



SELF STUDY REPORT

FOR

2nd CYCLE OF ACCREDITATION

JYOTHI ENGINEERING COLLEGE

**JYOTHI ENGINEERING COLLEGE, JYOTHI HILLS, VETTIKATTIRI PO
CHERUTHURUTHY-THRISSUR 679531, KERALA**

679531

www.jecc.ac.in

Submitted To

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

BANGALORE

August 2021

1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

Jyothi Engineering College (JEC), set up in 2002, under the aegis of Trichur Educational Trust, founded by the Catholic Archdiocese of Trichur, is a leading Engineering College in Kerala. The institute offers 8 UG programmes, 5 PG programmes and 5 Ph. D programmes. The college is affiliated to the APJ Abdul Kalam Technological University of Kerala and is approved by the All-India Council for Technical Education (AICTE), New Delhi.

JEC is a NAAC accredited institution signifying that we have a clearly defined process to ensure our desired outcomes are as objective as possible. In 2016, JEC was accredited by NBA for four B. Tech programmes i.e., Computer science and Engineering, Electronics and Communication Engineering, Electrical and Electronics Engineering and Mechanical Engineering. In 2019, our Civil Engineering department got NBA accreditation. JEC has recently applied to UGC for Autonomy status.



JECC has provided student development programs by virtue of being institutional members of multiple organizations such as Indian Society for Technical Education(ISTE), Delhi, Institution of Engineers(India), Computer Society of India (CSI), Institute of Electrical and Electronics Engineers (IEEE), Society of Automotive Engineers (SAE)- India, Institution of Electronics and Telecommunication Engineers (IETE), Institute of Electrical and Electronics Engineers-Industry Application Society(IEEE-IAS), and Indian Concrete Institute(ICI).

In line with JEC's stated vision to be an innovation-driven institution, we are in the process of setting up a state of-the-art incubation centre, Integrated Industrial Incubation Centre (IIIC), in association with TATA

Technologies. Additionally, we run a Technology Business Incubator (TBI) and a Fabrication lab (FABLAB).

Vision

Creating eminent and ethical leaders through quality professional education with emphasis on holistic excellence.

Mission

- To emerge as an institution par excellence of global standards by imparting quality engineering and other professional programmes with state-of- the-art facilities.
- To equip the students with appropriate skills for a meaningful career in the global scenario.
- To inculcate ethical values among students and ignite their passion for holistic excellence through social initiatives.
- To participate in the development of society through technology incubation, entrepreneurship and industry interaction

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

- Intellectual capital- good faculty
- Invigorating teaching and learning environment
- Committed and visionary management
- Safe and secure learning environment
- Good infrastructure

Institutional Weakness

- Inadequate focus on research activities
- Paucity of funded projects
- Inadequate interaction between the institute and industry.

Institutional Opportunity

- A strong start-up culture in Kerala that provides entrepreneurial opportunities for students
- New generation courses for students such as Robotics and AI
- The number of MSME s (Micro, Small and Medium Enterprise) have doubled over the last few years
- MSMEs in Thrissur provide opportunities for consulting

Institutional Challenge

- Improvement in quality and quantity of student intake
- Weak employment opportunities in Kerala for “core placements” for our students
- Hypercompetitive environment with oversupply of engineering graduates.

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

Jyothi Engineering College is an Institution affiliated to APJ Abdul Kalam Kerala Technological University (KTU). The Institution follows the syllabus and scheme prescribed by the University. Various academic and extracurricular activities are executed as per institutional academic calendar. Teaching plan is prepared and delivered using modern pedagogical tools to cater to the needs of the student community. The University has been regularly updating the syllabus every four years. The University has Board of Studies (BOS) for each Engineering Program, which consists of senior faculty members, academicians from various institutions and industry experts who help in updating the syllabus so as to satisfy the needs of all key stakeholders.

As quality enhancement is a continuous process, the Internal Quality Assurance Cell (IQAC), which should be an integral part of any Institution, should work towards realizing the goals of quality enhancement and sustenance. At JECC, class / course / Advisory Committee meetings, PTA Meetings, Academic audits, are conducted periodically to monitor and improve the teaching and learning process. Faculty document the prescribed delivery of course contents by maintaining course files for both theory and lab courses. The contents of the course file include syllabus, lesson plans, subject timetable, lesson notes, question banks etc. The prime objective is to employ learner centric techniques such as assignments, NPTEL lectures, industry visits and projects for the effective delivery of the academic courses.

Teaching-learning and Evaluation

The institution follows a transparent admission policy in line with the Admission Guidelines of the Government of Kerala. An Institutional academic calendar is prepared before the start of the semester taking into consideration the academic calendar of the affiliating University. The academic calendar consists of the activities planned for the entire academic year. The teaching-learning strategies are structured to facilitate the achievement of the intended learning outcomes. The institution has a team of dedicated, well qualified and experienced faculty, many with doctoral degrees.

The faculty of the institute adopt various methods of teaching and learning to create the optimum learning environment for students. Student centric methods like experiential learning, participative learning and problem-solving methods are employed for enhancing the learning experience with ICT for effective teaching and learning. The Institution strictly follows the evaluation procedure prescribed by the affiliating University. Student performance is evaluated through continuous assessment and end semester examinations. The process is transparent and robust and ensures effective student evaluation.

Each program includes course objectives and course outcomes, which are mapped with the program outcomes. The faculty are oriented towards outcome-based education (OBE) and actively utilize OBE to facilitate experiential learning. Both direct and indirect assessment methods, at the end of each course, help in ensuring attainment of stated course outcomes.

The institution with its effective mentoring system constantly encourages, motivates, and guides students to improve performance. We have a robust system to identify weaknesses in the student learning process so as to take corrective action. Specially designed programs and courses are offered so that students get the required support to become well-rounded engineers. Mentors counsel slow learners, identify their areas for improvement and help them overcome barriers to learning. In addition to gaining knowledge of the fundamentals of science and engineering, students are encouraged to enhance their communication skills.

Research, Innovations and Extension

JECC has created an ecosystem for innovation, creation, and transfer of knowledge by establishing R&D cell, Integrated Industrial Incubation Center in association with TATA Technologies, Innovation Laboratories and MOUs with industry. The Institute has made a concerted effort to create a veritable infrastructure of learning that will catalyze the holistic development of the student at the UG, PG and doctoral level. Technical events such as quizzes, project exhibitions, paper presentations, posters, etc. are organized to showcase talents of students. The Institute has an established Research and Development cell to promote and encourage research among students and faculty. R&D Cell takes initiative to support faculty members to apply for research projects offered by different funding agencies, RPS, etc. The cell organizes FDPs, STTPs, Technical Workshops, Seminars, and National and International Conferences. In addition, R&D cell supports research publication of the faculty in peer-reviewed journals and conference proceedings. Research Incentive Schemes (RIS) are offered to faculty to facilitate successful completion of publications, funded projects, Patents, etc. There are about 23 research scholars pursuing the doctoral program at JECC. During the last five-years, faculty members at JECC have published more than 250 research articles in different journals and conference publications. JECC runs a Technology Business Incubator to nurture start-up initiatives amongst students and faculty. In order to create a research culture among students and faculty, the institution has MOUs with the industry which provide research extension activities. The institution has an established student-run IEDC Cell, through which students interact with successful entrepreneurs and thereby create career opportunities.

