	0	0	14	11	0	106	93	0	224	

	Temporary Teachers										
Highest Qualificatio n	Qualificatio		Associate Professor			Assistant Professor					
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total	
D.sc/D.Litt.	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	

Part Time Teachers										
Highest Professor Asso Qualificatio		Assoc	ssociate Professor		Assistant Professor					
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt.	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

Details of Visting/Guest Faculties						
Number of Visiting/Guest Faculty	Male	Female	Others	Total		
engaged with the college?	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	240	2	0	0	242
	Female	151	0	0	0	151
	Others	0	0	0	0	0
PG	Male	12	0	0	0	12
	Female	9	0	0	0	9
	Others	1	0	0	0	1

Provide the Following Details of Students admitted to the College During the last four Academic Years								
Programme		Year 1	Year 2	Year 3	Year 4			
SC	Male	27	16	26	37			
	Female	8	7	7	19			
	Others	0	0	0	0			
ST	Male	14	9	17	28			
	Female	1	1	1	3			
	Others	0	0	0	0			
OBC	Male	192	142	284	258			
	Female	99	75	91	83			
	Others	0	0	0	0			
General	Male	146	118	156	230			
	Female	91	68	93	123			
	Others	0	0	0	0			
Others	Male	0	0	0	0			
	Female	0	0	0	0			
	Others	0	0	0	0			
Total		578	436	675	781			

3. Extended Profile

3.1 Programme

Number of courses offered by the institution across all programs during the last five years

Response: 791

Number of self-financed Programmes offered by college

Response: 0

Number of new programmes introduced in the college during the last five years

Response: 4

3.2 Student

Number of students year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
2395	2210	2767	2618	2247

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

2016-17	2015-16	2014-15	2013-14	2012-13
441	508	644	644	576

Number of outgoing / final year students year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
404	613	560	429	352

Total number of outgoing / final year students

Response: 404

3.3 Academic

Number of teachers year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
267	301	279	234	192

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

2016-17	2015-16	2014-15	2013-14	2012-13
267	301	279	234	192

Number of sanctioned posts year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
267	301	279	234	192

Total experience of full-time teachers

Response: 1406

Number of teachers recognized as guides during the last five years

Response: 1

Number of full time teachers worked in the institution during the last 5 years

Response: 664

3.4 Institution

Total number of classrooms and seminar halls

Response: 45

Total Expenditure excluding salary year wise during the last five years (INR in Lakhs)

2016-17	2015-16	2014-15	2013-14	2012-13
640.5	740.8	791.4	455	298.2

Number of computers

Response: 650

Unit cost of education including the salary component(INR in Lakhs)

Response: 0.75

Unit cost of education excluding the salary component(INR in Lakhs)

Response: 0.27

4. Quality Indicator Framework(QIF)

Criterion 1 - Curricular Aspects

1.1 Curricular Planning and Implementation

1.1.1 The institution ensures effective curriculum delivery through a well planned and documented process

Response:

The institution follows the curriculum prescribed by JNTUH for all the courses offered. To ensure effective curriculum delivery, the institution follows the process given below:

- The curriculum analysis committee of the institution having heads of the departments and other senior professors as members analyses the curriculum based on the industry requirements, syllabus of the competitive examinations and curriculum of other universities, and identifies various gaps.
- The committee also proposes various measures to cover the gaps, which include bridge courses, adjunct courses, add-on courses, etc. and submits recommendations to the Governing Council.
- The Governing Council conducts a meeting and approves the recommendations put forth by the committee on a case by case basis and permits the institution to implement the suggestions.
- The institution then incorporates the measures in to the academic calendar and prepares institution calendar without any deviation from the academic calendar prescribed by the affiliating university.
- The institution ensures effective implementation of its calendar through a well-planned and documented process given below:
 - Before the beginning of the semester, preference of the subjects willing to be taught by the faculty members is collected in a fixed format.
 - Subject allocation is done based on the preferences given and workload allocation for each department is finalized after taking approval from the Principal.
 - Each faculty member shall prepare the following for each allotted subject:
 - Course prerequisites
 - Course outcomes
 - Session plan
 - Assignment questions
 - Question bank
 - Session plans are also prepared for lab subjects, projects, and ITL methods.
 - A handbook is prepared with the above information for all subjects, including a calendar, academic rules and regulations, and other relevant information for each section of students and is shared with them.
 - Faculty members prepare course files which are shared with the students.
 - Based on the workload allocation, timetables are prepared by the timetables preparation committee with members from all the departments and are approved by the Principal.
 - Based on the gaps identified, more number of hours are allotted to certain subjects than that prescribed by the affiliating University.
 - Faculty members are ensured to follow the session plans strictly by collecting weekly syllabus completion status reports and are provided with extra classes in case of additional requirement.
 - Adherence to syllabus completion as per session plans is also monitored through attendance

- registers where faculty members write the topics covered in each lecture.
- Class teacher meetings are conducted periodically to identify weak students and conduct remedial classes.
- Feedback from students is obtained twice in a semester for each course on various aspects of teaching learning process.
- Internal exams for theory and practical subjects are conducted as per schedule from the affiliating university.
- Contents beyond the syllabus are taught through guest lectures by experts from the industry, industrial visits and e-learning.
- In laboratory subjects, additional experiments are added to cover contents beyond the syllabus.
- Periodic meetings are conducted by the principal with HoDs to review timely completion of syllabus.

File Description	Document
Any additional information	View Document

1.1.2 Number of certificate/diploma program introduced during the last five years

Response: 89

1.1.2.1 Number of certificate/diploma programs introduced year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
22	20	19	16	12

File Description	Document
Any additional information	View Document
Details of the certificate/Diploma programs	View Document

1.1.3 Percentage of participation of full time teachers in various bodies of the Universities/ Autonomous Colleges/ Other Colleges, such as BoS and Academic Council during the last five years

Response: 1.03

1.1.3.1 Number of teachers participating in various bodies of the Institution, such as BoS and Academic Council year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
3	3	2	3	2

File Description	Document
Details of participation of teachers in various bodies	View Document
Any additional information	<u>View Document</u>

1.2 Academic Flexibility

1.2.1 Percentage of new courses introduced of the total number of courses across all programs offered during the last five years

Response: 100

1.2.1.1 How many new courses are introduced within the last five years

Response: 791

File Description	Document
Details of the new courses introduced	View Document

1.2.2 Percentage of programs in which Choice Based Credit System (CBCS)/Elective course system has been implemented

Response: 100

1.2.2.1 Number of programs in which CBCS/ Elective course system implemented.

Response: 7

File Description	Document
Name of the programs in which CBCS is implemented	View Document
Any additional information	View Document

1.2.3 Average percentage of students enrolled in subject related Certificate/ Diploma programs/Addon programs as against the total number of students during the last five years

Response: 60.19

1.2.3.1 Number of students enrolled in subject related Certificate or Diploma or Add-on programs year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
1799	1677	1407	1268	1139

File Description	Document
Any additional information	View Document
Details of the students enrolled in Subjects related to certificate/Diploma/Add-on programs	View Document

1.3 Curriculum Enrichment

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

Response:

The institution has the following courses in the curriculum prescribed by the affiliating university, which address cross cutting issues relevant to Gender, Environment and Sustainability, and Human Values and Professional Ethics:

• Gender Sensitization

- This course is offered for B.Tech II year I semester students following R16 regulation and covers topics on understanding gender, gender and biology, gender and labor, issues of violence, and gender co-existence.
- The course aims to develop students' sensibility with regard to issues of gender in contemporary India, provide a critical perspective on socialization of men and women, introduce students to information about some key biological aspects of gender, expose students to debates on the politics and economics of work, and help students reflect critically on gender violence
- Through this course, apart from acquiring important knowledge on various issues related to gender, the students shall be better equipped to work and live together as equals, and are empowered to understand and respond to gender violence.

• Environmental Science and Technology

- This course is offered for B.Tech II year I semester students following R16 regulation and covers topics on ecosystems, classification of natural resources, biodiversity and biotic resources, environmental pollution and control technologies, and environmental policy, legislation and EIA.
- The course aims at making students understand the importance of ecological balance for sustainable development, the impacts of developmental activities and mitigation measures, the environmental policies and regulations.
- Through this course, the students shall understand, evaluate, or develop technologies on the

basis of ecological principles and environmental regulations which in turn help in sustainable development.

• Human Values and Professional Ethics

- This course is offered as an elective for B.Tech III year I semester students following R13 and R15 regulations and covers topics on the need for value education, understanding harmony in the human being, understanding harmony in the family and society, understanding harmony in the nature and existence, and implications of the holistic understanding harmony on professional ethics.
- The course aims to help the students appreciate the complementarity between 'values' and 'skills' to ensure sustained happiness and prosperity, to facilitate the development of a holistic perspective among students towards life, profession and happiness, and to highlight plausible implications of such a holistic understanding in terms of ethical human conduct, trustful and mutually satisfying human behavior and mutually enriching interaction with nature.
- Through this course, the students shall understand the importance of holistic development and shall exhibit better understanding of professional ethics in their behavior.

File Description	Document	
Any Additional Information	<u>View Document</u>	

1.3.2 Number of valued added courses imparting transferable and life skills offered during the last five years

Response: 50

1.3.2.1 Number of value-added courses imparting transferable and life skills offered during the last five years

Response: 50

File Description

Brochure or any other document relating to value added courses.

Details of the value-added courses imparting transferable and life skills

View Document

View Document

1.3.3 Percentage of students undertaking field projects / internships

Response: 22.28

1.3.3.1 Number of students undertaking field projects or internships

Response: 448	
File Description	Document
Institutional data in prescribed format	View Document
List of students enrolled	View Document

1.4 Feedback System

1.4.1 Structured feedback on curriculum obtained from 1) Students 2) Teachers 3) Employers 4) Alumni 5) Parents For design and review of syllabus semester wise/ year wise

A.Any 4 of the above

B.Any 3 of the above

C. Any 2 of the above

D. Any 1 of the above

Response: A.Any 4 of the above

File Description	Document
URL for stakeholder feedback report	View Document

- 1.4.2 Feedback processes of the institution may be classified as follows:
- A. Feedback collected, analysed and action taken and feedback available on website
- B. Feedback collected, analysed and action has been taken
- C. Feedback collected and analysed
- D. Feedback collected

Response: A. Feedback collected, analysed and action taken and feedback available on website

File Description	Document
URL for feedback report	<u>View Document</u>

Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1 Average percentage of students from other States and Countries during the last five years

Response: 0.14

2.1.1.1 Number of students from other states and countries year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
2	3	4	5	3

File Description	Document
Institutional data in prescribed format	<u>View Document</u>
List of students (other states and countries)	View Document

2.1.2 Average Enrollment percentage (Average of last five years)

Response: 64.53

2.1.2.1 Number of students admitted year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
574	435	647	776	774

2.1.2.2 Number of sanctioned seats year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
780	900	1140	1140	1020

File Description	Document	
Institutional data in prescribed format	View Document	
Any additional information	View Document	

2.1.3 Average percentage of seats filled against seats reserved for various categories as per

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applicable reservation policy during the last five years

Response: 71.72

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

2016-17	2015-16	2014-15	2013-14	2012-13
341	250	426	428	573

File Description Document	
Any additional information	View Document
Institutional data in prescribed format	<u>View Document</u>

2.2 Catering to Student Diversity

2.2.1 The institution assesses the learning levels of the students, after admission and organises special programs for advanced learners and slow learners

Response:

The college has a mechanism to assess the learning levels of the students after admission before the commencement of the programme which is described below:

- A data sheet is collected from each student pertaining to cut-off marks, quota through which admission was made, medium of instruction, Board studied, community and place of residence.
- Based on the data collected during the beginning of the first year, statistics about the number of students belonging to various categories such as Medium of Instruction other than English at school level, Vocational Stream, etc. are prepared.
- A pre-assessment test is conducted in Mathematics, Physics, Chemistry and English to identify the areas where students may require extra assistance.
- Based on the data sheet and the performance in the test, students are classified into the following categories:
 - Vernacular medium students
 - Rural Background Students
 - Slow leaners
 - Advanced learners
- Bridge courses are conducted for students immediately after they join the first year, to enable smooth transition into college study from school level and polytechnic college.
- The following bridge courses are conducted based on the category:
 - Communicative English
 - Physical Sciences
 - Fundamentals of computing

- Mathematics, aptitude and logical reasoning
- Students hailing from a rural background are mentored to break their language barriers and improve their interpersonal skills.

Activities for Slow Learners

- Remedial Classes are conducted for the first-year students and second year lateral entry students with slow learning capacity, to improve their knowledge on the subject.
- Question bank with answer key is provided to the slow learners.
- Slow learners are counselled and offered guidance to refer the examination question papers of previous years and identify the frequently repeated questions.

Activities for Advanced learners

- The students are encouraged to do additional experiments in the lab classes.
- Advanced learners are motivated to participate in technical events at inter-college and intra-college levels.
- The organizational skills are developed by assigning various roles like coordinator for a student group, organizer for events, etc.,
- Value added courses are conducted in various domains.
- To inculcate research culture, students are encouraged to do projects.
- The students are motivated to publish and present papers in national / international journals.
- Students are encouraged to participate in science exhibitions to execute working models to shape their inherent ideas.
- Proficiency prizes are awarded to class toppers.
- University rank holders are honoured during the graduation ceremony.

Further, the students are identified and split into small self-learning groups. The group comprises of advanced learners, normal learners and slow learners and they try to help each other in self-learning and sharing clarifications as and when needed.

File Description	Document	
Any additional information	View Document	
Link for Additional Information	View Document	

2.2.2 Student - Full time teacher ratio Response: 8.28 File Description Document Institutional data in prescribed format View Document

2.2.3 Percentage of differently abled students (Divyangjan) on rolls

Response: 0.05

2.2.3.1 Number of differently abled students on rolls

Response: 1

File Description	Document	
List of students(differently abled)	View Document	
Institutional data in prescribed format	View Document	
Any additional information	View Document	

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

Response:

The Institute adopts following student-centric practices to increase students' participation in teaching learning process:

EXPERIENTIAL LEARNING

(a) Mini and major projects

- Projects in the curriculum develops application engineering and nurtures good practices and innovative methods of learning, teaching and assessment.
- The traditional lecture and laboratory activities have evolved into more open-ended, project-based experiences that help students develop additional skills and contextualize the learning of theories.
- Students take up industry oriented mini projects at the end of their third year of study
- Major projects are developed by students during the final year second semester

(b) Laboratory work

- More emphasis is given on laboratory classes to facilitate the understanding of the concerned theory topic through experiential learning.
- Laboratory practices are incorporated with the objective of 'practice engineering' rather than 'study engineering'.
- In each semester, students study at least two laboratory courses as prescribed in the curriculum.
- Additional lab courses are also conducted beyond the curriculum to bridge the gap between the industry requirements and the curriculum prescribed by the affiliating university.