Infrastructure and Learning Resources

Jyothi Engineering College is located in a picturesque setting amid lush greenery. It is blessed with a serene and poignant ambience apt for teaching and learning. The institute was established and nurtured by sharp minds whose acute vision has resulted in a systematically planned extensive campus with all the requisite facilities for a technological institute of higher learning. There are 33 well maintained ICT enabled classrooms, 5 seminar halls, 42 labs, 6 workshops and 14 tutorial rooms. The labs are well equipped to further our vision of developing the institute into a strong research driven college, capable of working on the frontiers of the various

branches of engineering. The institute also houses a FABLAB where regular training programmes are conducted for students. The institute also does outreach services like water testing in the Environmental Engineering Lab at subsidized rates for the local public. As an environmentally friendly campus, we have a solar power plant of 63.7 kWp and a rain harvesting system of 1000m³.

Our central Library has an area of 1028.91 m². The library subscribes to 92 journals and has got a collection of 38314 volumes consisting of 12998 titles in different domains of Science and Technology. Library is automated using an in house developed library management software integrated with the management information system of the institute. The library is a member of the National Digital Library of India (NDLI) which is sponsored and mentored by Ministry of Education, Government of India, through its National Mission on Education through Information and Communication Technology (NMEICT).

Our IT infrastructure includes over 800 computers, all of which are connected to a LAN. We have a leased line internet connectivity of 100 Mbps in addition to 20Mbps internet connectivity under NMEICT. We have 30 static IPs available. The network is secured by Cyberoam 300 ING UTM firewall from academic year 2015-16 which we upgraded with Sophos XG 310 Firewall on 2nd May 2021. The campus is networked through Optical Fiber, Ethernet, and Wi-Fi. The Wi-Fi is configured in the campus with 34 access points.

Student Support and Progression

The institution maintains a healthy student support and progressive mechanism as a result of a plethora of different scholarship schemes, career guidance, soft skills, placement and training, alumni association, remedial coaching besides numerous add on courses.

The Students Council is very active in the college, it galvanizes the students to encourage participation to develop their leadership qualities in academic as well as nonacademic activities. It also helps them to conduct various co-curricular and extra-curricular activities. The institution offers several scholarships to the needy and deserving students from both the government and private agencies every year. As an important step, they identify the needy and meritorious students to ensure the timely disbursal of their scholarships.

The institution had constituted an anti-ragging committee to prevent incidences of ragging and to make the campus ragging free. A grievance cell effectively functions in the institution to resolve the grievances of students. The institution follows a well-organized and an efficient mentoring and counselling system to impart moral values to the students. The main aim of the mentoring system is to motivate the students to take right decision for their academic and personal development. The head of the department assigns a faculty member for 30 students in each class and they will record their concerns and evaluate their progress.

The department of Placement and training conducts a number of career guidance and training programs to the students to support and enhance various career options and sharpen their aptitude skills, language fluency, communication and computing skills. It plays a key role in assisting the students to get high paying jobs and also to make them capable of pursuing higher studies in India and abroad. The college has a strong and full-fledged alumni association and is of immense help to Placement department for job contacts. The alumni association provides cash awards for the best outgoing student from the institution and various endowment

awards. The alumni interacts with the students about their working experience and various career options which helps the graduates to acquire knowledge on the recent trends with latest technologies.

Governance, Leadership and Management

Jyothi Engineering College(JEC) activities are aligned to the well-defined Vision and Mission statements. The institute has a well-defined organizational structure. The policies of the management committee and Board of Governors are implemented by the Principal with the help of different committees constituted for specific purposes.

Institute has a well-defined perspective plan with specific objectives in accordance with the Vision and Mission statements. As part of decentralization, representatives of faculty, non-teaching staff, students, parents, and alumni participate in various committees of the institution. E-governance has been implemented for admissions, finance and accounts, and examinations using the in-house developed software.

The Institute provides several welfare schemes for the faculty and non-teaching staff. These include Gratuity, medical leave, ESI, provident fund, maternity leave for women, etc. Financial support has been provided to some faculty to participate in workshops, conferences, and seminars. The Institute provides training programs for teaching and non-teaching staff for their professional development. Faculty attend various faculty development programs for improving their knowledge and skills. Also, staff performance appraisal is conducted every year. JEC has a proper strategy for the mobilization of funds and optimum utilization of resources. Regular internal and external financial audits are conducted.

The IQAC regularly reviews the teaching-learning process evaluation and also conducts regular meetings through which various quality improvements are made. The institute has been participating regularly in the ranking of higher educational institutions instituted by MHRD. During 2011-17, JEC was ISO 9001:2008 Quality Management System(QMS) certified. All the five undergraduate programs have been accredited by NBA. JEC has recently applied to UGC for Autonomy status.

Institutional Values and Best Practices

Jyothi Engineering College creates eminent and ethical graduates inculcating core values like Basic Humanism, Love of Fellow beings, Belief in Universal Citizenship, Moral Integrity and Social Commitment. Gender equity, Safety, Cleaning campaigns, and other social relevant programs are all conducted by the institution. As part of Environment Consciousness and sustainability a solar power plant is set up. Led lights and solar lights are used as alternate sources of energy along with different energy conservation. Solid, liquid and e-wastes are segregated properly. A Smart campus called Green Campus with an eco-friendly one is available. It is a smoke and plastic free campus. Rainwater harvesting systems within the campus for water

collection are available and used during summer seasons for gardening and other non-domestic purposes. The greenery on the campus is also getting expanded covering almost 30% of the area with attractive horticultural and ornamental plants. The student and employee Code of Conduct manual is updated on a regular basis. To promote basic values, the institution remembers national and international historic days, events, and festivals. Revamped Teaching Learning Process and Social and Technical activities through Center for Water Research and Education are the best practices. Global Standards, Ethical leadership, Interdisciplinary Research, and quality professional education are the four pillars of the Institute's vision. Academic excellence, Skills enrichment through research, Innovation & Entrepreneurship Development, Technical skill enhancement for the Growth of a Well-rounded Individual with a Global Perspective and Social Responsibilities are the Institutional Distinctiveness of Jyothi Engineering College which plays a vital role, in alignment with Institutional goals.

NAAC

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the College	
Name	JYOTHI ENGINEERING COLLEGE
Address	Jyothi Engineering College, Jyothi Hills, Vettikkattiri PO Cheruthuruthy-Thrissur 679531, Kerala
City	Vettikkattiri PO Cheruthuruthy
State	Kerala
Pin	679531
Website	www.jecc.ac.in

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Director	Jose Kannampuzha	04884-259000	9447870275	04884-274777	info@jecc.ac.in
IQAC / CIQA coordinator	Anoop V	04884-259255	9895837646	04884-274198	iqac@jecc.ac.in

Status of the Institution	
Institution Status	Self Financing

Type of Institution	
By Gender	Co-education
By Shift	Regular

Recognized Minority institution	
If it is a recognized minority institution	Yes Minority Certificate.pdf
If Yes, Specify minority status	
Religious	Christian
Linguistic	
Any Other	

Establishment Details	
Date of establishment of the college	06-06-2002

University to which the college is affiliated/ or which governs the college (if it is a constituent college)		
State	University name	Document
Kerala	A.P.J. Abdul Kalam Technological University	View Document

Details of UGC recognition		
Under Section	Date	View Document
2f of UGC	19-02-2020	View Document
12B of UGC		

Details of recognition/approval by stationary/regulatory bodies like AICTE,NCTE,MCI,DCI,PCI,RCI etc(other than UGC)				
Statutory Regulatory Authority	Recognition/Approval details Institution/Department programme	Day,Month and year(dd-mm-yyyy)	Validity in months	Remarks
AICTE	View Document	01-10-2020	12	

Details of autonomy	
Does the affiliating university Act provide for conferment of autonomy (as recognized by the UGC), on its affiliated colleges?	Yes autonomydoc_1626065944.pdf
If yes, has the College applied for availing the autonomous status?	Yes

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

Location and Area of Campus				
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.
Main campus area	Jyothi Engineering College, Jyothi Hills, Vettikkattiri PO Cheruthuruthy-Thrissur 679531, Kerala	Rural	38.356	35621.45

2.2 ACADEMIC INFORMATION

Details of Programmes Offered by the College (Give Data for Current Academic year)						
Programme Level	Name of Programme/Course	Duration in Months	Entry Qualification	Medium of Instruction	Sanctioned Strength	No.of Students Admitted
UG	BTech,Civil Engineering	48	XII STD	English	60	34
UG	BTech,Computer Science And Engineering	48	XII STD	English	120	120
UG	BTech,Electrical And Electronics Engineering	48	XII STD	English	60	21
UG	BTech,Electronics And Communication Engineering	48	XII STD	English	60	41
UG	BTech,Mechanical Engineering	48	XII STD	English	120	62
UG	BTech,Mechatronics Engineering	48	XII STD	English	60	47
UG	BTech,Robotics And Automation	48	XII STD	English	60	16
UG	BTech,Artificial Intelligence And Data Science	48	XII STD	English	60	54
PG	Mtech,Civil Engineering	24	B Tech	English	18	12
PG	Mtech,Computer Science And Engineering	24	B Tech	English	6	6
PG	Mtech,Electr	24	B Tech	English	6	4

	ical And Electronics Engineering					
PG	Mtech,Electr onics And C ommunicatio n Engineering	24	B Tech	English	6	2
PG	Mtech,Mech anical Engineering	24	B Tech	English	6	4
Doctoral (Ph.D)	PhD or DPhi l,Computer Science And Engineering	48	M Tech	English	8	0
Doctoral (Ph.D)	PhD or DPhi l,Electrical And Electronics Engineering	48	M Tech	English	12	0
Doctoral (Ph.D)	PhD or DPhi l,Electronics And Commu nication Engineering	48	M.Tech	English	22	0
Doctoral (Ph.D)	PhD or DPhi l,Mechanical Engineering	48	M.Tech	English	22	0
Doctoral (Ph.D)	PhD or DPhi l,Mathematic s	48	MSC M Tech	English	8	0

Position Details of Faculty & Staff in the College

Teaching Faculty												
	Professor				Associate Professor				Assistant Professor			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government	0				0				0			
Recruited	0	0	0	0	0	0	0	0	0	0	0	0
Yet to Recruit	0				0				0			
Sanctioned by the Management/Society or Other Authorized Bodies	24				20				85			
Recruited	20	4	0	24	14	6	0	20	43	42	0	85
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				14
Recruited	9	5	0	14
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				37
Recruited	29	8	0	37
Yet to Recruit				0

Qualification Details of the Teaching Staff

Permanent Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt/LLD	0	0	0	0	0	0	0	0	0	0
Ph.D.	16	4	0	10	5	0	1	1	0	37
M.Phil.	0	0	0	0	0	0	0	6	0	6
PG	4	0	0	4	1	0	42	35	0	86

Temporary Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt/LLD	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 Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt/LLD	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 engaged with the college?	Male		Female		Total
	0	0	0	0	0

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

Programme		From the State Where College is Located	From Other States of India	NRI Students	Foreign Students	Total
UG	Male	239	0	63	0	302
	Female	109	0	19	0	128
	Others	0	0	0	0	0
PG	Male	5	0	0	0	5
	Female	22	1	0	0	23
	Others	0	0	0	0	0
Doctoral (Ph.D)	Male	0	0	0	0	0
	Female	0	0	0	0	0
	Others	0	0	0	0	0

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	4	3	6	7
	Female	2	2	1	4
	Others	0	0	0	0
ST	Male	0	0	0	0
	Female	0	0	0	0
	Others	0	0	0	0
OBC	Male	5	7	15	18
	Female	4	3	10	15
	Others	0	0	0	0
General	Male	175	226	219	253
	Female	79	99	150	174
	Others	0	0	0	0
Others	Male	27	28	58	25
	Female	8	10	7	9
	Others	0	0	0	0
Total		304	378	466	505

Extended Profile

1 Program

1.1

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

2019-20	2018-19	2017-18	2016-17	2015-16
335	382	374	311	310
File Description		Document		
Institutional data prescribed format		View Document		

1.2

Number of programs offered year-wise for last five years

2019-20	2018-19	2017-18	2016-17	2015-16
12	11	10	7	7

2 Students

2.1

Number of students year-wise during last five years

2019-20	2018-19	2017-18	2016-17	2015-16
1530	1680	1852	1878	1816
File Description		Document		
Institutional data in prescribed format		View Document		

2.2

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

2019-20	2018-19	2017-18	2016-17	2015-16
228	245	245	206	206

File Description	Document
Institutional data in prescribed format	View Document

2.3

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

2019-20	2018-19	2017-18	2016-17	2015-16
490	415	518	496	452

File Description	Document
Institutional data in prescribed format	View Document

3 Teachers

3.1

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

2019-20	2018-19	2017-18	2016-17	2015-16
93	115	121	121	115

File Description	Document
Institutional data in prescribed format	View Document

3.2

Number of sanctioned posts year-wise during last five years

2019-20	2018-19	2017-18	2016-17	2015-16
116	114	142	134	134

File Description	Document
Institutional data in prescribed format	View Document

4 Institution

4.1

Total number of classrooms and seminar halls

Response: 38

4.2

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

2019-20	2018-19	2017-18	2016-17	2015-16
750.44	820.09	734.46	734.67	948.21

4.3

Number of Computers

Response: 806

NAAC

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 college follows a curriculum prepared by the university. The APJ Abdul Kalam Technological University to which the college is affiliated practices a significant degree of decentralization and its academic administration is organised in the form of clusters. The college is under the Palakkad cluster of KTU. Each cluster has significant autonomy in designing and developing curriculum subject to the approval of the KTU central Academic Committee.

The University, typically at the end of every academic year, requests the teachers in the affiliated colleges for feedback on the existing courses and the need for revision as well as the introduction of new courses. This college has devised various strategies to ensure outcome based learning and for strengthening our teaching learning process. These are mentioned below,

- Subject/course allocation based on faculty preference, competence /experience and university syllabus is done through a formal staff meeting chaired by the HOD well before the semester starts.
- The academic calendar, semester plan and time table are circulated and lesson plans are prepared. Lesson plans are made with well defined course outcomes, subject notes and learning materials like PPTs and manuals for conducting laboratory experiments.
- Course team meetings are conducted in the presence of Principal, HOD, and faculty members handling the classes, to check the availability of Lesson plan and Assignments.
- Class / Course / Advisory Committee meetings for students are conducted twice each semester before the internal exams.
- Continuous assessment for laboratory work is done on the basis of viva questions and real time performance through well defined rubrics.
- Course delivery as per lesson plan and completion of syllabus is monitored by HOD.
- To maintain quality, the internal exam question papers are approved by the IQAC before sending it to the exam cell.
- Student's feedback is taken twice each semester for the teaching learning process.
- PTA meetings are held class wise, after the internal examinations and the university examination result analysis of every semester, to discuss student academic progress and other matters.
- Progress reports for the internal and university exams are dispatched to the guardians to appraise them about their wards' performance.
- Course files prepared by the faculty are audited by KTU internal and external auditors at least twice in a semester.
- The central library, department libraries, digital library with e-books is available to both students

and faculty members.