(c) Internships

Students are encouraged to take up internship training at reputed R&D organizations/ institutions to

convert their innovative ideas to an application oriented product. Due to the continuous motivation from faculty members and steps taken by Industry Institute Interaction Cell, there is a great increase in the number of students taking up internships from their third year of study.

(d) Industrial Visits and In-Plant Trainings

Industrial visits and in-plant trainings are arranged for the students to help the students to relate the theory and practical courses to the working environment. Industrial visits and in-plant trainings are organised at least once every academic year.

PARTICIPATIVE LEARNING

- The institution implements the below listed interactive teaching learning methodologies in regular classes for all applicable subjects to enhance learning experience of students and create interest in the subject.
 - Case studies
 - Debates
 - Group discussions
 - Seminars
 - Quizzes
 - Role plays
- The Students are encouraged to participate in paper presentation, seminars and conferences
- Students are motivated to participate in competitions, scientific exhibitions and workshops
- During the Guest lectures, seminars, workshops and conferences the students finds an opportunity to interact with industrial experts or academic intellectuals.
- The institution enhances participative learning through conduct of quiz, debate, group discussions and role plays.

PROBLEM SOLVING METHODOLOGIES

The following problem-solving methodologies are followed by teachers during classroom teaching to enhance the learning process of students:

- 1. **Trial and error method**: Students are made to try a number of different solutions and rules out the ones that do not work.
- 2. **Insight method**: Solutions are found by students from their past experiences
- 3. **Difference reduction**: Student solve problems by breaking large task into small steps
- 4. Means-end analysis: Students learn by setting up sub-goals between current problem and goal
- 5.**Z to A approach**: Students solve problems by working backwards to achieve the goal
- 6. Algorithms and heuristics: Students solve problems through step-by-step practical approach

2.3.2 Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc.

Response: 100

2.3.2.1 Number of teachers using ICT

Response: 243

File Description	Document
List of teachers (using ICT for teaching)	View Document
Provide link for webpage describing the " LMS/ Academic management system"	View Document

2.3.3 Ratio of students to mentor for academic and stress related issues

Response: 9.58

2.3.3.1 Number of mentors

Response: 210

File Description	Document
Any additional information	<u>View Document</u>
Year wise list of number of students, full time teachers and students to mentor ratio	View Document

2.3.4 Innovation and creativity in teaching-learning

Response:

In order to make the teaching-learning process more effective and interesting to the students the following innovative teaching-learning methods, apart from ITL methodologies explained in 2.3.1, are implemented by the faculty members of the institution:

Cross-over learning

The faculty members pose questions before an industrial visit/ in-plant training. The students on industrial visit explore the questions, collect photographic evidences and share their experiences in the classroom after the trip. These crossover learning experiences exploit the strengths of both environments and provide students with authentic and engaging opportunities for learning.

Learning through argumentation

Students are encouraged to participate in class room debates. When students argue in scientific ways, they

learn how to take turns, listen actively, and respond constructively to others.

Incidental learning

Students are motivated for self-learning during which students experience technology-supported incidental learning.

Real-world learning

Faculty members link the subject topics relating and demonstrating through real life situations, to facilitate easy understanding.

Brain-storming

Brain-storming sessions provide platform for students to voice their thoughts without having to worry about right or wrong.

Story-boarding

The concept is explained to the students with the help of pictures and this visually stimulating activity ensure that even complex ideas are easily put across to students.

NPTEL videos

The faculty members utilize NPTEL – National Programme on Technology Enhanced Learning videos to support their teaching process and promote the student learning process.

Learning management systems

Local Open Source Platforms EDMODO is used to enable the higher level of teaching learning process.

Mind Maps

Mind mapping converts a long list of monotonous information into a colorful, memorable and highly organized diagram that works in line with the brain's natural way of doing things.

Learning groups

Learning groups facilitate students to develop problem solving, interpersonal, presentational and communication skills, all beneficial to life outside the classroom

Multimedia and Animation

Various multimedia tools are used by the faculty members which enable the students to obtain better understanding through the verbal and visual explanations

Play projects

The faculty member fixes the learning (research) problem, the students split into two competing groups and craft solutions to the problem. A final meeting is held where students take roles and publicly defend the developed solutions (peer reviewed prior to defense).

Behavioral modelling

The students are explained about a professional behaviour to be learnt. The students are trained to reproduce the behaviour and the feedback is given regarding the success of the behavioural reproduction.

2.4 Teacher Profile and Quality

2.4.1 Average percentage of full time teachers against sanctioned posts during the last five years

Response: 100

File Description	Document
List of the faculty members authenticated by the Head of HEI	View Document
Year wise full time teachers and sanctioned posts for 5 years	View Document

2.4.2 Average percentage of full time teachers with Ph.D. during the last five years

Response: 6.6

2.4.2.1 Number of full time teachers with Ph.D. year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
14	15	22	19	13

File Description	Document
Any additional information	View Document
List of number of full time teachers with PhD and number of full time teachers for 5 years	View Document

2.4.3 Teaching experience of full time teachers in number of years

Response: 5.79

File Description	Document
List of Teachers including their PAN, designation,dept and experience details	View Document

2.4.4 Average percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the last five years

Response: 0

2.4.4.1 Number of full time teachers receiving awards from state /national /international level from Government recognised bodies year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
0	0	0	0	0

File Description	Document	
Institutional data in prescribed format	<u>View Document</u>	

2.4.5 Average percentage of full time teachers from other States against sanctioned posts during the last five years

Response: 7.01

2.4.5.1 Number of full time teachers from other states year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
43	20	12	09	08

File Description	Document
List of full time teachers from other state and state from which qualifying degree was obtained	View Document

2.5 Evaluation Process and Reforms

2.5.1 Reforms in Continuous Internal Evaluation(CIE) system at the institutional level

Response:

As the institution is affiliated to JNTUH, it strictly follows all the norms and guidelines prescribed the university as given below with some reforms brought in at the institutional level to improve the system:

- The academic calendar for each semester is prepared in line with the University schedule of events which provides the information on scheduled timetable for internal assessments and the tentative examination schedule of University.
- Any reforms in the internal evaluation pattern is discussed during academic and governing council meetings and implemented through the examination cell after approval by the governing council.
- The question paper patterns for the internal examinations have been standardized by the institution, similar to that of University end semester question paper.
- Internal assessment I covers first two and half units and Internal assessment II covers the remaining two and half units.
- Two sets of questions papers are prepared by each subject handling faculty and submitted to the exam cell after verification by Question Paper Evaluation Committee, which selects any one question paper for conducting the assessment tests.
- The College Examination Cell holds the onus for all exam related activities and through coordinated efforts of all the stakeholders the entire evaluation system is smoothly managed.
- The answer scripts are evaluated by exchanging the answer scripts among sections.
- Results are intimated to the students immediately after the completion of assessment and the same is communicated to their parents through posts.
- Retests are conducted for students who fail to secure minimum percentage of marks or who want to improve their internal marks, with a special timetable framed for that purpose.
- The academic performance and attendance are maintained and recorded in each department.
- The laboratory exams are conducted twice a year and the best out of the two is considered for internal assessment.
- The performance of each student in the laboratory is recorded in the laboratory performance sheet by the faculty and checked by HoD.
- Lab continuous internal evaluation is conducted by the laboratory faculty and marks are awarded based on their attendance, conduct of experiment, observations made, record, and viva voce for each experiment.
- Subject-wise attendance is recorded and the consolidated attendance is displayed on the notice boards and also informed to students and parents through letters, SMS messages, and phone calls.
- To ensure strict monitoring of attendance and reduce the detentions, day-wise attendance statements are maintained and irregular students are counselled and their parents informed.
- Domain knowledge test and platform knowledge test are conducted for final year students doing their project work as internal evaluation to ensure the participation of students in project development and evaluate all the students and award them internal marks transparently.

2.5.2 Mechanism of internal assessment is transparent and robust in terms of frequency and variety

Response:

- There is complete transparency in the internal assessment. The criterion adopted is as directed by the University.
- Time table is displayed well in advance on the notice board and circulated to all the students and faculty members

- All the students are familiar with the system of internal assessment. The average will be calculated by considering the two internal tests and assignments.
- The orientation programme is also used as a platform to communicate the University norms on attendance stipulations, Internal assessment system etc.
- The assessment report is prepared by the concerned faculty and is given for HoD's and Principal's verification followed by entering the details on JNTUH portal.
- Internal assessment is based on mid-term tests and assignments which carry 25% marks. (External 75 marks+ 25 Internal = Total 100).
- Performance of students is displayed on the department and examination cell notice boards.
- Internal examination answer sheets are showed to the students and any discrepancy is immediately rectified.
- The class in-charge compiles the marks obtained by the students in all courses in each test and analyses the performance with respect to the following:
 - Pass percentage and Number of failures in each subject,
 - Number of students failed in one/ two/ three subjects
 - Overall pass percentage of the class
- Progress report indicating University marks, performance in internal assessment tests and the attendance are uploaded in the web portal and a copy is sent to their parents.
- Mentors personally inform the performance of identified slow learners to the parents. Parents of slow learners are called for a meeting, if necessary.
- After completion of every internal assessment test, the course outcome (CO) is checked with the PO attainment and analysed by the heads of various departments.
- Two internal examinations are conducted in each theory subject every semester and average of the marks secured in two examinations is considered as the final internal marks in the subject.
- Assignments are given to the students at the end of each unit of syllabus in each subject and the marks secured are included in the internal examinations.

2.5.3 Mechanism to deal with examination related grievances is transparent, time-bound and efficient

Response:

Grievance redressal at the institutional level

- The performance of the students is informed to the students and parents immediately after the completion of internal assessment tests.
- The students who have any grievance in the evaluation process can approach the faculty member who had evaluated the answer sheets for its redressal.
- The students can also approach the head of the department with their grievance, when it is not sorted out by the faculty concerned.
- All the grievances are addressed within two to three working days.
- All the circulars, schedules and notices related to examinations are communicated to staff and students by the exam cell.

Grievance redressal at the University level

- The University provides the students with an option of obtaining photocopy of their answer sheets after the declaration of results.
- The student can review his/her answer sheets and apply for re-counting and /or re-evaluation through the exam cell.
- The communication related to complaints is posted in inward –outward register maintained by the exam cell of the institution. Students may check the status of their complaint from this register.
- If a student is not satisfied with revaluation results, he/she can go for a challenge with the recommendation by the head of the department wherein his/her answer sheets will be evaluated once again.
- Challenge evaluation fee is reimbursed by the University to the students in case of improvement in the grades in comparison to the first evaluation.
- Other type of grievances like data missing in the question papers, question asked from outside the syllabus, question paper being tough etc. are communicated to the controller of examinations through the web portal on the same day of the conduct of exam by the exam cell of the institution through the HoDs concerned and the Principal for necessary action.

File Description	Document
Any additional information	<u>View Document</u>

2.5.4 The institution adheres to the academic calendar for the conduct of CIE

Response:

- The academic calendar is prepared in accordance with the academic schedule prescribed by JNTUH for affiliated institutions.
- The calendar provides details on date of commencement of classes, number of working days, holidays and proposed dates of internal and external examinations, college level and department level functions / activities.
- Session plans are prepared by the faculty members for each subject containing topics to be covered in each session, text books/reference books to be used, and ITL method that will be used to deliver the topic.
- Handbooks are prepared for each section of students with the following contents to ensure timely completion of syllabus and conduct of continuous internal evaluation:
 - Code of conduct for students
 - Day-wise and session-wise Calendar based on working days in the semester and academic calendar of the university
 - o Timetables
 - Syllabus
 - Session plans
 - Assignment questions
 - Previous year question bank
 - Questions from competitive examinations
- The soft copy of the same is distributed to all the students and faculty to enable them to perfectly plan the academic activities such as preparation of time tables, lecture planning, conduct of internal assessment tests etc.

- The faculty members maintain a register for each of the subjects and the laboratory classes they handle comprising of the students' attendance and details of the topics covered in the classroom.
- Attendance is marked for every subject and consolidated. The consolidated attendance is displayed on the notice board and communicated to parents.
- The attendance registers are periodically checked by the HODs and verified by the Principal.
- Weekly course completion reports are prepared by the departments and are verified by the Principal.
- Internal assessment and Pre-final examination question papers are prepared as per JNTUH question paper pattern.
- In order to avoid malpractices, two sets of question papers are prepared for each internal assessment test by the faculty members, which are further checked by the academic committee of the department and verified by the Principal.
- Question papers are submitted to centralized examination cell which selects any one question paper set
- The answer papers are evaluated by a team of senior academic faculty for an unbiased evaluation.
- Laboratory performance is evaluated based on the regularity, timely completion of the experiments, presentation of content in both observation and record book and the performance in viva voce.
- Laboratory performance evaluation sheet is prepared by the faculty member for each student which is verified by the HoD.
- A minimum of two assignments are assigned to the students to assess the student learning outcome.
- Evaluation of final year projects, which carry 200 marks, is done by the Project Review Committee formed and headed by the HOD at the beginning of the seventh semester.
- Periodic monitoring and evaluation of the project works are done in three phases: zeroth review, first review and second review by this committee.
- Out of 200 marks, 100 marks are allotted for the performance in the project review and remaining 100 marks are allotted for the final viva voce examination.

File Description	Document
Any additional information	<u>View Document</u>

2.6 Student Performance and Learning Outcomes

2.6.1 Program outcomes, program specific outcomes and course outcomes for all programs offered by the Institution are stated and displayed on website and communicated to teachers and students

Response:

Mechanism of Communication

- a. Publishing POs
 - POs are displayed in the form of printed posters and display boards in the laboratories, staff rooms, corridors and offices of the department.
 - POs are published in the department home page of the college web portal which is frequented by all stakeholders of the programme.

• Printed in the student handbooks and lab manuals which are published in hard/soft copy every semester and are given to students.

b. Disseminating POs to All Stakeholders

- **Students**: Awareness workshops are conducted periodically for the students to make them aware of the POs. They are also explained to students at the time of joining the institution as part of an induction programme.
- **Parents**: Parents are explained about the POs during induction programme organized at the time of joining their wards in the college. They are also explained to them during parent-teacher meetings.
- **Faculty and Staff**: Staff orientation programmes are conducted periodically for newly joined faculty and staff members to induct them into the institution and the department during which the POs are also explained. Awareness workshops are also conducted periodically to explain the same to the faculty and staff.
- **Alumni Members**: Explained to alumni members during alumni meetings organized every semester. Digital magazine containing the POs is also emailed to the alumni every year.
- **Governing Council**: The POs of the department are mailed to the governing council members every year contained in the department's digital magazine.
- **Employers**: When employers visit the campus for campus placements, and when the placement cell approaches the employers during placement activity, the department brochure containing the POs is given to them.
- **Professional Bodies:** While organizing events under professional bodies, the events brochures are designed to contain the department POs which are sent to the professional bodies.
- **Sponsors and Donors**: While approaching sponsors/donors for sponsorship for various activities organized in the department, the department brochure containing POs is given and explained to them.

File Description	Document
COs for all courses (exemplars from Glossary)	<u>View Document</u>
Link for Additional Information	View Document

2.6.2 Attainment of program outcomes, program specific outcomes and course outcomes are evaluated by the institution

Response:

Attainment of POs

Each department in the institution regularly assesses the attainment of POs by using both direct and indirect methods. The assessment of POs is done upon graduation of the students from the programme which requires the assessment to be made yearly. The process of assessment followed by the department ensures that the POs are assessed, and evolved periodically to continuously improve the programme. The assessment is done by the department and the process is documented along with the results obtained and are maintained in the department.

The process used for assessing the attainment of each PO is as follows:

- 1. The direct assessment mechanisms used for assessing the POs are identified by DAC and CAC. The mechanisms identified as given below:
 - Assignments
 - Examination result analysis
 - Seminars
 - Group discussions
 - Comprehensive viva
 - Placements
 - Higher education records
 - Entrepreneurship
- 2. The indirect assessment mechanisms used for assessing the POs are also identified by DAC and CAC.
- 3. The survey forms are prepared by DAC and CAC for the indirect assessment mechanisms which are given below:
 - Course surveys
 - Faculty surveys
 - Exit surveys
- 4. Once the mechanisms are in place, the data collection process begins every year where several committees perform the data collection as follows:
 - DAC collects the results of assignments from Examination cell.
 - DAC collects the results of examination, seminar, group discussions, and comprehensive viva.
 - Placements and Training Committee (PTC) collects the placements results and forwards them to DAC.
 - Course surveys and faculty surveys are conducted by QAC and the results are forwarded to DAC.
 - SMC conducts exit surveys and forwards the results to DAC.
 - Once the assessment results are received, they are evaluated by CAC and DAC.
 - The results are reviewed by CAC, DAC and SC and whether the POs are attained or not is assessed.
 - If required POs are redefined by CAC, DAC, and SC and the new POs are documented, published, and disseminated to all the stakeholders.

Attainment of PSOs

Program Specific Outcomes are also analysed through a similar process explained above. However, the assessment begins upon completion of two to three years after the graduation of the students form the programme.

Attainment of COs

Attainment of Course Outcomes is measured by conducting course surveys at the end of each semester after the end examinations using course survey forms for each subject and filled by the students. Faculty surveys are also conducted to assess the attainment of course outcomes. The results of course surveys and faculty surveys are analysed to assess the attainment of course outcomes, program outcomes and program specific outcomes.

2.6.3 Average pass percentage of Students

Response: 59.5

2.6.3.1 Total number of final year students who passed the university examination

Response: 404

2.6.3.2 Total number of final year students who appeared for the examination

Response: 679

 File Description
 Document

 Institutional data in prescribed format
 View Document

2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process

Response:

File Description		Document	
	Database of all currently enrolled students	<u>View Document</u>	

Criterion 3 - Research, Innovations and Extension

3.1 Resource Mobilization for Research

3.1.1 Grants for research projects sponsored by government/non government sources such as industry ,corporate houses, international bodies, endowment, chairs in the institution during the last five years

Response: 0

3.1.1.1 Total Grants for research projects sponsored by the government/non-government sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution year wise during the last five years(INR in Lakhs)

2016-17	2015-16	2014-15	2013-14	2012-13
0	0	0	0	0

File Description	Document	
List of project and grant details	View Document	

3.1.2 Percentage of teachers recognised as research guides at present

Response: 0.41

3.1.2.1 Number of teachers recognised as research guides

Response: 1

File Description	Document
Any additional information	<u>View Document</u>
Institutional data in prescribed format	View Document

3.1.3 Average number of research projects per teacher funded by government and non government agencies during the last five years

Response: 0

3.1.3.1 Number of research projects funded by government and non-government agencies during the last five years

File Description	Document
List of research projects and funding details	View Document

3.2 Innovation Ecosystem

3.2.1 Institution has created an ecosystem for innovations including incubation centre and other initiatives for creation and transfer of knowledge

Response:

The institution has an incubation centre for creation and transfer of knowledge with the following facilities:

- A room with an area of 200 square meters
- A large table with chairs for discussions and meetings
- An LCD projector for presentations and talks
- A computer lab with 20 high end PCs, WiFi internet facility and advanced software supporting incubation in all streams of engineering
- PaloAlto network security products to learn and get trained on network security
- A 7-axis robotic arm to learn and get trained on operating robotic arms
- E-Resources for training in advanced areas

A senior faculty member is designated as coordinator of the incubation centre with faculty members from each engineering department. The same faculty team also monitors the functions of Entrepreneurship Development Cell of the institution.

The areas under which the institutions' incubation centre provides support include:

- Energy auditing
- Computer repairing
- Mobile repairing
- Copy editing
- Mobile application development
- Web development
- Automobile fabrication
- Automobile repair and service
- Reverse engineering
- Game development
- Water testing
- Soil testing
- Pneumatics

The institution has MoUs with the following organisations which support the operations in the incubation centre:

- Amazon Web Services
- Palo Alto
- RamTech Industries
- Oracle Academy
- NPTEL
- Dell EMC
- ICT Academy

- Amis Engineers
- Smart Bridge
- Ambo University

The institution also has the following support systems creating an eco system for innovations on campus and in turn supports the operations in the incubation centre:

- I3 club
- Entrepreneurship development cell
- Research and development cell
- Industry institute interaction cell
- Urja club
- Access club
- Water Testing Laboratory

3.2.2 Number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the last five years

Response: 4

3.2.2.1 Total number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
2	2	0	0	0

File Description	Document	
Report of the event	<u>View Document</u>	
List of workshops/seminars during the last 5 years	View Document	

3.3 Research Publications and Awards

3.3.1 The institution has a stated Code of Ethics to check malpractices and plagiarism in Research

Response: Yes

File Description	Document	
Institutional data in prescribed format	View Document	
Any additional information	View Document	

3.3.2 The institution provides incentives to teachers who receive state, national and international recognition/awards

Response: Yes

File Description	Document	
List of Awardees and Award details	View Document	
e- copies of the letters of awards	View Document	

3.3.3 Number of Ph.D.s awarded per teacher during the last five years

Response: 0

3.3.3.1 How many Ph.Ds awarded within last five years

File Description	Document
List of PhD scholars and their details like name of the guide, title of thesis, year of award etc	View Document

3.3.4 Number of research papers per teacher in the Journals notified on UGC website during the last five years

Response: 0.15

3.3.4.1 Number of research papers in the Journals notified on UGC website during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
26	37	38	42	41

File Description	Document
List of research papers by title, author, department, name and year of publication	View Document

3.3.5 Number of books and chapters in edited volumes/books published and papers in national/international conference proceedings per teacher during the last five years

Response: 0.01

3.3.5.1 Total number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
6	5	3	2	3

File Description	Document
List books and chapters in edited volumes / books published	View Document

3.4 Extension Activities

3.4.1 Extension activities in the neighbourhood community in terms of impact and sensitising students to social issues and holistic development during the last five years

Response:

The institution gives lot of importance to holistic development of students and organised many community development activities in the last five years. Many students in the institution take part in the community service activities regularly organised by various support systems of the institution sensitising them to social issues and helping in their holistic development. The following list of activities were organised in the neighbourhood community in the last five years under each support system:

- 1. National Service Scheme (NSS) Cell
 - Offers mandatory NSS course for the first year students from R16 regulation
 - Adopted local government school and organises the following activities regularly
 - Monthly salary of Rs.1700/- is offered to one teacher from the institution
 - Special classes to students of school by the students of institution
 - Conduct of cultural, literary and sports competition to the school students and award of prizes
 - Celebration of important days at the school premises
 - Inviting school students to the college premises for witnessing science expos
 - Distribution of books, clothes and stationery to school students
 - Adopted Qutubullapur village
 - Organised the following awareness programmes:
 - Aids awareness
 - Road safety
 - Fire safety
 - Anti-Smoking, Anti-Alcohol and Anti-Drug awareness
 - o Beti Bachao Beti Padhao
 - Organised the following camps in the local neighbourhood:
 - Medical camps
 - Blood donation camps
 - Pulse polio camps
 - Special camps in villages
 - Organised clean and green initiatives such as Swachh Bharath and tree plantation programmes and

ITC-WOW Chapter.

2. ARITRI, Nature Cub

- Clay Ganesh bucket immersion campaign
- Haritha Haram for the protection of greenery in the campus and in the neighbourhood
- Rally for rivers to protect of rivers
- Medicinal sapling plantation
- Slope cleaning
- Cleaning surroundings and adding clay to the plants
- Making of flour ganesha for protection of water bodies during immersion

3.Street Cause ATRI

- Fund raised by selling clay Ganesha idols has been donated to the Government school for the establishment of water plant.
- Distributed sarees and footwear to the workers at Uppal construction site.
- Students of ZPHS, Old Bowenpally have been taught vocabulary and competitions were conducted. Prizes were distributed to the kids.
- Organised awareness programme regarding safe celebration of Holi at Sacred Heart Convent High School.
- Organised painting competition for the mentally challenged children of Sadhana institute, Nacharam and distributed prizes.
- Distributed blankets to the road side dweller during winter.
- Conducted awareness campaign on road safety.
- Conducted self-defence programmes for school students.

4. Festivities Committee

- To promote harmony among students of various religions the committee organises celebrations of all important national and state festivals
- The committee also organises birth and death anniversaries of national personalities
- Organises celebration of independence day and republic day to promote national integrity and patriotism among students
- Organises celebration of days of national and international importance

3.4.2 Number of awards and recognition received for extension activities from Government /recognised bodies during the last five years

Response: 10

3.4.2.1 Total number of awards and recognition received for extension activities from Government /recognised bodies year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
9	1	0	0	0

File Description	Document
e-copy of the award letters	View Document
Number of awards for extension activities in last 5	View Document
years	

3.4.3 Number of extension and outreach programs conducted in collaboration with industry, community and Non-Government Organisations through NSS/NCC/Red cross/YRC etc., during the last five years

Response: 32

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

2016-17	2015-16	2014-15	2013-14	2012-13
10	9	4	5	4

File Description	Document
Number of extension and outreach programs conducted with industry, community etc for the last five years	View Document
Reports of the event organized	<u>View Document</u>

3.4.4 Average percentage of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the last five years

Response: 31.68

3.4.4.1 Total number of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
1168	1147	577	782	157

File Description	Document
Average percentage of students participating in extension activities with Govt. or NGO etc.	View Document
Report of the event	View Document

3.5 Collaboration

3.5.1 Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc during the last five years

Response: 134

3.5.1.1 Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc year-wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
49	37	16	19	13

File Description	Document
Copies of collaboration	View Document
Number of Collaborative activities for research, faculty etc.	View Document

3.5.2 Number of functional MoUs with institutions of national, international importance, other universities, industries, corporate houses etc. during the last five years (only functional MoUs with ongoing activities to be considered)

Response: 30

3.5.2.1 Number of functional MoUs with institutions of national, international importance, other universities, industries, corporate houses etc. year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
13	8	6	1	2

File Description	Document
Details of functional MoUs with institutions of national, international importance, other universities etc. during the last five years	View Document
e-copies of the MoUs with institution/ industry/ corporate house	View Document

Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

4.1.1 The institution has adequate facilities for teaching- learning. viz., classrooms, laboratories, computing equipment, etc.

Response:

The institution has adequate facilities for teaching-learning as described below, as per the requirements of AICTE and JNTUH and ensures optimal utilisation of the available physical infrastructure.

1. Classrooms

The institution has 40 well-furnished and ventilated classrooms of minimum 66 sqm area for conducting teaching-learning activities with the following facilities:

- Seating for 65 students
- LCD projector with screen
- Wi-Fi internet facility
- Blackboard
- Provision for connecting PC or laptop
- Provision for public addressing system

2. Tutorial Rooms

The institution has 10 well-furnished and ventilated rooms with minimum 33 sqm area for conducting tutorial classes with the following facilities:

- Seating for 30 students
- Wi-Fi internet facility
- Blackboard

3. Laboratories

The institution has 56 well-equipped laboratories with latest hardware and software under all its departments as per the requirement of the statutory bodies. The laboratories have equipment for conducting all the experiments prescribed in the curriculum by the affiliating university. The laboratories are also used for developing mini and major projects and conducting research by students and faculty members.

4. Workshop

The institution has engineering workshop with more than 200 sqm area having the following facilities:

- 10 Workbenches
- Equipment for carpentry, fitting, thin smithy, black smithy, welding, plumbing, foundry and house wiring

5. Computer centre

The institution has a computer centre with 60 desktop PCs connected over LAN with internet facility and is accessible to all students and faculty members for teaching-learning, research and development, and other academic activities.

6. Drawing halls

Two drawing halls are available in the institution for teaching Engineering Graphics to B.Tech first year students of all branches, Machine Drawing to B.Tech second year students and Production Drawing Practice to B.Tech fourth year students of Mechanical Engineering. Each drawing hall has 60 drawing tables and stools and can at a time accommodate 60 students.

7. Seminar halls

The institution has four seminar halls with each hall having more than 132 sqm area which are used for conducting guest lectures, seminars, tech talks, group discussions, debates, role plays, etc. and have the following facilities:

- Seating for 150 students
- LCD projectors with screen
- Public addressing system
- Blackboard
- Wi-Fi internet facility
- PC

8. Smart Classroom

Keeping the advancements in teaching-learning technologies in view, the institution has setup one smart classroom with the facilities listed below. The institution is also planning to setup at least one smart classroom under each department in the near future.

- Desktop/laptop
- Document camera
- Interactive whiteboard
- LCD projector
- Digital camera
- Wireless microphone
- Speakers
- Cloud-based communication system
- Skype
- Edmodo

9. Computing equipment

The institution has 650 desktop PCs exclusively for teaching-learning purposes for students and faculty members under all the departments with latest hardware and software. All the PCs are connected in LAN and have restricted access to internet facilities. The institution also has 35 printers and four scanners. The

campus is Wi-Fi enabled and is accessible to all students and faculty members.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

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

Response:

The institution gives utmost importance to overall development of the students and organises various sports, games, and cultural activities on campus regularly. To support this, the institution has the following facilities which are kept open beyond the working hours for students and staff.