- Bridge courses are organized and conducted for students to get a clearer understanding about the topics.
- A Mentoring system with 20 students assigned to one faculty is in place.

The Teaching and learning process has been enhanced by various Faculty Development Programs on recent updates in technology conducted by eminent experts from the academic and industrial fields. Add-on courses and invited talks help the students to meet experts in specific areas. Through NPTEL videos, MOOC courses and webinars, students get sound information about the recent activities in the world and can thus improve their skills.

File Description	Document
Upload Additional information	View Document
Link for Additional information	View Document

1.1.2 The institution adheres to the academic calendar including for the conduct of CIE

Response:

As quality enhancement is a continuous process, the Internal Quality Assurance Cell (IQAC) will become a part of an Institution's system and work towards realizing the goals of quality enhancement and sustenance. The prime task of the IQAC is to develop a system for conscious, consistent and catalytic improvement in the performance of institutions.

IQAC will make a significant and meaningful contribution in the post accreditation phase of institutions. During the post accreditation period, the IQAC will channelize the efforts and measures of an institution towards academic excellence.

The primary aim of IQAC is to develop a system for conscious, consistent and catalytic action to improve the academic and administrative performance of the institution and to promote measures for institutional functioning towards quality enhancement through internalization of quality culture and institutionalization of best practices.

IQAC evolves mechanisms and procedures for

- Ensuring timely, efficient and progressive performance of academic, administrative and financial tasks.
- The relevance and quality of academic and research programmes.
- Equitable access to and affordability of academic programmes for various sections of society.
 - Optimization and integration of modern methods of teaching and learning.
 - The credibility of evaluation procedures.

- Ensuring the adequacy, maintenance and proper allocation of support structure and services

IQAC will facilitate / contribute

- Heightened level of clarity and focus in institutional functioning towards quality enhancement.
- Enhancement and coordination among various activities of the institution and institutionalize all good practices;
- A sound basis for decision-making to improve institutional functioning;
- Act as a dynamic system for quality changes in HEIs
- Development of an organized methodology of documentation and internal communication
- Availability of student attendance and feedback through Campus Book
- Meetings with students to make them aware of the need of feedback on teachers which is done online.
- Designing and arranging of a Teachers Diary which is helpful for them to prepare the teaching plan and record daily events and meetings.
- Conduct a statistical analysis of admitted students based on gender, marks, category and admitted course and made a report.
- The training on ICT enabled teaching using online platforms for teachers and students to motivate them to use it.
- Conducting a need analysis after which, the IQAC proposed starting new undergraduate and postgraduate programmes.
- IQAC preparation of the academic calendar along with the exam schedule and its distribution to Departments
- A feedback by graduands about their teachers collected online. The Principal intimated teachers about their feedback and a plan of action was suggested to improve required areas.
- The Time table committee made the general time table well ahead of the academic year.
- As per plan the academic activities and the examinations were conducted smoothly as scheduled in the academic calendar
- Wi-Fi internet facilities were provided to all Departments for accessing the Digital Library.
- PG and Research candidates are provided with extra computer terminals in library.

File Description	Document
Upload Additional information	View Document
Link for Additional information	View Document

1.1.3 Teachers of the Institution participate in following activities related to curriculum development and assessment of the affiliating University and/are represented on the following academic bodies during the last five years

1. Academic council/BoS of Affiliating university
2. Setting of question papers for UG/PG programs
3. Design and Development of Curriculum for Add on/ certificate/ Diploma Courses
4. Assessment /evaluation process of the affiliating University

Response: B. Any 3 of the above

File Description	Document
Institutional data in prescribed format	View Document
Details of participation of teachers in various bodies/activities provided as a response to the metric	View Document
Any additional information	View Document
Link for Additional information	View Document

1.2 Academic Flexibility

1.2.1 Percentage of Programmes in which Choice Based Credit System (CBCS)/ elective course system has been implemented

Response: 108.33

1.2.1.1 Number of Programmes in which CBCS / Elective course system implemented.

Response: 13

File Description	Document
Minutes of relevant Academic Council/ BOS meetings	View Document
Institutional data in prescribed format	View Document
Any additional information	View Document
Link for Additional information	View Document

1.2.2 Number of Add on /Certificate programs offered during the last five years

Response: 35

1.2.2.1 How many Add on /Certificate programs are offered within the last 5 years.

2019-20	2018-19	2017-18	2016-17	2015-16
13	9	6	4	3

File Description	Document
List of Add on /Certificate programs	View Document
Brochure or any other document relating to Add on /Certificate programs	View Document
Any additional information	View Document
Link for Additional information	View Document

1.2.3 Average percentage of students enrolled in Certificate/ Add-on programs as against the total number of students during the last five years

Response: 20

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

2019-20	2018-19	2017-18	2016-17	2015-16
624	442	275	185	149

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

1.3 Curriculum Enrichment

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

Response:

Jyothi Engineering College has taken impressive efforts to integrate cross cutting issues such as Gender, Environment and Sustainability, Human values and Professional Ethics wherever possible into the curriculum and more often by other indirect means.

Gender:

Gender equality, equality between men and women, entails the concept that all human beings, both men

and women, are free to develop their personal abilities and make choices without the limitations set by stereotypes, rigid gender roles and prejudices.

- Jyothi ensures that equal opportunity is given to both genders in terms of admissions. Self Study Report of Jyothi Engineering College employment, and training programmes as a result of which gender issues generally do not arise.
- Women's Day Celebration has been conducted in association with WDC JEC.
- Institution ensures equal representation of students (both genders) in students union, course committee, class committee.

Environment and Sustainability:

The following are some of the initiatives towards integrating environment and sustainability into the curriculum:

- Natura Club of the college is functioning with a vision to make the college campus green and Eco-friendly. There are more than 30 species of trees including a wide range of traditional medicinal herbal plants in the campus based on Indian Knowledge System (IKS).
- We have various projects and publication related to sustainable development.
- An approved water testing laboratory Centre for Water Research and Education(CWRE) provides services to the people on remediation of various water issues such as water quality, water shortage, rain water harvesting, water treatment and with special focus on maintenance of domestic water sources of Kerala.
- Rain water harvesting facility with a pond of size 50m x 20m x 10m storage capacity.
- Grid connected Solar roof panel of 63.7kW power supply. This takes care of major part of the power supply we need.

List of core courses related to Sustainable development

- Introduction to sustainable engineering
- Humanities
- Engineering Geology
- Economics and Business Management
- Environmental Engineering and Disaster Management
- Environmental Engineering 1
- Geotechnical Engineering 1 & 2
- Energy Conservation
- Business Economics/Life Skills
- Energy Management and auditing
- Environmental Engineering

Human Values and Professional Ethics:

Jyothi is committed to provide quality education in engineering and technology, to transform the youth

into committed technical personal for the social and economical well being of the nation with integral development of the personality and character building.