1. Indoor Sports and Games Facilities

The institution has indoor sports room with an area of 150 sqm and has the equipment for the following sports and games:

- Table tennis
- Caroms
- Chess
- Dartboard
- Ludo
- Snakes and Ladders

2. Outdoor Sports and Games Facilities

A three-acre area of land on campus is dedicated for outdoor sports and games facilities. The institution has the equipment for the following sports and games:

- Cricket
- Football
- Baseball
- Basketball
- Volleyball
- Kho Kho
- Running
- Long Jump
- Discus
- Ring

- Throwball
- Kabaddi

3. Gymnasium

The institution has a dedicated room for Gymnasium with the facilities given below:

- 3 treadmills
- 2 upright bikes
- Dumbbells
- Sqat Station
- Dipping bars
- Abdominal bench

4. Yoga Centre

A room with an area of 90 sqm is dedicated as a Yoga centre in the institution and regular Yoga training sessions are organised by a certified Yoga trainer to students and staff. There is a dedicated slot available for Yoga in the timetable for all students. The Yoga centre can accommodate up to 50 members at a time.

5. Nrithya, Dance Club

To encourage students with talent in various dance forms, and to help interested students to learn and participate in dance competitions, the institution has established a dance club with the name Nritya, which has a dedicated room with music system. The club has more than 50 student and staff members who regularly practice and perform in cultural programmes and competitions. The club has 42 students and staff as members. Dr. K.Nagajyothi, Professor and Dean, who is also a trained classical dancer, designated as a mentor and coordinator of the club.

6. Suswara, Music Club

Suswara, a music club is established by the institution to encourage students with talent in singing. The club shares the room with Nritya club and has a dedicated music system with microphone. The club also has a few musical instruments which are regularly used for practice by staff and students. Ms. Anusha, Assistant Professor, EEE, who is also a professional singer, designated as a mentor and coordinator of the club.

7. Atri-Apertures, Photography Club

The institution has an active photography club, ATRI Apertures, and has a dedicated digital camera. The club organises workshops, field trips, and competitions regularly for interested students and staff. The club has 35 active members at present. Mr. Kranthi Kumar, Assistant professor, Civil Engineering Department with experience in skilled photography designated as a mentor and coordinator of the club.

File Description	Document
Any additional information	<u>View Document</u>

4.1.3 Percentage of classrooms and seminar halls with ICT - enabled facilities such as smart class, LMS, etc

Response: 100

4.1.3.1 Number of classrooms and seminar halls with ICT facilities

Response: 45

File Description	Document
Number of classrooms and seminar halls with ICT enabled facilities	View Document
any additional information	<u>View Document</u>

4.1.4 Average percentage of budget allocation, excluding salary for infrastructure augmentation during the last five years.

Response: 20.95

4.1.4.1 Budget allocation for infrastructure augmentation, excluding salary year wise during the last five years (INR in Lakhs)

2016-17	2015-16	2014-15	2013-14	2012-13
106.5	115.2	194.5	77.3	92.5

File Description	Document
Details of budget allocation, excluding salary during the last five years	View Document

4.2 Library as a Learning Resource

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

Response:

The library of the institution is fully automated using the Integrated Library Management System described below:

Name of the ILMS Software: NewGenLib

Nature of Automation: Fully automated

Version: 3.1.2

NewGenLib is an open source software with all the functional modules of library management completely implemented and has the following modules:

1. Cataloguing

- Importing bibliographic data
- Primary or original cataloguing
- Search catalogue

2. Circulation

- Check out and check in
- Reserve items
- Recall and renew items on loan
- Inter library loans management
- Process items lost
- Weed out process
- Binding management
- Automatic over-due notices and reminder for renewals
- Emails and SMS facility

3. Acquisitions

- Request process
- Process on-approvals from vendors
- Raise and receive orders
- Accession received items
- Process payments
- Budget management
- Record payment details
- Claims for items not supplied
- Solicited and unsolicited gift processing
- Quotation process

4. Serials Management

- Process subscription list
- Raise firm order
- Receive invoice
- Register serial issues
- Binding management
- Auto-claim generation for not received issues

5. MIS Reports

- Accession register
- Customized list of titles
- List of new arrivals
- Documentation list
- Stock verification
- Detailed circulation transaction
- Overdue material
- Patron list
- Items reported lost
- Daily circulation transaction
- Current subscriptions
- List of subscriptions

6. Web Online Public Access Catalogue (OPAC)

- Various types of searches
- Reserve, cancel and renew items online
- List of new arrivals
- Suggest new books to be acquired online
- View special collections in the library

All the above modules are fully implemented in the library. The use of ILMS has resulted in ease of use of library resources, enhanced reporting and monitoring, and flexible access to information.

File Description	Document
Any additional information	<u>View Document</u>

4.2.2 Collection of rare books, manuscripts, special reports or any other knowledge resources for library enrichment

Response:

- The College Library is enriched with good numbers of textbooks, reference books, books beyond the text, journals and magazines.
- The institution has taken an initiative to enrich the library with e-resources like e-books, e-journals, e-articles related to subject and curriculum of the college which provides support to the teachers and the students.
- The college library has been enriched with some valuable research thesis, manuscripts of unpublished books/drama/letters.
- The college library has collections of 866 rare books and 18 manuscripts in a digital archive which is accessible by the faculty, students and alumni.

Some of the rarebooks include:

- 1. The Holy Lake of the Acts of Rama; An English Translation of Tulsi Das's Ramacharithamanasa
- 2. History of the Pallavas of Kanchi
- 3. The Satakas or Wise Sayings of Bhartrihari
- 4. A Forgotten Empire (Vijayanagar): A contribution to the history of India
- 5. Literary History of Sanskrit Buddhism
- 6. Life in ancient India in the age of the mantras
- 7. The REKHAGANITA or Geometry in Sanskrit Composed
- 8. The Dasaratha-Jataka Being the Buddhist story of King Rama.
- 9. The Sultanate of Delhi (711- 1526 A.D.)
- 10. An Idealist View of Life

Some of the manuscripts include:

- 1. A Monk is Greeted at the Gate of the Coronation
- 2. Three Folios from a Book of Iconography
- 3. Sangrahanisutra
- 4. Poster After Sunder Murder
- 5. Hidden for 164 years, Mewar Ramayana paintings dazzle London

File Description	Document
Any additional information	View Document

4.2.3 Does the institution have the following:

- 1.e-journals
- 2.e-ShodhSindhu
- 3. Shodhganga Membership
- 4.e-books
- 5. Databases
- A. Any 4 of the above
- B. Any 3 of the above
- C. Any 2 of the above
- D. Any 1 of the above

Response: B. Any 3 of the above

File Description	Document
Details of subscriptions like e-journals,e- ShodhSindhu,Shodhganga Membership etc.	View Document
Any additional information	View Document

4.2.4 Average annual expenditure for purchase of books and journals during the last five years (INR in Lakhs)

Response: 6.88

4.2.4.1 Annual expenditure for purchase of books and journals year wise during the last five years (INR in Lakhs)

2016-17	2015-16	2014-15	2013-14	2012-13
8.3	7.5	6.4	5.7	6.5

File Description	Document
Details of annual expenditure for purchase of books and journals during the last five years	View Document

4.2.5 Availability of remote access to e-resources of the library Response: Yes File Description Document Details of remote access to e-resources of the library View Document

4.2.6 Percentage per day usage of library by teachers and students

Response: 9.45

4.2.6.1 Average number of teachers and students using library per day over last one year

Response: 213

File Description	Document
Details of library usage by teachers and students	View Document

4.3 IT Infrastructure

4.3.1 Institution frequently updates its IT facilities including Wi-Fi

Response:

Aurora's Technological and Research Institute has a well-defined process for updating its IT facilities including Wi-Fi.

Process for Frequent Upgradation of IT Facilities

- 1.To maintain the IT infrastructure in the institution and upgrade the facilities, year-end audits are conducted by the department of Computer Science and Engineering with support from the System Administrators.
- 2. Based on the audit report, the equipment under repairs or which has become obsolete is identified and is submitted to the Head of the department.
- 3. The Head of the department of CSE along with other senior faculty members form a committee to deliberate and decide the equipment to be replaced and also suggest the latest configuration of equipment to be procured based on the recommendations of the affiliating university for conducting lab experiments, current developments in the IT industry.
- 4. A report is submitted by the department committee to the Principal which is then finalised in the College Academic Committee meeting in the presence of all the Heads of the Departments and senior faculty members.
- 5. The final recommendation of the Principal is submitted to the management for approval and sanction of funds from the budget allocated.
- 6. This process is followed at the end of each academic year and IT infrastructure is updated based on the suggestions before the beginning of the next academic year with causing any disturbance to the teaching learning activity on campus.

Recent Upgrades of IT Facilities including Wi-Fi

The institution has upgraded the following IT facilities in the past five years:

- Campus internet facility was updated from wired to wired and wireless in 2013-14
- 60 desktop PCs were procured in 2014-15
- 5 LCD projectors were procured in 2014-15
- Entire campus was made Wi-Fi enabled with 100 mbps internet speeds setup by Reliance Jio in the academic year 2015-16
- 10 LCD projectors were procured in 2015-16
- A colour printer was procured in 2015-16
- A wireless presenter was procured in 2015-16
- 25 LCD projectors were procured in 2016-17
- An interactive whiteboard is procured in 2016-17
- 20 inkjet printers were procured in 2016-17
- Credit/debit card reader for digital payments was procured in 2016-17
- 240 desktop PCs with latest configuration were procured in 2016-17
- Cloud based storage system is established in the academic year 2017-18
- UPS facilities are maintained and batteries replaced every year
- Switches and routers are replaced or upgraded every year
- Microsoft Campus Agreement is reached every year which provides all the licensed Microsoft

products with latest upgrades

• Licensed and open source application and system software is upgraded as and when latest versions are released

4.3.2 Student - Computer ratio

Response: 3.09

File Description	Document
Student - Computer ratio	View Document

4.3.3 Available bandwidth of internet connection in the Institution (Lease line) <5 MBPS

5-20 MBPS

20-35 MBPS

35-50 MBPS

Response: >=50 MBPS

File Description	Document
Details of available bandwidth of internet	View Document
connection in the Institution	

4.3.4 Facilities for e-content development such as Media Centre, Recording facility, Lecture Capturing System (LCS)

Response: No

File Description	Document
Facilities for e-content development such as Media Centre, Recording facility,LCS	View Document

4.4 Maintenance of Campus Infrastructure

4.4.1 Average Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component, as a percentage during the last five years

Response: 100

4.4.1.1 Expenditure incurred on maintenance of physical facilities and academic support facilities

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

2016-17	2015-16	2014-15	2013-14	2012-13
640.5	740.8	791.4	455	298.2

File Description	Document
Details about assigned budget and expenditure on physical facilities and academic facilities	View Document

4.4.2 There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc.

Response:

Maintenance personnel for the upkeep of infrastructural facilities are recruited. They are allocated different jobs under the following categories:

Buildings and Infrastructure:

- Maintenance of buildings and related services are undertaken by the Maintenance Department.
- Monitoring of the facilities is carriedout regularly by the administrative officer.
- Maintenance Department also looks into the restoration of RO plants including testing of water quality, fixing of LCDs and replacing green and whiteboards when required.
- Broken glass panes of windows in classrooms are replaced periodically.
- Regular Cleaning and mopping work is done by floor attenders. Registers are maintained to record the work.

Electrical Facilities:

- Electricians are available round the clock to address power breakdown.
- Maintenance Department monitors the services of electricians.
- They perform regular checks in classrooms and campus to ensure that all electrical fittings are working in excellent condition.
- Voltage power supply, functioning of generators, multi metres of the campus are called for repairing within warranty or after warranty as per the norms
- Supply of electricity during power breakdown through generators is provided.

Laboratories:

- Regular checks of equipment are carried out in all the laboratories.
- As per the requirement, minor repairs are carried out by lab assistant/s.
- Major maintenance works are outsourced as per procedures of the institution.
- Necessary accessories and glassware are replaced regularly.
- Calibration and other precision measures of the equipment/instrument is conducted annually by

Matrix Calibration Laboratory Equipment and services.

Computers and allied Infrastructure:

- The Department of Computer Science and Information Technology supervise the AMC including Computers and its allied Infrastructure.
- AMC ensures that the suppliers attend to the problems during the Warranty period, and beyond the warranty period, AMC personnel themselves fix the issues reported.
- AMC also handles need-based installation of computer facilities in the college.
- CSE department controls the Internet and biometric security systems.

Other Facilities:

Maintenance Department monitors other facilities:

- All kinds of plumbing issues.
- Regular cleaning to ensure hygiene in the campus and safe toilets
- Supply of raw water to RO treatment plants. RO water is tested by Aurora's Research Lab, Gangotri.
- Routine pest treatment and control services of the campus by local pest control agencies.
- Gardening and watering of plants including lawn laying.
- Maintenance staff consists of Qualified Electricians, Carpenters, Plumbers and other service personnel.
- Major works like gardening are outsourced to professional agencies like Vijaya Durga Devi Nursery.
- Regular spraying of Mosquito repellents is carried out on the campus, including classrooms, labs, seminar halls, playgrounds, etc. and other fumigation works are carried out in the library
- Security is outsourced to professional agency-Sentinel Security Services.
- Institution is well barricaded with boundary wall and security guards placed at all critical locations to guard the campus.
- Professional agencies are by and large outsourced to ensure safety to staff and students.
- Fire extinguisher is outsourced since refilling of the cylinder is done once in a year

Criterion 5 - Student Support and Progression

5.1 Student Support

5.1.1 Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years

Response: 58.42

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

2016-17	2015-16	2014-15	2013-14	2012-13
1281	1322	1511	1599	1418

File Description	Document
Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years	View Document
Upload self attested letter with the list of students sanctioned scholarships	View Document

5.1.2 Average percentage of students benefited by scholarships, freeships, etc. provided by the institution besides government schemes during the last five years

Response: 1.56

5.1.2.1 Total number of students benefited by scholarships, freeships, etc provided by the institution besides government schemes year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
40	50	57	37	9

File Description	Document
Number of students benefited by scholarships and freeships besides government schemes in last 5 years	View Document
Any additional information	<u>View Document</u>

5.1.3 Number of capability enhancement and development schemes -

- 1. For competitive examinations
- 2. Career counselling
- 3. Soft skill development
- 4. Remedial coaching
- 5. Language lab
- **6.Bridge courses**
- 7. Yoga and meditation
- 8. Personal Counselling
- A. 7 or more of the above
- B. Any 6 of the above
- C. Any 5 of the above
- D. Any 4 of the above

Response: A. 7 or more of the above

File Description	Document
Details of capability enhancement and development schemes	View Document
Link to Institutional website	View Document

5.1.4 Average percentage of student benefited by guidance for competitive examinations and career counselling offered by the institution during the last five years

Response: 34.62

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

2016-17	2015-16	2014-15	2013-14	2012-13
1013	895	992	724	602

File Description	Document
Number of students benefited by guidance for competitive examinations and career counselling during the last five years	View Document

5.1.5 Average percentage of students benefited by Vocational Education and Training (VET) during the last five years

Response: 19.17

5.1.5.1 Number of students attending VET year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
679	668	447	312	207

File Description	Document
Details of the students benifitted by VET	<u>View Document</u>

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

Response: Yes

File Description	Document
Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee	View Document
Details of student grievances including sexual harassment and ragging cases	View Document

5.2 Student Progression

5.2.1 Average percentage of placement of outgoing students during the last five years

Response: 33.45

5.2.1.1 Number of outgoing students placed year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
111	168	165	202	126

File Description	Document
Details of student placement during the last five years	View Document
Self attested list of students placed	View Document

5.2.2 Percentage of student progression to higher education (previous graduating batch)

Response: 9.41

5.2.2.1 Number of outgoing students progressing to higher education

Response: 38

File Description	Document
Upload supporting data for student/alumni	<u>View Document</u>
Details of student progression to higher education	View Document

5.2.3 Average percentage of students qualifying in state/national/international level examinations during the last five years (eg: NET/SLET/GATE/ GMAT/CAT, GRE/ TOFEL/ Civil Services/State government examinations)

Response: 24.56

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

2016-17	2015-16	2014-15	2013-14	2012-13
21	19	17	16	16

5.2.3.2 Number of students who have appeared for the exams year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
80	78	75	70	60

File Description	Document
Number of students qualifying in state/ national/ international level examinations during the last five years	View Document
Upload supporting data for the same	View Document

5.3 Student Participation and Activities

5.3.1 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) during the last five years.

Response: 72

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

2016-17	2015-16	2014-15	2013-14	2012-13
32	9	8	20	3

File Description	Document
Number of awards/medals for outstanding performance in sports/cultural activities at national/international level during the last five years	View Document
e-copies of award letters and certificates	View Document

5.3.2 Presence of an active Student Council & representation of students on academic & administrative bodies/committees of the institution

Response:

Students' Council (Students' Activity Committee)

- The institution has an active Students' Council, which is reconstituted every year.
- The Student Council comprises of a nominated senior faculty member as the faculty coordinator, the Student President, the Student Secretary and the Student office bearers.
- Students from II and IV years are selected by a team of senior faculty members based on good academic, non-academic, communication competencies coupled with good conduct.
- The main purpose of constituting Students' council is to create a perfect link between the students and the management, the students and the faculty, the students and the community and among the students themselves.

• The students' council acts as a liason between the management and the students facilitating the smooth functioning of the institution and to the satisfaction of the student community

The students' council activities include:

- 1. Dissemination of information regarding competitions, meetings, festivals, etcto the students.
- 2. Organising technical fests, Sports events, cultural activities, festivals by coordinating with various clubs of the college.
- 3. Celebrating the days of National and International Importance in coordination with all the departments and clubs.
- 4. Playing the morning prayer and National anthem at the end of the day, announce information and current news by coordinating with the ATRI FM. This instills the human values, patriotism and enables to update latest information.

The students' council organizes Self-governance day on Teacher's Day every year. On this day senior students teach the junior students dressed-up as teachers. Students assume the roles of the Principal, Heads of the departments, faculty members and function individually according to their designation. This practice inculcates the leadership qualities, work commitment and team work.

Representation of students in Academic and Administrative Committees

- The students play a vital role in almost all the academic and administrative bodies of the institution.
- These bodies create more avenues for students to develop technical skill, updating knowledge on the state of the art subjects, personality development and service to society through various Bodies/Committees/Cells.
- There are staff coordinators to guide students in the smooth and efficient conduct of these activities.
- The following is the list of committees on which students are members:
 - 1.NSS Cell
 - 2. Grievance Redressal Cell
 - 3. Public Relations Committee
 - 4. Publications Committee
 - 5. Women Empowerment Cell
 - 6. Photography Club
 - 7. Internal Complaints Committee
 - 8. Student Discipline Committee
 - 9. Library Committee
 - 10. Anti-Ragging Committee
 - 11. Cultural Club
 - 12. Website Committee
 - 13. Nature Club
 - 14. Entreprenuership Development Cell
 - 15. Placements Cell
 - 16. Canteen Committee

File Description	I	Document	
Link for Additional Information	Vie	iew Document	

5.3.3 Average number of sports and cultural activities/ competitions organised at the institution level per year

Response: 78.6

5.3.3.1 Number of sports and cultural activities / competitions organised at the institution level year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
109	89	84	71	40

File Description	Document
Report of the event	View Document
Number of sports and cultural activities / competitions organised per year	View Document

5.4 Alumni Engagement

5.4.1 The Alumni Association/Chapters (registered and functional) contributes significantly to the development of the institution through financial and non financial means during the last five years

Response:

- The college has a registered alumni association and Alumni meet is conducted every year.
- The college has a healthy and mutually beneficial relationship with its alumni.
- The college organizes alumni meet from time to time to have a continued bonding with alumni and to get their support in student progression.
- Alumni from various parts of the world enthusiastically participate in the meet
- The alumni participate and contribute to the development of the institute in the following ways:
 - Internal Quality Assurance Cell (IQAC) has alumni of the college as members. These members contribute to the improvement of teaching-learning processes.
 - Alumni members have active participation in syllabus framing as BOS members and Academic Council Members.
 - Alumni members are invited to deliver guest lectures and also as the resource persons for workshops and seminars on recent trends in technology. They also share their professional experience and motivate the students.
 - Alumni members actively participate as judges in various technical and non-technical competitions organized at the institute.
 - o Alumni also provide the sponsorship for the National Technical Fest conducted by the

- college every year.
- Alumni feedback is taken periodically to understand the curricular gaps and recent market trends.
- The alumni survey is taken once in a year during alumni meet. The survey includes their knowledge, skill level, team spirit, employer appreciations, honors and awards received, current job position, skill updating, experience gained, career track, promotions obtained, future scopes, current trends in industries and valuable suggestion for their juniors.
- They also intimate the current scenario for placements, expectations from industry and potential job opportunities in the new emerging areas.
- The college Alumni Association has contributed both financially and non-financially. Some of the contributions include:
 - Donation of Sports Uniforms
 - Donation of Water Coolers
 - Donation of Clocks
 - Donation of books to the library
 - Mass Tree plantation
 - Donations for instituting scholarships/awards
 - Coordinate in organizing State/National level events

5.4.2 Alumni contribution during the last five years

<1 Lakh

1 Lakh - 3 Lakhs

3 Lakhs - 4 Lakhs

4 Lakhs - 5 Lakhs

Response: ? 5 Lakhs

File Description	Document
Alumni association audited statements	<u>View Document</u>

5.4.3 Number of Alumni Association / Chapters meetings held during the last five years

Response: 5

5.4.3.1 Number of Alumni Association /Chapters meetings held year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
1	1	1	1	1

File Description	Document
Number of Alumni Association / Chapters meetings conducted during the last five years.	View Document
Any additional information	<u>View Document</u>
Report of the event	View Document

Criterion 6 - Governance, Leadership and Management

6.1 Institutional Vision and Leadership

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

Response:

Vision

ATRI seeks to be a center of higher learning that can provide the best learning experience, the most productive learning community, and the most creative learning environment in engineering education and to be recognized as one of the best engineering colleges in India.

Mission

- To provide excellent education in Engineering and Technology.
- To create environment for quality research and dissemination of knowledge.
- To develop entrepreneurship and managerial abilities through world-class engineering and management education.

Quality Policy

To strive for providing uncompromised and complete education preparing every student for the future.

Aurora Educational Society was founded by Dr. Ramesh B Nimmatoori and Shri N Raja Babu in the year 1989 and has more than 25 years of service in educational sector. ATRI aims to provide a safe and intellectually challenging environment that will empower students to become innovative thinkers, creative problem solvers and inspired learners

Nature of Governance

- The college has an effective Governing Council consisting of senior academicians, industry professionals and research consultants, along with management members, Principal, Dean and Heads of the Departments.
- The governing council meeting is convened twice a year and all aspects of academic and non-academic matters are discussed and decisions are taken to benefit all the stakeholders of the system.
- The Management strictly adheres to the recommendations of its Governing Council.
- The Principal and Heads of the Departments also participate in the deliberations of the Governing Council meetings.
- The decisions taken during the Governing Council meeting are properly documented, recorded and circulated to all concerned members and effectively implemented.
- There is an effective monitoring system in order to ensure a transparent, robust, objective and scalable process.
- Major Plans for Aurora's Technological and Research Institute in the near future as envisaged in Governing Council meeting are:

- 1.To obtain renewal of NBA accreditation for all eligible Undergraduate and Postgraduate Programmes in the current academic year
- 2. To obtain NAAC accreditation by 2018
- 3.To introduce more value-added courses according to the latest trends in the industrial sector immediately
- 4. To apply for funding to various agencies for research projects
- 5. To provide foreign language coaching to final year students by experts from the next academic year
- 6. To encourage the faculty members to acquire higher qualifications and to provide all the required facilities
- 7. To establish Centres of Excellence in all engineering departments
- 8. To collaborate with industries for consultancy projects

Participation of Teachers in decision making bodies

- All the Heads of the Departments conduct faculty meetings every fortnight.
- The minutes of the meetings are communicated to the Principal who in turn consolidates all the suggestions and submits them to the Management for approval.
- The faculty members are involved in various functional committees and contribute to the decision-making process at all levels.
- The Management supports all the suggestions given for improvement and hence creates a healthy work culture and ambience.

File Description	Document
Link for Additional Information	View Document

6.1.2 The institution practices decentralization and participative management

Response:

Participative Management as evinced from the Ganesh Bucket Immersion Programme

ATRI has celebrated Sri Ganesh Chaturhi with two important missions.

- The first mission was to bring awareness on "environmental pollution" and the second mission was to "save lakes from pollution".
- To accomplish the former mission the college has distributed 1200 clay Ganesha idols among the faculty, staff, students, Parents and local community. The Department of Civil Engineering erected a clay Ganesh. For five days the Ganesh was worshipped in the college premises from 25th August to 30th August 2017. Each of the departments in turn offered prayers.

• And for the later the college has taken up" The Massive Bucket Campaign" and attempted a record in "India Book of records" by the holy immersion of 1200 Ganeshas. The college has not only succeeded in its mission but also secured place in World Book of record.

Participative management in organizing the programme at all levels:

- The Nature club, Student Activity Council, NSS of ATRI jointly organized a massive bucket immersion Programme in collaboration with Lee Shreyus foundation and Lions Club as a part of 'save our lakes' programme on 21st August 2017.
- The administrative officer along with the office staff members provided the stage arrangements and hospitality measures.
- The faculty members of various committees actively participated and mentored the students in organizing the programme.
- Students of Suswara Club presented the invocation and Nrithya Club members performed vibrant dances.
- Students of Fine Arts club showcased their talents by presenting theme oriented Rangolis and decorations.
- The members of the Literary club anchored the programme with the guidance of the faculty coordinator.
- The students discipline and anti-ragging committees were vigilant to ensure the smooth conduct of the programme.
- The exam cell coordinator along with the members prepared the certificates of participation.
- Media partners 92.7Big FM, TV9 and HANS India rendered great support by enormous publicity.
- Mr. Uma Shankar, IG awardee and Mr. Krish, RJ addressed the gathering and motivated the students to become "Green Warriors" and spread the message among their friends and community.
- The programme was graced by Ms. Vasudha Ashok, Adjudicator, India Book of Records, popular TV anchor Ms. Jhansi, General Manager of HMTVMr.Bommareddy Sai Prasad Reddy, Dr. Bonthu Ram Mohan, Mayor, Hyderabad and Mr. Baba Fasiuddin, Deputy Mayor and Deputy Commissioner of GHMC

6.2 Strategy Development and Deployment

6.2.1 Perspective/Strategic plan and Deployment documents are available in the institution

Response:

Strategic Plan

The institution has a unique culture of aiming high and accomplishing the same through its continuous pursuit for excellence. The Strategic plans and perspective plans are developed in consultation with various stakeholders of the institution, experts from industry and academics, Principal, Heads of the departments keeping in view the long term perspectives of the institution. These plans are reviewed from time to time to check the practicality and achievements.

The following are the important components of the strategic plan:

- 1. To be recognized as an institution of excellence in academics
- 2. To undertake research and consultancy
- 3. To contribute significantly towards students progression
- 4. To collaborate and partner with industries
- 5. To create unique outreach in the national and international platforms
- 6. To serve the society through extension and community services
- 7. To nurture global citizens with human values

Perspective Plan

Based on the strategic plans, the institution has a perspective plan of development. This plan is made as per the requirements of the learners and with a view to cater to the needs of the institution and the society at large. Eight Major areas are covered in the plan as mentioned below

- 1. Academics
- 2. Students progression
- 3. Administration
- 4. Research
- 5. Infrastructure
- 6. Industry interface
- 7. Institutional Excellence
- 8. Social Responsibility

Deployment Documents

The plans articulated by the management and principals are communicated to the target groups like faculty, students, staff and other stakeholders through meetings, mails and other forms.

The Principal's Handbook serves as guideline at the institutional level to undertake these activities. The organizational procedure manual guides all the above mentioned activities through well defined policies and procedures for each of the activities.

CASE STUDY

Industry Institute Interaction Cell

In order to bridge the gap between the industry and the academic institution, an Industry-Institute Interaction cell was established.

Strategic plan/objectives

- To promote various industrial activities for the faculty members and students like field trips, industrial visits and internships.
- To have a closer linkage and promote research suited to industry needs, and consultancy which creates a sense of ownership among faculty members.
- To enable academics to take a sabbatical in industries; provide internships for students in industries

- and provide industry preparedness.
- To bring about MOU'S and Agreements with various industrial and research organizations in different fields and sectors to promote various forms of interactions.

Activities under Industry-Institute Interaction Cell:

- 1. Industrial Research & Consultancy
- 2. Research guidance from industry
- 3. Short-Term Training Programmes
- 4. Onsite Educational Programmes
- 5. Collaborative Educational Programmes
- 6. Industry-Institute Human Resources Exchange
- 7. Faculty and student exchange for knowledge sharing.
- 8. Training programmes / Short term assignments to the faculty members in industries
- 9. Participation of industrial experts in curriculum design
- 10. Student internships and industrial visits

File Description	Document
Any additional information	View Document
Strategic Plan and deployment documents on the website	View Document
Link for Additional Information	View Document

6.2.2 Organizational structure of the institution including governing body, administrative setup, and functions of various bodies, service rules, procedures, recruitment, promotional policies as well as grievance redressal mechanism

Response:

The Organisational Structure of the College has the Chairman and Secretary of Aurora Consortium at the topas guiding lights. While the Chairman of Aurora Consortium is responsible for all administrative decisions, the Secretary supervises all the personnel, making procedural or developmental recommendations.

The Governing Council functions as a broad governing setup guiding the College and includes, apart from Chairman, Secretary, and Principal, a body of academicians, and industrialists along with representatives from AICTE and JNTUH.