- Charity Visit is organized every year by the college to make the students aware of social responsibilities.
- Anti-drug campaigns have also been conducted by this institute.
- Plagiarism Checking is strictly followed in any type of publication.
- Academic Retreats are conducted for both staff & students every year.
- A well formed code of conduct is formulated to motivate the students become a responsible citizen.

File Description	Document
Upload the list and description of courses which address the Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum.	View Document
Any additional information	View Document

1.3.2 Average percentage of courses that include experiential learning through project work/field work/internship during last five years

Response: 3.34

1.3.2.1 Number of courses that include experiential learning through project work/field work/internship year-wise during last five years

2019-20	2018-19	2017-18	2016-17	2015-16
10	13	12	11	11

File Description	Document
Programme / Curriculum/ Syllabus of the courses	View Document
MoU's with relevant organizations for these courses, if any Average percentage of courses that include experiential learning through project work/field work/internship	View Document
Minutes of the Boards of Studies/ Academic Council meetings with approvals for these courses	View Document
Any additional information	View Document

1.3.3 Percentage of students undertaking project work/field work/ internships (Data for the latest completed academic year)**Response:** 30.33**1.3.3.1 Number of students undertaking project work/field work / internships**

Response: 464

File Description	Document
List of programmes and number of students undertaking project work/field work/ /internships	View Document
Any additional information	View Document

1.4 Feedback System**1.4.1 Institution obtains feedback on the syllabus and its transaction at the institution from the following stakeholders 1) Students 2)Teachers 3)Employers 4)Alumni****Response:** A. All of the above

File Description	Document
Any additional information (Upload)	View Document
Action taken report of the Institution on feedback report as stated in the minutes of the Governing Council, Syndicate, Board of Management (Upload)	View Document
URL for stakeholder feedback report	View Document

1.4.2 Feedback process of the Institution may be classified as follows: Options:

- 1.Feedback collected, analysed and action taken and feedback available on website
- 2.Feedback collected, analysed and action has been taken
- 3.Feedback collected and analysed
- 4.Feedback collected
5. Feedback not collected

Response: B. Feedback collected, analysed and action has been taken

File Description	Document
Upload any additional information	View Document
URL for feedback report	View Document

Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1 Average Enrolment percentage (Average of last five years)

Response: 72.29

2.1.1.1 Number of students admitted year-wise during last five years

2019-20	2018-19	2017-18	2016-17	2015-16
304	378	465	504	375

2.1.1.2 Number of sanctioned seats year wise during last five years

2019-20	2018-19	2017-18	2016-17	2015-16
570	612	612	516	516

File Description

Document

Institutional data in prescribed format

[View Document](#)

Any additional information

[View Document](#)

2.1.2 Average percentage of seats filled against reserved categories (SC, ST, OBC, Divyangjan, etc. as per applicable reservation policy) during the last five years (exclusive of supernumerary seats)

Response: 27.2

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

2019-20	2018-19	2017-18	2016-17	2015-16
50	53	98	78	30

File Description

Document

Average percentage of seats filled against seats reserved

[View Document](#)

Any additional information

[View Document](#)

2.2 Catering to Student Diversity

2.2.1 The institution assesses the learning levels of the students and organises special Programmes for advanced learners and slow learners

Response:

Students are given prime importance in the college. The college organizes an orientation program for the parents and students at the commencement of the programme for the new batch each year. It helps students and parents familiarize themselves with the institution, curricular and co-curricular activities, facilities, rules regulations and so on.

At the very outset students are identified as advanced learners and slow learners so that special attention can be given where required. In subsequent years, categorization is made based on the performance of students in the Continuous Internal Evaluation and University examinations along with their performance in the Co-Curricular and Extra-Curricular activities. The institution has an effective student centric mechanism for continuous monitoring and evaluation of the students' performance for both slow and advanced learners.

Advanced learners

Advanced learners are encouraged, motivated and advised by the Heads / Senior Professors of the concerned Departments and mentors to perform better in their academics by providing them with all the support needed.

The following special programs are carried out to encourage advanced learners to enhance their overall personality development.

- Leadership qualities of advanced learners are enhanced by providing them an Opportunity to become a class representative and student representatives in various committees.
- Advanced learners are encouraged to involve in the peer teaching to enhance their leadership / presentation skills.
- Motivated to carry out innovative projects.
- Encouraged to prepare for competitive examinations.
- Encouraged to publish papers in Conferences and Journals.
- University Toppers are felicitated for academic excellence with cash prizes and certificates.
- Provides opportunities to develop their creativity by participating in various events.
- Encouraged to join B. Tech Honours.
- Encouraged to join additional certification programmes such as NPTEL / MOOC / BEC etc.

- Motivation through Scholarships.

Slow learners

The Institute practices a robust student academic counselling process. At the time of admission the Principal interacts with the parents and the student to assess their needs and aspirations.

The following special programs are carried out to encourage slow learners to enhance their communication skills and fundamental knowledge, which results in better performance.

- The institution has an effective mentoring system to monitor the performance of slow learners. The mentor, who acts as a guide and local guardian, counsels the slow learners, identifies the nature of their problems and helps to overcome the inabilities and hurdles faced by the slow learners.
- Remedial classes are provided for slow learners in difficult subjects so as to clarify doubts and to acquire a strong fundamental base in the subject thereby enhancing their performance.
- Faculty members prepare a university question bank for each subject and discuss ways of presenting answers in the university examination to enhance their marks.
- Intimation to parents about the progress of their ward is given and parents' meetings are arranged as and when required.

File Description	Document
Upload any additional information	View Document
Past link for additional Information	View Document

2.2.2 Student- Full time teacher ratio (Data for the latest completed academic year)

Response: 16.45

File Description	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 institution has adopted a multi pronged approach through which students are future ready and imbibed to face professional life challenges using the methodologies stated below to implement an Outcome Based Education through experiential learning, participative learning and problem solving methods for enhancing the learning experiences of students.

EXPERIENTIAL LEARNING

Project works, Industrial visits and Workshops are concrete experiences where students understand the responsibility of the engineering profession and it provides an opportunity for them to improve technical skills and gives practical exposure. Students are involved in real time and societal projects which are funded by various organizations and a few innovative projects are published in newspapers.

Students are encouraged to participate in various internship programmes outside the college to develop professional skills and to enhance their knowledge and skills.

The talks by Industry Experts, academic experts and interactive sessions with successful alumni are arranged for students so as to update their knowledge and to bridge the gap between the industry and academia.

The well advanced FABLAB of JECC provides the students a chance to turn their ideas into new prototypes and products. A Fabrication Laboratory (FabLab) is a technical prototyping platform for innovation and invention which aims at providing a stimulus for local entrepreneurship and serves as a platform for learning and innovation.

PARTICIPATIVE LEARNING

Students are encouraged to explore knowledge using explanative, empowerment and explorative approaches through workshops, seminars for participative learning. Participants are encouraged to use, discuss and exchange their unique ways of expression, share their inspiration and learning.

Technical fests organized by the institute provide a platform to exhibit the technical skills and talents of our students. Industrial visits organized as per the curriculum give more technical exposure and promote industrial interaction.

Department wise students Associations in collaboration with professional bodies conduct various technical events to explore the technical skills of the learners as well as to ensure participation of each student in various programs.

Students are encouraged to involve in various certification courses thereby facilitating independent learning. The institution has a Well-equipped digital library with a good number of books, eBooks, technical magazines, journals, e-journals which serve as a Knowledge Resource Centre to the students to inculcate research culture.

The career guidance and counseling program such as group discussion, aptitude tests, mock interviews etc., are provided by the Placement Department Cell to enhance the overall personality development of students and to make realistic academic and career decisions.

PROBLEM SOLVING METHODOLOGIES

Students are encouraged to improve their problem solving skills by motivating them to participate in various technical events such as project contests, Hackathons and coding competitions organized by the institution and other organizations.

JECC follows the discussion method in many of the subjects as it makes the students to think wide and participate by coming up with opinions & suggestions to check their current knowledge. Quiz Competitions are organized to promote scholastic excellence and to provide a venue for interaction among various student bodies.

File Description	Document
Upload any additional information	View Document
Link for additional information	View Document

2.3.2 Teachers use ICT enabled tools for effective teaching-learning process.

Response:

2.3.2 Teachers use ICT enabled tools for effective teaching-learning process.

JECC uses ICT enabled tools for : effective teaching - learning process, to implement new teaching techniques, to help students work collaboratively and thus develop higher-order thinking skills, to encourage students to be engaged in the learning process, to assist students who have various learning styles and special needs and to expose students to a broad range of information and expertise.

Using technology in our classrooms has helped both teachers and students to acquire essential skills. Teachers use different apps or trusted online resources to enhance the traditional ways of teaching and to keep students more engaged.

The following methods are adopted in the institution in the teaching-learning process:

1. The use of multimedia teaching aids by the faculty like LCD projectors, videos, PPTs, simulations, internet enabled computer/laptops systems in classrooms creates the best learning environment for the students. The Google classroom is used to manage and post course related information-learning material, quizzes, lab submissions, evaluations, assignments and so on. Lab manuals are mailed to students well in advance of the time the experiment is performed.
2. The classrooms and laboratories are equipped with LCD projectors, computer facility, projector screen, audio system, laptop connecting facility and uninterrupted power supply (UPS).
3. The faculty members have moved from the traditional blackboard teaching, to using resources such as NPTEL, e-books, technical magazines and journals to keep the students actively involved in the classroom session.

4. The institution has provided 33 ICT enabled classrooms.
5. The college has provided internet and Wi-Fi facility with 100Mbps internet band width for students and faculty in the campus and hostels.
6. The institution has a digital library, which helps the students to access NPTEL (National Program on Technology Enhanced Learning) lectures and study materials.
7. The institution has well equipped seminar halls for each Department.
8. A specialized computer laboratory with an internet connection has been provided to promote independent learning.
9. MAC-ID based Wi-Fi facility for access to the internet is provided on individual laptop and mobile devices.
10. All the Departments conduct seminars, workshops and hold guest lectures on new developments in the core subjects for effective teaching and learning in the course of each semester.
11. A detailed academic plan, and multiple choice questions with solutions, are made available in the campus automation software Campusbook. All students can access the Campusbook through their login id.

File Description	Document
Upload any additional information	View Document
Provide link for webpage describing the ICT enabled tools for effective teaching-learning process	View Document

2.3.3 Ratio of students to mentor for academic and other related issues (Data for the latest completed academic year)

Response: 22:1

2.3.3.1 Number of mentors

Response: 69

File Description	Document
Upload year wise, number of students enrolled and full time teachers on roll.	View Document
mentor/mentee ratio	View Document
Circulars pertaining to assigning mentors to mentees	View Document

2.4 Teacher Profile and Quality

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

Response: 88.48

File Description	Document
Year wise full time teachers and sanctioned posts for 5years(Data Template)	View Document
List of the faculty members authenticated by the Head of HEI	View Document
Any additional information	View Document

2.4.2 Average percentage of full time teachers with Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. during the last five years (consider only highest degree for count)

Response: 10.15

2.4.2.1 Number of full time teachers with Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. year wise during the last five years

2019-20	2018-19	2017-18	2016-17	2015-16
18	13	10	8	6

File Description	Document
List of number of full time teachers with Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. and number of full time teachers for 5 years (Data Template)	View Document
Any additional information	View Document

2.4.3 Average teaching experience of full time teachers in the same institution (Data for the latest

completed academic year in number of years)

Response: 8.08

2.4.3.1 Total experience of full-time teachers

Response: 751

File Description	Document
List of Teachers including their PAN, designation, dept and experience details(Data Template)	View Document
Any additional information	View Document

2.5 Evaluation Process and Reforms

2.5.1 Mechanism of internal assessment is transparent and robust in terms of frequency and mode

Response:

The academic calendar is prepared for every semester in line with the University calendar, which provides the information on scheduled timetables for internal assessments, model examinations and the tentative schedule of University practical examinations.

The Institution strictly follows the evaluation procedure prescribed by the affiliating University. As per the guidelines of University, it is mandatory to conduct internal tests twice in each semester and the internal marks obtained are to be entered in the web portal of the university within the stipulated time.

The following actions are taken for the fair conduct of test and also for the transparent and robust evaluation of the students:

- In this respect, the Institute circulates the university circulars/notifications, the evaluation process and all the academic related documents published in the university website among the students, faculty members and administrative staff from time to time. This is available on the notice boards as well as on the website of the Institute (campus book).
- Student performance is evaluated with continuous assessment and end semester assessment.
- Schedule and syllabus of series examination and end semester examination and assignment are communicated to students well in advance.
- The first and second series examinations are conducted within the scheduled date as prescribed by the university academic calendar
- The question paper pattern for the internal examination has been standardized by the institution with the help of IQAC. The question paper pattern is similar to that of University end semester question papers.

- 3 sets of question papers are prepared by each faculty member and the IQAC selects the question paper from among them for the internal examination.
- Question papers are set based on Course outcomes and are approved by Heads of the Departments.
- Internal test answer scripts are returned within a week from the actual exam date.
- The student can approach the teachers in case they need clarification on the award of marks based on the scheme of valuation discussed in the class.
- The mark list for Internal Assessment is prepared and displayed on the notice board.
- The Assessment marks of the students are updated in the campus book and student marks are intimated to respective parents through posts/SMS.
- Retests are conducted for students who fail to attend any one of the internal exams with a valid reason with proof.
- The academic performance and attendance of each student is maintained and recorded in respective Departments which can be accessed by students, parents, faculty, HODs and the Principal.

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

2.5.2 Mechanism to deal with internal/external examination related grievances is transparent, time-bound and efficient

Response:

College Level:

There is complete transparency in the internal assessment. The criteria adopted is as directed by the University.

- Internal assessment tests are conducted each semester as per the university academic calendar.
- After the completion of the internal assessment tests the marks are published in the Department notice board as well on the college website (campus book).
- In case of any grievance regarding the internal assessment, the student is free to interact with the

concerned faculty and get it resolved. If it is not resolved by the faculty concerned the students can approach the Head of the Department.

- The unresolved grievance, if any, is referred to the institution level Grievance Redressal Committee.
- At the end of each semester, the internal assessment marks of all the students are verified by the Principal before uploading it in the university portal.
- Attendance is mandatory for each course. As per the university norms 75% attendance is mandatory for writing the end semester examination. However in case of medical grounds or long illness or major personal tragedies/contingencies the college Principal can relax the minimum attendance requirement to 60%, to write the end semester examination, provided that he/she submits an application with proper documents.
- Internal assessment is also done for the laboratory courses which includes continuous evaluation of day to day laboratory performance, viva performance and the promptness in submitting the record of the students.
- The marks/grade scored by the student for each experiment is indicated in the observation/record.