The Academic Council plays an active role in guiding critical academic activities of the College. Eminent academicians and senior faculty members of the College are included in this Council, along with Chairman, Secretary, and Principal.

The Principal, Dean, HoDs look after the academics, administration and research activities of the college

and is responsible for achieving the goals and targets set for the college.

An Administrative Officer assists the Principal in the day-to-day administration of the college, and looks after purchases, budgeting, personnel affairs, PR, and admissions.

The College Academic committee consists of Principal, Deans, HoDs, and Senior Professors and is responsible for setting, defining, and reviewing targets. Issues like accreditation & evaluation also come within the purview of this committee.

Recruitment Process

ATRI has a recruitment process that helps draw and retain highly qualified and experienced faculty and staff from all parts of India. The recruitment process starts with collecting and review data from all departments regarding staff and faculty requirement, keeping in mind AICTE teacher-student ratio norms. The HR Department at Aurora Consortium issues advertisements in local and national newspapers and job websites. Interested candidates can apply online or submit hard copies of their CV and relevant documents. The interview date is conveyed to the shortlisted candidates well in advance. Interview panels are constituted with subject experts from universities in Hyderabad or outside, JNTUH, and senior professors of the institute. Depth and range of subject knowledge, confidence, ability to impart knowledge and verbal expression, are the parameters considered for selection. The selected candidates attend a final personal interview by the Chairman, who finalises their recruitment and fixes their salary package. Some candidates are asked to give a demo at the institute and senior faculty evaluate them.

Once recruited, faculty members may be given promotions/increments based on enhancement of qualification, student feedback, other contributions to the college, publications, R&D activities, conferences and workshops attended, API score, etc.

Grievances Redressed

The Grievances Redressal Cell of the College is constituted as per the norms of JNTUH/AICTE to look into the grievances of teaching and non-teaching staff and students. This easily accessible committee has the Asst. Registrar, Exam Cell Incharge, and a senior professor as members along with two HoDs with the Principal as the final authority. Academic and discipline-related grievances and personal problems are also addressed promptly. In case of staff, specific grievances regarding service conditions, salary, etc., are referred to the HR Cell or it may be submitted to the management if necessary.

File Description	Document
Link for Additional Information	<u>View Document</u>

6.2.3 Implementation of e-governance in areas of operation: 1.Planning and Development 2. Administration 3. Finance and Accounts 4. Student Admission and Support 5.Examination A. All 5 of the above

B. Any 4 of the above

C. Any 3 of the above

D. Any 2 of the above

Response: A. All 5 of the above

File Description	Document
Details of implementation of e-governance in areas of operation Planning and Development, Administration etc	View Document
Screen shots of user interfaces	View Document

6.2.4 Effectiveness of various bodies/cells/committees is evident through minutes of meetings and implementation of their resolutions

Response:

To ensure smooth functioning of the academic ,co-curricular and extra-curricular activities of the institute, ATRI has various committees and cells that have well defined guidelines and are monitored regulary for effective functioning. The functions of the cells and committees include creating awareness among the students and faculty, organizing and conducting various programmes, hold meetings at regular intervals and submitting reports at the end of every month to the HoDs and the Principal for necessary suggestions and follow up.

CASE: NSS Activities

Purpose

The NSS committee was constituted to plan and organize various programmes that could sensitize faculty and students towards societal issues pertaining to health, environment and issues of the destitute and under privileged.

Meeting

The NSS committee convened a meeting at the beginning of the academic year 2017 with an agenda to plan and initiate activities for the academic year. The following were the initiatives planned and implemented subsequently.

- To reach an MoU with Literacy Helping Hands
- The institute has planned to establish an MOU with an Organization named Literacy Helping Hands .Literacy Helping Hands is committed to a single goal; to strive to make the world a better place and dedicated to finding volunteers to help those in need overcome challenges, while developing meaningful relationships with them and helping them for education in any financial situation.

• To sign MoU with ITC – Wellbeing out of Waste (WOW)

• ATRI has planned to sign an MoU with ITC-WOW (well being out of waste) with regard to waste management in the campus for a clean and sustainable environment.

To establish MoU for Village Adoption of Qutbullahpur by NSS ,ATRI

• The NSS Unit of Aurora's Technological and Research Institute is planning to adopt Quthubullapur village and work towards improving the living conditions of the villagers by giving new ideas for development by sensitizing community about programmes of mass tree plantation, sanitation drives, significance of the girl child education, women empowerment, female foeticide, health awareness, evils of drinking cheap liquor, anti-smoking and adult education programmes for the weaker sections of the community, helping inmates of orphanages and the physically handicapped.

• To conduct Haritha Haram Programme

• ATRI NSS Unit & ARITRI Club is planning to conduct the plantation program **Haritha H?ram**. It is a flagship programme of the Telangana Government which envisages to increase the present 24% tree cover in the State to 33% of the total geographical area of the State. To support and take forward this initiative ,around 400 saplings would be planted in the college premises.

• To organize a Village Camp

• In order to fulfill the aim of 'service to community', the NSS unit of our college a village named Ankireddygudem of Choutuppal (mandal) ,Yadadri district. The camp will be conducted for seven days and programmes like Swach Bharath, Shramdaan, Digital literacy Awareness and Medical camps will be taken up for the benefit of the people.

File Description	Document
Link for Additional Information	<u>View Document</u>

6.3 Faculty Empowerment Strategies

6.3.1 The institution has effective welfare measures for teaching and non-teaching staff

Response:

The following are few of the welfare schemes available for the teaching and non-teaching staff

- Free transport to non-teaching staff and at subsidized rate for teaching faculty members
- Paid maternity leave for women faculty
- PF scheme for employees drawing salary less than Rs. 15,000/- P.M.
- PF facility for senior faculty for who it is not mandatory.
- Sponsorship for participating in seminars/conferences and workshops
- Sponsorship for journal publications
- ESI coverage to all employees with monthly salary less than Rs. 20,000/- Group Insurance
- Relocation allowance to those who join the institute from other states/ faraway places.
- Sponsorship for Professional body membership

- Motivation for higher studies and online courses
- Retention allowance to senior faculty members
- Free Cell-phone facility for all employees
- Children education allowance to faculty and non-teaching staff

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

Response: 10.56

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

2016-17	2015-16	2014-15	2013-14	2012-13
71	28	16	14	10

File Description	Document
Details of teachers provided with financial support to attend conferences, workshops etc. during the last five years	View Document
Any additional information	View Document

6.3.3 Average number of professional development /administrative training programs organized by the institution for teaching and non teaching staff during the last five years

Response: 15.8

6.3.3.1 Total number of professional development / administrative training programs organized by the Institution for teaching and non teaching staff year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
22	23	13	10	11

File Description	Document
Details of professional development / administrative training programs organized by the Institution for teaching and non teaching staff	View Document
Any additional information	View Document

6.3.4 Average percentage of teachers attending professional development programmes viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programme during the last five years

Response: 88.3

6.3.4.1 Total number of teachers attending professional development programs, viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Programs year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
225	291	212	215	178

File Description	Document
Any additional information	View Document
IQAC report summary	View Document
Details of teachers attending professional development programs during the last five years	View Document

6.3.5 Institution has Performance Appraisal System for teaching and non-teaching staff

Response:

- The institution / management evaluates teachers based on teaching, research and participation in development activities and due importance is given to all the activities.
- A structured staff evaluation form is made use of by each faculty member for this purpose wherein the faculty gives the details of his/her performance and participation in all the activities assigned department /college.
- The self appraisal submitted by the faculty is analyzed for the fulfillment of four criteria Evaluation of Teaching, Research & Development, Administrative work and Extension activities
- The HoD concerned and Principal give their remarks on the performance of the faculty member.
- Based on this performance appraisal and the feedback obtained from students and peers, the teachers are given promotion, increments and other facilities.
- Faculty are motivated by rewarding with merit certificates, awards and prizes

The Staff Appraisal method has motivated the faculty to

- Pursue higher studies
- Publish research papers in reputed journals and books
- Participate and present papers in International and National Seminars and Conferences.
- Submit well prepared research proposals to the funding agencies
- Participate actively in all the development programmes.

- Introduce innovations in teaching methodologies.
- Organize various activities through technical/co-curricular /extra-curricular clubs and community services.

Outcomes of Appraisals

- As part of faculty improvement, performance reviews after appraisal procedures are done by Management and Director and appropriate measures are taken to upgrade and bring in positive changes in the institute.
- Assessments are made with respect to outcome of goals set by faculty members in terms of teaching ,research and contribution to institution.
- Faculty are intimated about outcome of appraisals that identify the strength of faculty, areas requiring improvement and quality of teaching.
- Faculty who have obtained feedback below the desired points are counseled by the HOD and Principal.
- Constructive feedback is given, and if required the faculty concerned gives a demo so that areas needing improvement are identified.
- Performance reviews which are done every semester in an objective way, offers scope for grading and rewarding faculty.
- Teaching Excellence Awards and Outstanding Contribution are given based on the above mentioned parameters.
- The appraisal system helps in improving Teaching-Learning process, earmarking areas for improvement and identifying leadership qualities for future responsibilities and training needs for development of faculty and institute.

6.4 Financial Management and Resource Mobilization

6.4.1 Institution conducts internal and external financial audits regularly

Response:

Income and expenditure of the Institute are audited every month by the College Finance Committee for internal audit. The institute follows the procedure laid down by AICTE and the TSCHE. The committee monitors the purchase and expenses incurred from funds generated through fees and other grants. The budget takes into consideration the following.

- 1. Maintenance and Construction of buildings, Campus development
- 2. The salary for teaching, non-teaching and contingency staff
- 3. Research and Development activities
- 4. Sponsoring faculty members for seminars, workshops, and conferences.
- 5. Purchase of books and subscription of journals in the library.
- 6. Payment of internet, electricity and telephone bills.
- 7. Purchase of equipment and software
- 8. Conducting various college functions such as College Day (Avyaya), Tech Fest (Borealis), Induction Day (Abhijna), Placement Day (Abhidheya), Sports Dayetc,.
- 9. Graduation Day (Snataka) expenses.

Every academic year, it is mandatory that all branches of Engineering prepare for recurring and nonrecurring expenditure statements. The college in-house Finance committee examines the budget proposal, expenditure statements, monitoring and equipment purchases. The committee reviews the utilization of funds allocated to the Depts. against the proposed budgets for the financial year.

The expenditure statements are audited by the Accounts department before it is submitted to the Principal. Tally ERP software is used for the accounts related functions in order to achieve paperless office and for reliability. The in-house Finance Committee ensures that the payments are paid and duly authorized and presents the audit report. A statutory audit is conducted at the close financial year. The audit report is sent to the Management for review.

In-house Finance committee in consultation with the CA audits the income and expenditure within the allocated/ approved budget to ensure that there are no deviations. Necessary changes are incorporated by the in-house Finance Committee on the suggestions/ directions of the auditors for the external audit.

On completion of the external audit by the CA the audit report is presented to the Corporate office. As per the standard accounting guidelines, minor deviations are looked into for rectification during the audit.

- Proper utilization of financial resources is planned at the beginning of every financial year.
- Accounts department takes care of the collection of tuition fees, salary distribution, tax payment and loan distribution, purchase orders for the laboratory equipment, teaching aids, furniture, facilities, and payment of maintenance bills.
- The annual audit is done by the statutory auditor.
- The audit of accounts and submission of income tax returns are being carried out regularly each year.
- There are no audit objections since the institution follows a good system of internal controls like calling quotations, comparison of rates, preparation of purchase order etc.
- Approvals are obtained at every stage of such implementation and due verification of goods and services after delivery.

6.4.2 Funds / Grants received from non-government bodies, individuals, Philanthropists during the last five years (not covered in Criterion III)

Response: 8

6.4.2.1 Total Grants received from non-government bodies, individuals, philanthropists year wise during the last five years (INR in Lakhs)

2016-17	2015-16	2014-15	2013-14	2012-13
02	02	02	01	01

File Description	Document
Details of Funds / Grants received from non- government bodies during the last five years	View Document

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

Response:

The mechanisms used to monitor effective and efficient use of financial resources are as below:

Mobilisation of Funds

- Student Tuition fee is the major source of income for the institute.
- The management also provides need based loans to individual colleges.
- Various government and non-government agencies sponsor events like seminars and workshops.
- Alumni contribute to the institute by raising funds to purchase items like water coolers, wall clocks etc.
- Sponsorships are sought from individuals and corporate afor cultural events and fest.

Utilisation of Funds

- A finance committee is constituted to monitor optimum utilization of funds for various recurring and non-recurring expenses
- The purchase committee seeks quotations from vendors for purchase of equipment, computers, books etc.
- The quotations are scrutinized by the finance and purchase committee before a final decision is made based on parameters like pricing, quality and terms of sevice etc.
- The Principal, finance and purchase committees along with the accounts department ensure that the expenditure lies within the allotted budget. The intervention of the management is sought in case the expenditure exceeds the budget.

Resource Mobilisation Policy and Procedure

- Before the financial year begins, Principal and Heads of Departments prepare college budget.
- Institutional budget includes recurring expenses such as salary, electricity and internet charges, equipment and facilities maintenance cost, stationery and other consumable etc.
- It includes planned expenses such as lab equipment purchases, furniture and other development expenses.
- Budget is scrutinized and approved by the top management and Governing Council.
- Accounts department and Purchase department monitor whether expenses are exceeding budget provision.
- Statutory auditors are also appointed who certify the financial statements in every financial year.
- The grants received by the college are also audited by certified auditors.

Optimal utilization of resources

- Optimal deployment of infrastructure is ensured through conducting workshops/ awareness programs/training programs for faculty and students on the use of new technology.
- Effective utilization of infrastructure is ensured through appointment of adequate and well qualified lab technicians/system administrator.
- The optimal utilization is ensured through encouraging innovative teaching learning practices.
- The available physical infrastructure is optimally utilized beyond regular college hours, to conduct remedial classes, co-curricular activities/extra-curricular activities, parent teacher meetings, Campus Recruitment Training.
- The college infrastructure is utilised as an examination centre for Government examinations/University Examinations.
- Library functions beyond the college hours for the benefit of students, faculty and alumni.
- The college premises are used to host Borealis National Level Inter Collegiate Technical, Literary and Cultural Fest.
- The water-testing centre at Aurora Research Laboratory serves the community and Industry by analyzing water quality and suggesting improvement solutions.