At university level:

Students can express grievances by applying for the following evaluation procedure:

Re-evaluation:

- If the students are not satisfied with the marks awarded, they can apply for re-evaluation through the examination branch at the institution.
- The University provides the students with an option of obtaining a photocopy of their answer sheets.
- The results of Re-evaluation are announced as per the university norms.
- The revaluation fee is reimbursed by the University to the students in case of improvement in the grades in comparison to the first evaluation.

Other types of grievances like data missing in the question papers, question asked from outside the syllabus, toughness of the question paper etc., are communicated to the Controller of Examinations by the concerned faculty through the web portal on the same day of the conduct of examination, after getting the approval of the HOD's concerned and the Principal, for necessary action.

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

2.6 Student Performance and Learning Outcomes

2.6.1 Programme and course outcomes for all Programmes offered by the institution are stated and displayed on website and communicated to teachers and students.

Response:

The institution has adopted the Outcome Based Education (OBE) in its teaching, learning and evaluation process and strives for continuous improvement.

The Program Outcomes (POs) are defined by National Board of Accreditation (NBA) are common for all programs across departments and are customized for applicability to the respective program. The Program Specific Outcomes (PSOs) are framed by the respective department through brainstorming in the Department Academic as well as Advisory Committee. The Course Outcomes (COs) are defined in the syllabus of each subject.

Consequently, Program Outcomes, Program Specific Outcomes and Course Outcomes for all the programs offered by the institution are stated and displayed on the college website-department wise, from the first year to the fourth year for communicating with teachers, students and other stakeholders.

Mechanism of Communication:

Program outcomes and program specific outcomes for a particular program are stated displayed and communicated through various ways such as:

1. Communicated in departmental faculty meeting.
2. Displayed in departmental webpage of institutional website Published in Students Lab Record Displayed in Laboratories.
3. Displayed in class rooms, Staff rooms and in the rooms of Head of the Departments.
4. Displayed in departmental library
5. Displayed in department notice boards
6. Incorporated in Campus Book (Campus Automation software)
7. Communicated in class committee meeting
8. Course Outcomes are displayed in Lesson plan, Lab records, internal exam question papers and course file.

File Description	Document
Upload COs for all Programmes (exemplars from Glossary)	View Document
Upload any additional information	View Document
Past link for Additional information	View Document

2.6.2 Attainment of programme outcomes and course outcomes are evaluated by the institution.

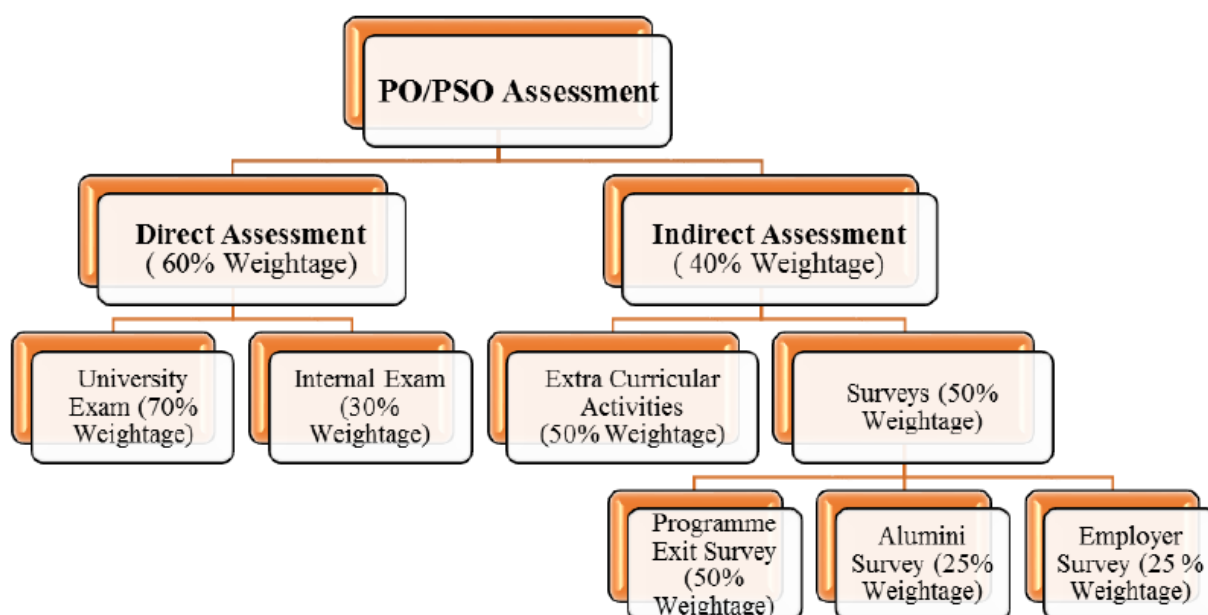
Response:

The institution evaluates its POs and PSOs by the following ways.

1.Direct assessment method

2.Indirect assessment method

The following figure shows the entire process of PO-PSO evaluation.



DIRECT ASSESSMENT METHOD

The departments under this institution conduct two internal examinations and two assignments to assess the attainment of the course outcomes (CO) and in turn contributes to the attainment of the programme outcomes (PO) and Programme Specific Outcomes (PSO).

Attainment of PO's using direct assessment method is done by calculating the weighted average of

COs attained using the CO-PO mapping of all courses.

To facilitate continuous improvement in attainment of COs, target levels are set for each CO by the faculty based on the previous student performance and nature of the course.

NAAC

PO and PSO assessment tools

Assessment Method	Type of Assessment	Course Type	Process of Assessment	Minimum Frequency of Assessment
Direct Assessment method (60% weightage)	Internal	Theory course	Series Test	2 per course
			Assignment	2 per course
		Practical course	Daily performance and record	Every lab class
			Viva	Every lab class
	University	Theory course	Examination with questions set by external examiners	1 per course
			Practical course	University lab exam
		Seminar	Presentation	1 per course
			Seminar Report	1 per course
		Project	Zeroth Review	1 per course
			Interim Review	1 per course
			Final Review	1 per course
			Evaluation by Guide	Continuous evaluation
	Viva Voce	Assessment by external examiner	1 per course	
	Indirect method (40% weightage)	Surveys (50%)	Programme Exit Survey	
Employer Survey			Once in two years	
Alumni Survey			Once in a year	
Extracurricular Activities (50%)		Programs and Participation in various technical and non-technical activities		Once in a year

INDIRECT ASSESSMENT METHOD

PO attainment using indirect assessment method includes the following ways:

1.Exit Surveys are conducted from the passed out students in each academic year

2.The co-curricular activities of students.

3.Feedback obtained from the workshops and seminars conducted to bridge the gap between the curriculum and POs.

4.Alumni Survey

The overall PO attainment can be calculated by assigning appropriate weightages to the direct and indirect assessment methods.