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

Response:

The institutional policy to implement quality assurance is as follows:

- Develop, maintain and regularly update the QMS as the document of all the processes involved in the academic and administrative activities and the forms to implement the processes.
- All the departments, with the teaching and non-teaching faculty carry out the activities as per the processes and forms.
- Various policies implemented for quality assurance are:
 - Customer satisfaction by collecting feedbacks from students, parents, alumni and industry and actions are taken to ensure that the college satisfies all its stakeholders.
 - Internal Audit Regular internal audits are conducted at planned intervals to checks the effectiveness of the implementation, maintenance and improvement of the QMS.
 - Monitoring and measurement of processes and products Continuous measurement and monitoring of the processes are done to identify appropriate corrective action to ensure conformity of service.
 - Control of non-conformity to prevent and be prepared for deviations and the actions to be taken
 - Data analysis and continuous improvement
 - External Audit

Best practices institutionalized as a result of IQAC initiatives

1. Learning Management System EDMODO

- Edmodo is for Teachers, Students and also for Parents
- With intuitive features and unlimited storage it is easy to create groups, assign homework, schedule quizzes, manage progress, and more
- With everything on one platform, Edmodo reinforces and enhances what is already done in the classroom.
- Edmodo is designed to give complete control over the digital classroom. Teachers can determine who can join groups, ensure they remain private, and monitor member activity, safety is built right in.
- Gives students new ways to engage, participate, and express themselves. With Edmodo, you can post discussion topics, conduct polls, award badges, and many more.
- EDMODO is available as Web based application as well as Mobile based application.
- A one day workshop was conducted for the faculty and students about the process and application of EDMODO.
- Teachers create a Class of each of the sections they handle and then students are added on.
- Teachers can post assignments, fix a deadline for submission, evaluate it online and post comments along with scores.
- Students and teachers can also create a platform for discussion and sharing of ideas and issues.
- Flexibility in terms time and access facilitates the teaching learning process.

2. Industry Institute Interaction

Students and faculty are provided hands-on experience through exposure to the industry through industry visits, establishment of MoUs, training programmes, internships, inviting professionals for workshops, guest lectures and conferences. This interface facilitates students' abilities to correlate their theoretical knowledge with practical experience, and also helps them face real world challenges.

File Description	Document
Link for Additional Information	View Document

6.5.2 The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms

Response:

Quality assurance of the teaching learning process is done by IQAC. The Internal Quality Assurance Cell (IQAC) helps in framing an action plan for the academic year by interacting with the management, faculty, administrative staff, laboratory staff and the students.

Functions of IQAC

- Fixing the target results to be achieved for the college
- Approval of subject allocation by the departments
- Verification of lecture plans for their feasibility of completion at the prescribed time as per the academic calendar.
- Conduct of class committee meetings and redressal of the issues raised.

- Conduct of course coordinators meeting/Analysis of unit tests / internal assessment tests / model examinations / university examinations.
- Recommendation of remedial measures to HoD and faculty of the departments concerned to improve the overall performance of the students.
- Collecting feedback (online and through class committee meetings) from the students on the teaching effectiveness of the faculty.
- Suggesting / recommending the measures to improve the teaching effectiveness through FDPs, workshops, conferences etc.

Institutional reviews and implementation of teaching learning reforms facilitated by the IQAC

Based on the analysis and review of teaching-learning process in IQAC meetings and recommendation of the governing council, ITL methods and e-learning are incorporated to increase the quality of education. An orientation is given to the students about implementation and evaluation of the methods.

ITL Methods - Promote intellectual stimulation and creative thinking and used in all the subjects across the curriculum.

- Multimedia Power point presentations and educational videos
- Role plays- to improve conversation skills and body language
- Case studies- to promote problem solving and decision making skills by giving real life examples .
- Group discussions- to develop problem solving skills and inculcate team spirit
- Debates and Seminars- conducted on latest topics to develop thinking skills (both pros and cons) and aptitude in general awareness
- Quiz- to recapitulate concepts and enhance knowledge in the subject
- MCQ tests- to prepare students for the mid- term exams
- E-resources- E- books and MIT online courseware and other open sources are used.

ITL methods help in improving the communication skills, knowledge sharing, personality development and employability skills.

E-learning

- Aurora's Technological and Research partnered with NPTEL during June 2017. 320 faculty and students registered for various online courses to upgrade their technical knowledge.
- The videos of 200 courses pertaining to various streams of Engineering, Technology, Science and Humanities are accessible to the faculty and students though college digital library.
- Faculty members utilize the videos to explain the concepts and enhance the teaching-learning process.
- Faculty members have attended NPTEL exams and secured meritorious certificates with Gold Elite, Elite and ranked as toppers.

File Description	Document
Link for Additional Information	View Document

6.5.3 Average number of quality initiatives by IQAC for promoting quality culture per year

Response: 0

6.5.3.1 Number of quality initiatives by IQAC for promoting quality year-wise for the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
0	0	0	0	0

File Description	Document
Number of quality initiatives by IQAC per year for promoting quality culture	View Document
IQAC link	View Document

6.5.4 Quality assurance initiatives of the institution include:

- 1. Regular meeting of Internal Quality Assurance Cell (IQAC); timely submission of Annual Quality Assurance Report (AQAR) to NAAC; Feedback collected, analysed and used for improvements
- 2. Academic Administrative Audit (AAA) and initiation of follow up action
- 3. Participation in NIRF
- 4.ISO Certification
- 5.NBA or any other quality audit
- A. Any 4 of the above
- B. Any 3 of the above
- C. Any 2 of the above
- D. Any 1 of the above

Response: B. Any 3 of the above

File Description	Document
Details of Quality assurance initiatives of the institution	<u>View Document</u>
Annual reports of institution	View Document

6.5.5 Incremental improvements made during the preceding five years (in case of first cycle) Post

accreditation quality initiatives (second and subsequent cycles)

Response:

- 1. The pass percentage of students has increased marginally over the last five years. This has resulted from various measures implemented by the institute. Access to e-learning resources like NPTEL, SWAYAM, interactive teaching learning methods used by the faculty members and promoting collaborative learning have contributed to the enhancement of results. Remedial lectures are taken for weak students to bring them at par with the other students.
- 2. Student placements are considerably good over the last five years and show a sustained increment despite a sluggish recruitment scenario. Though the increase is small, off campus efforts are paying off well. Training & Placement cell at ATRI organises placement training sessions for the students to help them develop an all-round personality. Coaching is given in aptitude, soft skills, core subject areas and numerical ability etc. to improve the employability quotient. Sessions by HR managers, industry experts and alumni are conducted to orient students towards industry, government jobs and higher education. Entrepreneurship efforts are fruitful as some students established start ups.
- 3. As part of the Corporate Social Responsibility, the NSS unit of ATRI has conducted many activities like Blood donation camp, Haritha Haram, Swach Bharath, AIDS Awareness, medical camps, helmet awareness etc. NSS branch has adopted the village Quthbullapur, in Hayathnagar mandal. Socially relevant projects are taken up by the students in the Final year to solve problems in the community. A water testing lab was also established by the R&D Centre.
- 4. Green initiatives are promoted on a large scale on college campus. The conventional light bulbs and tubes are replaced by CFL bulbs and tube lights to reduce the electricity consumption in a phased manner. Canteen waste is converted into compost and is used for gardening. Waste paper generated is sold to vendor for recycling. Roof top Rain water harvesting structures are installed. We are aiming to be plastic free and paper free campus. Green landscaping is maintained throughout the year. To spread the awareness of environmental conservation and promote greenery, institute follows the culture of presenting saplings (instead of bouquets) to guests and esteemed visitors.
- 5. ATRI has signed Memorandum of Understanding (MOUs) with many leading industries as well as research institutes/ Universities of repute like AMBO University, ICT Academy, ORACLE, WoW, AMAZON Web Services, DELL EMC, PALO ALTO to accelerate industry- institute interaction. Centre of excellence for Big data Analytics has been set-up in the college by DELL EMC.
- 6. The subscription of journals recommended by UGC and AICTE are available in our library. Digital Library provides access to open education resources, on-line journals and e-books. Open Source software -D space is installed to manage repository for archiving journals articles, research papers etc. National Digital Library membership is also available to access journals and books.
- 7. ATRI encourages faculty members to take part in Faculty Development Programmes conducted at the institute as well as in other organizations by providing on duty leave and sponsorship of registrations fee.

Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

7.1.1 Number of gender equity promotion programs organized by the institution during the last five years

Response: 14

7.1.1.1 Number of gender equity promotion programs organized by the institution year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
3	3	3	3	2

File Description	Document
Report of the event	View Document
List of gender equity promotion programs organized by the institution	View Document

7.1.2

- 1. Institution shows gender sensitivity in providing facilities such as:
 - 1. Safety and Security
 - 2. Counselling
 - 3. Common Room

Response:

The institution gives utmost importance to gender equity and takes several initiatives in that direction described below:

a) Safety and Security

- 24 hour security is provided on campus through security guards
- Entire campus is surveilled by CC Cameras
- Internal complaints committee for addressing any issues related to gender equity
- All the college buses have female faculty members travelling along with students and monitor discipline and any other related issues
- Primary health centre provides the necessary first aid to the students and staff
- In case of serious health issues the students/staff members are taken to nearby hospitals for treatment using college transport
- Self defence workshops are organised regularly
- Women empowerment cell organised various awareness programmes on gender equity

- Students are made aware about SHE teams who are available 24x7 to act on any crime related to female students
- Students are also made aware about HawkEye, a SOS mobile app for alerting police in case of any serious problem
- Parents are intimated regarding any issue immediately over phone by the mentors
- Information regarding availability of support systems with respect to various gender equity issues is prominently displayed on all the notice boards for easy access to students

b) Counselling

- Women empowerment cell promotes women emancipation through capacity and confidence building programmes
- The cell also assists women in their struggle for economic, social, cultural, political and mental empowerment
- Every ten students in the college are allotted with a faculty mentor who continuously monitors the performance of the students and counsels them regarding academic, career, and personal issues
- Awareness programmes are conducted to all the students regarding various rights of women
- Institution has a primary health centre with a professional counsellor who conducts counselling sessions to all the needy students

c) Common room

- The institution provides separate common room for boys and girls with the following facilities:
 - Cots, beds, and mattresses
 - Chairs
 - Toilets
 - Recreational facilities
 - Newspapers
 - Magazines
 - Notice boards
 - Locker facility
- Faculty/staff in-charges monitor the activities in the common rooms including maintenance of login registers, facilities and other related issues

7.1.3 Alternate Energy initiatives such as:

1. Percentage of annual power requirement of the Institution met by the renewable energy sources

Response: 0

7.1.3.1 Annual power requirement met by the renewable energy sources (in KWH)

7.1.3.2 Total annual power requirement (in KWH)

Response: 145558

File Description	Document
Details of power requirement of the Institution met by renewable energy sources	View Document

7.1.4 Percentage of annual lighting power requirements met through LED bulbs

Response: 10.34

7.1.4.1 Annual lighting power requirement met through LED bulbs (in KWH)

Response: 5400

7.1.4.2 Annual lighting power requirement (in KWH)

Response: 52200

File Description	Document
Details of lighting power requirements met through LED bulbs	View Document

7.1.5 Waste Management steps including:

- Solid waste management
- Liquid waste management
- E-waste management

Response:

The institution has signed an MoU with ITC-WOW(an initiative of ITC in collaboration with GHMC) and established WOW(wellbeing out of waste)-Hyderabad Chapter in the campus towards effective waste management.

a) Solid Waste Management

- Separate dust bins are provided for collecting solid waste on all floors in all the buildings
- The solid waste from the dust bins is collected every day and is segregated into paper, plastic, metal, sanitary, wood, etc. at one place and are packed separately
- The waste is also segregated as toxic and non-toxic waste
- The segregated waste is disposed with the help of ITC-WOW who inturn recycle the waste.
- The institution has a practice of collecting dry leaves and decomposing in a composting pit which is later used as a manure for the trees and plants

b) Liquid Waste Management

- Sewage disposal system is available in all buildings for disposing liquid waste
- Chemical waste from laboratories is disposed off after adjusting PH

c) E-Waste Management

- Lamps and bulbs are disposed off after removing mercury filaments
- Battery terminals are tapped before disposal
- All the e-waste collected on campus is kept in containers and labelled before disposal
- The E-waste collected in the containers is disposed off to E Scrap Zone for dismantling and recycling
- To reduce the use of CDs and DVDs, students and faculty members are encouraged to use emails for all official purposes

7.1.6 Rain water harvesting structures and utilization in the campus

Response:

Our college has Musi river in close vicinity. Due to this the waterbed in the surroundings is abundant and ground water level is high. There is no dearth of water supply to our college. The rain water harvesting system is not really necessary as there are water tanks available for the storage of water for all purposes. Water purification plant is established to supply pure drinking water. Rain water is channeled through passages to water the plants on campus.

7.1.7 Green Practices

- Students, staff using
- a) Bicycles
- b) Public Transport
- c) Pedestrian friendly roads
- Plastic-free campus
- Paperless office
- Green landscaping with trees and plants

Response:

Students and staff using bicycles, public transport and pedestrian friendly roads

- Many students and staff of the college use the college transportation provided from various key locations in the city thereby reducing the use of personal vehicles
- Students and staff residing in the nearby areas commute to the college by walk
- The college is located on the main road and has the bus stop very close by due to which many students commute to the campus using public transportation

Plastic free campus

- Plastic is banned on campus and is prominently displayed on all notice boards and corridors
- The college discourages the use of plastic by conducting awareness programs to staff and students
- The institution has organised a clay Ganesh campaign to make all the students, staff and

community aware of using eco-friendly Ganesh for the Ganesh Chathruthi festival and has also set a record in India Book of Records for most number of eco-friendly Ganesh idols immersed in buckets

Paperless office

- The institution encourages use of emails and mobile applications for sharing notices, circulars and other important documents for communicating with staff and students
- Phone calls and SMS messages are used to communicate the performance of students to their parents
- The Accounts department use Tally ERP softyware for all the functions in order to aim for paperless office.

Green landscaping with trees and plants

- The institution organises tree plantation programmes every year as part Haritha Haram project from the Government of Telangana and has planted more than 500 trees in the last two years
- The entire campus is landscaped with trees and plants at all major locations and is maintained by Vijaya Durga Nursery regularly

Effective waste management

The solid, liquid and e-waste from institution is seggregated and collected by ITC-wow every fornight. The waste collected by WOW is further recyled and used in the manufacture of Papers and paper cups.

7.1.8 Average percentage expenditure on green initiatives and waste management excluding salary component during the last five years

Response: 0.25

JUIISC. U.Z.

7.1.8.1 Total expenditure on green initiatives and waste management excluding salary component year wise during the last five years(INR in Lakhs)

2016-17	2015-16	2014-15	2013-14	2012-13
1.6	1.45	1.28	1.15	1.1

File Description	Document
Details of expenditure on green initiatives and waste management during the last five years	View Document

7.1.9 Differently abled (Divyangjan) Friendliness Resources available in the institution:

- 1. Physical facilities
- 2. Provision for lift
- 3. Ramp / Rails
- 4. Braille Software/facilities
- **5. Rest Rooms**
- 6. Scribes for examination
- 7. Special skill development for differently abled students
- **8.** Any other similar facility (Specify)
- A. 7 and more of the above
- B. At least 6 of the above
- C. At least 4 of the above
- D. At least 2 of the above

Response: A. 7 and more of the above

File Description	Document
Resources available in the institution for Divyangjan	View Document
link to photos and videos of facilities for Divyangjan	View Document

7.1.10 Number of Specific initiatives to address locational advantages and disadvantages during the last five years

Response: 22

7.1.10.1 Number of specific initiatives to address locational advantages and disadvantages year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
5	5	4	4	4

File Description	Document
Any additional information	<u>View Document</u>
Number of Specific initiatives to address locational advantages and disadvantages	View Document

7.1.11 Number of initiatives taken to engage with and contribute to local community during the last five years (Not addressed elsewhere)

Response: 22

7.1.11.1 Number of initiatives taken to engage with and contribute to local community year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
6	5	4	4	3

File Description	Document
Report of the event	View Document
Details of initiatives taken to engage with local community during the last five years	View Document

7.1.12

Code of conduct handbook exists for students, teachers, governing body, administration including Vice Chancellor / Director / Principal /Officials and support staff

Response: Yes

File Description	Document
URL to Handbook on code of conduct for students and teachers, manuals and brochures on human values and professional ethics	View Document

7.1.13 Display of core values in the institution and on its website

Response: Yes

File Description	Document
Provide URL of website that displays core values	View Document

7.1.14 The institution plans and organizes appropriate activities to increase consciousness about national identities and symbols; Fundamental Duties and Rights of Indian citizens and other constitutional obligations

Response: Yes

File Description	Document
Any additional information	View Document
Details of activities organized to increase consciousness about national identities and symbols	View Document

7.1.15 The institution offers a course on Human Values and professional ethics

Response: Yes

File Description	Document
Provide link to Courses on Human Values and professional ethics on Institutional website	View Document

7.1.16 The institution functioning is as per professional code of prescribed / suggested by statutory bodies / regulatory authorities for different professions

Response: Yes

File Description	Document
Provide URL of supporting documents to prove institution functions as per professional code	View Document

7.1.17 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties during the last five years

Response: 55

File Description	Document
Any additional information	View Document
List of activities conducted for promotion of universal values	View Document

7.1.18 Institution organizes national festivals and birth / death anniversaries of the great Indian personalities

Response:

ATRI celebrates all the national festivals to commemorate the greatness of the historical events of national importance to inculcate a strong feeling of nationality in everyone. The birth and death anniversaries of National leaders are celebrated to honour and pay tributes to their contribution for attaining independence and the progress of our nation.

Celebrations on these days are marked by competitions conducted for students in debate, essay writing, poster presentations and cultural programmes on themes relevant to the occasion.

- Aug 15 Independence Day Celebrations start with the NCC band and flag hoisting. Speeches by students and faculty, patriotic songs and cultural programmes boost the spirit of patriotism Programmes are also conducted in the government school adopted by the college.
- Jan 26 Republic day is an occasion to reaffirm our faith in the democratic way of life. The importance of constitution of India, duties and responsibilities of citizens are reaffirmed and appraised through songs and dances.
- Oct 2 Gandhi Jayanthi observed as Swachch Bharath Diwas. Campus cleaning and plantation of saplings are conducted by the NSS unit and Nature Club. Environment awareness issues are presented trough skits and street plays.
- Jan 12- National Youth Day, Swami Vivekananda's birthday is celebrated to inspire young minds to work for the progress of our nation emulating his ideology by conducting youth talks.
- Sep 5 Dr.Sarvepalli Radhakrishnan's Birthday is celebrated as Teachers' day. Self-governance day is conducted in our college by Student Activity Committee as students assume the roles of teachers. Teaching excellence and outstanding contributions awards are presented to felicitate teachers on this day.
- Feb 28- National Science day, in honour of Nobel Laureate Sir. C. V. Raman is marked by conducting science and technology based quiz programmes and display of models.
- Apr 14- Ambedkar Jayanti is observed in our college to spread the values of social equality and justice by organizing rallies and campaigns.
- Sep 15- Sir M. Visvesvarayya's birthday is celebrated as Engineer's day to highlightthe contribution of Engineers in improving quality of life. Technical seminars and debates are conducted on this day.
- Oct 30 –Death Anniversary of Gandhiji is exalted by observing two minutes of silence to pay homage to him for sacrificing his life for our nation.
- Oct 31- National Unity day, the birthday of Sardar Vallabhai Patel, aims to promote unity in diversity and brotherhood among people. Seminars and discussions are conducted on themes like secularism and non-violence. Oath is taken by all the students to promote national unity.
- Aug 9 New India pledge was initiated by Prime Minister Narendra Modi for renewing the enthusiasm of people in development. All the faculty members, staff and students took this pledge.
- Jun 21- International Yoga Day is celebrated to create awareness about the importance of health and physical fitness through yoga. A workshop is conducted every year to encourage students and staff members to learn yogasanas.

7.1.19 The institution maintains complete transparency in its financial, academic, administrative and auxiliary functions

Response:

ATRI ensures transparency in the academic, administrative, financial and auxiliary functions through decentralization and participative management. Problem-solving, decision-making, negotiation policy-making, etc. permeate through all levels of the organizational structure, reiterating transparency and inculcating a sense of ownership at all levels.

The Management of ATRI ensures transparency by involving stakeholders at all levels in the institute's management system development, implementation of plans and strategies and continuous improvement. It provides the required support for policy making and planning through need analysis, research inputs and consultation with stakeholders. The Management takes feedback from the stakeholders like parents, students, alumni, employers, industry, faculty and analyses it. The Management provides interface through parent teacher meetings which are conducted periodically not just to intimate the performance of students to parents, but also to get their valuable feedback regarding the functioning of the institute. Student committee meetings are conducted to pulse their needs and grievances and alumni meets for fostering healthy environment and recording suggestions. Corporate meets like Placement Day are held for crucial industry-institute interaction. The Management conducts brainstorming sessions with senior faculty and Think-Tanks of the institute that go a long way in identifying lacunae, solving issues and ensuring progress.

All Heads of Departments are a part of academic, administrative, financial and auxiliary functions of the institute. They play a pivotal role in financial planning such as purchases, budgeting, allocation of funds, etc. The Heads have the autonomy to set up departmental objectives and plans, and also to monitor their effective implementation. They conduct periodical surveys to assess academic issues such as syllabus completion, quality of teaching and maintenance of standards in paper setting and evaluation. Heads of Departments play a role in faculty recruitment by being part of interview panels.

Faculty at ATRI are not only apprised of the functioning of the college but are also part of the academic, administrative, financial and auxiliary process. They can exercise autonomy and flexibility in their teaching methodology and also use their discretion in inviting subject experts for guest lectures, workshops, etc. They give their inputs regarding course surveys and paper setting and evaluation. As committee members, they are in charge of various academic, co-curricular and extra-curricular activities. They are also involved in Student Counseling.

Students too play an active role in the administrative aspects of the institute in roles such as Class Representatives, Committee Coordinators and office bearers of Professional Bodies, Student Editors and members of clubs. They organize programmes and take initiatives in social causes. Student Activity Committee (SAC) organizes programmes ,motivates students and ensures optimal participation of students in all activities. Transparency is extended to students through meetings with Principal/HOD and their feedback is taken into consideration for the development of the institute.

The transparency policy of ATRI is thus realized not just by disseminating information to all stakeholders through meetings, circulars, notifications on websites, circulation of Minutes of Meetings, SMS and E-Mails, but by ensuring their proactive presence in policy making, decision making, strategising, execution and implementation.

7.2 Best Practices

7.2.1 Describe at least two institutional best practices (as per NAAC Format)

Response:

Best Practice 1

1. Title of the Practice

Environmental Awareness among Students, Staff, Local Community and Society through Nature Club, ARITRI

2. Objectives of the Practice

To save and protect the environment by inculcating environmental consciousness among students, staff, local community and society at large and engaging them in environment development programmes

3. The Context

Awareness on environmental issues and taking proactive action to protect the environment has become the need of the hour. Protection of environment has become a challenge to all the nations. In this context, the institution has taken it as a challenge to address the issue and create awareness among all its students, staff, and the local community on various environmental issues.

4. The Practice

ARITRI-nature club was established in the year 2016 to create environmental awareness among all students and staff, develop greenery on campus and in the village, and organise programs to save and protect the environment. Several students and staff members have joined the club as volunteers. The club has reached MoUs with NGOs working for a similar cause.

5. Evidence of Success

The institution has set a record in India Book of Records and World Book of Records by organising a Massive Bucket Immersion of Clay Ganesh under ARITRI, nature club by motivating all the students and staff to use only clay Ganeshas during Ganesh Chathurthi and immerse them only in buckets on campus. More than 1200 staff and students have participated to set the record.

6. Problems Encountered and Resources Required

- Faced difficulty in ensuring plastic free campus as the club could not strictly monitor the use of plastic covers brought to the campus by students
- The trees planted in locality are not protected from animals and not maintained by local authorities

Best Practice 2

1. Title of the Practice

Implementation of NPTEL Online Certification Courses

2. Objectives of the Practice

- To enable the students and faculty gain advanced technological knowledge through video lectures prepared by IITs and IISc.
- To promote mode of self-learning and peer-group learning.

3. The Context

To have better employability opportunities, students are in need to have additional skills and in-depth knowledge apart from what they gain from their regular curriculum. However, students have limitations in acquiring this knowledge due to regular course work and examinations. NPTEL online courses give them flexibility to gain this knowledge at their own time and pace.

4. The Practice

Aurora's Technological and Research Institute had setup NPTEL Local Chapter on June 30, 2017. The faculty members and students are encouraged to register for the courses, write examinations and get certified by IITs.

5. Evidence of Success

320 faculty and students have registered for NPTEL courses and 32 have written examinations and got certificates from IITs.

6. Problems Encountered and Resources Required

Due to overlapping of NPTEL course work schedule with regular course work faculty and students found it difficult to manage.

Resources required:

- Digital library with NPTEL courseware
- WiFi internet connectivity
- Faculty mentors

File Description	Document
Any additional information	<u>View Document</u>
Link for Additional Information	View Document

7.3 Institutional Distinctiveness

7.3.1 Describe/Explain the performance of the institution in one area distinctive to its vision, priority and thrust

Response:

The vision of Aurora's Technological and Research Institute is to be a centre of higher learning that can provide the best learning experience, the most productive learning community, and the most creative learning environment in engineering education and to be recognized as one of the best engineering colleges in India.

To accomplish the vision and translate it into reality, the institution has been using the best teaching learning methodologies over the years and gives utmost importance to quality teaching. The motto of the institution is "Learning beyond the classroom" and has been conducting various activities such as Guest Lectures, Seminars, Industrial Visits, etc. apart from classroom teaching to make learning more interesting.

In the academic year 2015-16, ATRI has come up with another innovative method of teaching learning named as ITL (Interactive Teaching Learning) methodology to inculcate high motivation, communication skills, knowledge sharing, team spirit, freedom of expression and employability skills in students. Through this methodology, the classrooms are made more interactive, fun, and interesting to the students, as the concepts in the curriculum are taught using various methods.

Taking cue from the latest concept of 'Flipped classrooms', which is a blended learning approach, where face-to-face interaction is mixed with independent study, various methods of ITL were identified to facilitate this student centric learning.

The ITL methods are implemented by dividing students into learning groups. A class of 60 will have 20 learning groups with 3 students in each group. The students in a group are selected in such a way that each group has one above average, one average, and one below average performer. Objectives of each method, guidelines and parameters for evaluation are communicated to the students. Performance of students in each learning group is evaluated individually. The ITL methods are are mentioned below:

- 1. Case Studies
- 2. Group Discussions
- 3. Debates
- 4. Ouizzes
- 5. Student Seminars
- 6. Role-Plays

Due to the vast syllabus in first year of B.Tech curriculum and due to the transition from intermediate education to engineering education, many students perform very poorly in first year examinations. Taking it as a challenge to improve their performance, the institution has implemented the ITL methodology beginning with 2016 batch of B.Tech students from the academic year 2016-17. The performance of the students in academics has improved gradually semester after semester due to the implementation of these methodologies.

Due to its success, ITL methodologies are being implemented for all students of all semesters from the

academic year 2017-18 onwards. The students of the institution have opined that the ITL methodologies have provided them with the best and the most creative and productive learning environment.

File Description	Document
Any additional information	View Document

5. CONCLUSION

Additional Information:

In the current academic year our college has taken up several initiatives given below to promote the quality of teaching and learning process on campus.

- Augmenting classroom learning with on-line courses offered by NPTEL. Our college has an NPTEL
 local chapter and was recognised as ACTIVE SPOC. Many faculty members and students completed
 online certification courses with good grades.
- Contents beyond the classroom are provided through SWAYAM and MOOCs and access to National Digital library resources.
- Many MoUs which are listed below were signed with universities, multinational companies and educational institutes to promote networking and access to opportunities for students.
 - ICT ACADEMY
 - PALO ALTO
 - AMAZON WEB SERVICES
 - AMBO UNIVERSITY, ETHIOPIA.
 - ITC WELLBEING OUT OF WASTE (WOW).
 - DELL-EMC
 - LITERACY HELPING HANDS
- A centre of Excellence in Big Data Analytics is established to promote learning and research in the field of Computer Science.
- Our College has Institutional membership in the following organisations
 - ICT Academy
 - ORACLE Academy
 - ELTAI
 - IIPE
- Student Chapters are established for IETE, IEEE, CSI and IIPE
- Quthbullapur Village is adopted by our college as part of Corporate Social Responsibility through the college NSS unit.
- Our college entered the INDIA BOOK OF RECORDS for promoting the social cause of eco-friendly Ganeshas and conducting a Massive Bucket Immersion.

Concluding Remarks:

Aurora's Technological and Research Institute has its academic, administrative and infrastructural systems in place, and is one of the premier institutes in the country in terms of the curriculum planning and implementation, the teaching-learning process, extension and research activities, infrastructural development, student activities, institutional vision and leadership, and best practices adopted.

Uniqueness in the Teaching-Learning process is the USP of the institute. 'Learning Beyond the classroom' always been the motto of the institute and incorporation of this tagline in the Teaching-Learning process one of its prime objectives. Student-centric learning, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences. The institute provides the faculty with freedom and flexibility in using ICT, LMS and e-learning resources. Student seminars, presentations, group

discussions, debates in the college and inter-college level aim at confidence boosting, personality development, honing leadership and team skills.

ATRI seeks to define the moral obligation of the engineer using traditional moral philosophy and describe how this obligation might be translated into a more positive definition of success. The programs offered by the institute prepare students for careers in industry or for post graduate study in engineering or related fields. Their contribution to society and development of our nation is the ultimate goal.