File Description	Document
Upload any additional information	View Document
Paste link for Additional information	View Document

2.6.3 Average pass percentage of Students during last five years

Response: 73.83

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

2019-20	2018-19	2017-18	2016-17	2015-16
365	340	319	381	335

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

2019-20	2018-19	2017-18	2016-17	2015-16
490	414	518	496	452

File Description	Document
Upload list of Programmes and number of students passed and appeared in the final year examination (Data Template)	View Document
Upload any additional information	View Document
Paste link for the annual report	View Document

2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process	
Response: 3.5	
File Description	Document
Upload database of all currently enrolled students (Data Template)	View Document

Criterion 3 - Research, Innovations and Extension

3.1 Resource Mobilization for Research

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

Response: 40.27

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

2019-20	2018-19	2017-18	2016-17	2015-16
0.59	24.96	2.00	0	12.72

File Description	Document
List of endowments / projects with details of grants	View Document
e-copies of the grant award letters for sponsored research projects / endowments	View Document
Any additional information	View Document

3.1.2 Percentage of teachers recognized as research guides (latest completed academic year)

Response: 9.68

3.1.2.1 Number of teachers recognized as research guides

Response: 9

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

3.1.3 Percentage of departments having Research projects funded by government and non government agencies during the last five years

Response: 30

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

2019-20	2018-19	2017-18	2016-17	2015-16
2	4	2	0	1

3.1.3.2 Number of departments offering academic programmes

2019-20	2018-19	2017-18	2016-17	2015-16
6	6	6	6	6

File Description	Document
Supporting document from Funding Agency	View Document
List of research projects and funding details	View Document
Any additional information	View Document
Paste link to funding agency website	View Document

3.2 Innovation Ecosystem

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

Response:

JECC has created an ecosystem for innovation, creation and transfer of knowledge by establishing R&D cell, Incubation center and entrepreneur cell, Financial Support system, Innovation Laboratory and MoU with external agencies. Institute is making concerted effort to create a veritable infrastructure of learning that would catalyze the holistic development of student at the UG. PG level. Technical events such as technical quiz, project exhibition, paper presentations, poster etc are organized to tap the talents of students.

Research and Development Cell takes initiative to support and inculcate faculty members to apply for research projects to different funding agencies, RPS etc. R&D organizes FDP, STTP, Technical Workshops, Seminars, National and International Conferences for creation and transfer of knowledge among the students and faculty members. R&D supports research publication of the faculty in peer reviewed, UGC approved journals and conference proceedings.

IEDC is an active student-run cell under JECC, that seeks to create and promote innovation and entrepreneurship skills among the students. The main objectives of IEDC is to inculcate entrepreneurial orientation among students through formal and non-formal programmes and to enhance interpersonal and leadership skills by organising workshops, invited lectures, project exhibitions etc.

TBI is setup to promote innovation and entrepreneurship by converting and translating technology ideas in various disciplines of science and engineering into products, processes and services for commercial exploitation and for the benefit of society. TBI facilitate incubation of new enterprises with innovative technologies and providing them with physical, technical, managerial and networking supports and services.

Innovation Laboratory:Fab lab has started a mini fab lab in 2009 with support of KTU and KSUM. It provides a widespread access to modern man of investigation. They began as an outreach projects from MIT's Centre for Bits and Atoms (CBA) and became into collaborative and global network.

JECC TALK:Innovative and informative talks by the staffs of Jyothi Engineering College titled 'JECC Talk Series' in association with Media Catholica. JECC Talk Series is exclusively targeting the public to get updated with the recent technologies.

Tech Talk: Innovative discussion with the socially relevant and recent research topic by experts from industry or academicians. Tech talk is exclusively targeting the public and young researchers to be updated with the recent technologies and to further develop their Prototypes.

Library Resource: has a good collection of 40000+ books. The library provides IP enabled access to E-books from Wiley Online Library and E-Journals in Engineering & Technology. **Digital Repository** consist of open source software, to promote research activities in the campus.

ADD-ON COURSES is offered to students in association with NPTEL. It aims at imparting crucial job skills to the students through various certificate programmes and also encourages in developing the industry related skill development programs by external agencies and from the Govt./Non-Govt sectors

Financial Assistance Policy: JECC provides Research Incentive Scheme (RIS) to the faculty, scholars and students. RIS is a means to assist with research activities or reward staff for successful publication or presentation of research outputs, funded project, Patent etc.

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

3.2.2 Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the last five years

Response: 6

3.2.2.1 Total number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship year-wise during last five years

2019-20	2018-19	2017-18	2016-17	2015-16
4	1	0	1	0

File Description	Document
Report of the event	View Document
List of workshops/seminars during last 5 years	View Document
Any additional information	View Document

3.3 Research Publications and Awards

3.3.1 Number of Ph.Ds registered per eligible teacher during the last five years	
Response: 0.78	
3.3.1.1 How many Ph.Ds registered per eligible teacher within last five years	
Response: 7	
3.3.1.2 Number of teachers recognized as guides during the last five years	
Response: 9	
File Description	Document
List of PhD scholars and their details like name of the guide , title of thesis, year of award etc	View Document
Any additional information	View Document
URL to the research page on HEI website	View Document

3.3.2 Number of research papers per teachers in the Journals notified on UGC website during the last five years				
Response: 0.2				
3.3.2.1 Number of research papers in the Journals notified on UGC website during the last five years.				
2019-20	2018-19	2017-18	2016-17	2015-16
16	7	0	0	0

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

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

Response: 0.62

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

2019-20	2018-19	2017-18	2016-17	2015-16
12	10	23	9	16

File Description	Document
List books and chapters edited volumes/ books published	View Document
Any additional information	View Document

3.4 Extension Activities

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

Response:

The institute's vision envisages offering sustainable livelihoods to enhance the well-being of the neighborhood community through knowledge, innovation and transformative actions and to develop ethical and socially responsible engineers who contribute to society and work in harmony with nature. Conforming to the vision, the institute encourages the NSS wing of the Institute, which has been functional since the last decade, with a mandate to carry out extension activities in pursuit of its service to community and society. There have been multifarious activities in the Institute involving the students with the objective of sensitizing them about various social issues and strengthening community participation for holistic development.

1) Various initiatives taken to sensitize students towards social issues : Issues related to Environment and Sustainability are taken care of in the Engineering curriculum through courses such as Environmental Science.

The Institute is proactive in sensitizing and promoting gender equality. Women's Day, Yoga Day, etc. are celebrated as part of Gender sensitization programmes. The Institute, in its outreach programmes, always gives priority to the needs of the marginalized people especially women and children from the under privileged sections of society. The beneficiaries of Massive Charity Drives including both cash as well as gifts (clothes, food and student materials) were -Missionaries of Charity and Bibekananda Bani Prachaar Samity.

2) Activities undertaken to engage faculty, students and staff in the neighbourhood community are:

a) Cleanliness awareness- In keeping with the Swacchh Bharat initiatives all across the country.

Since 2017, students voluntarily carried out Swacchh Bharat cleanliness drives within and around the college campus.

b) Awareness of the Environment

The Institute is striving hard to inculcate environment consciousness among students, faculty and staff members. On Multiple occasions, tree plantation drives were taken up by the NSS team in the last three years. E-Waste collection is carried out through e-waste Re-cycle bins placed around the campus. 2nd Battalion, NDRF under the banner of NSS conducted multiple workshops for creating awareness and preparedness for Disaster Management. Campaigns on "No to Plastic" have been carried out by the students in the campus.

c) **Health**

An Awareness Week is celebrated every year to create awareness about the importance of using helmets for those on two wheelers. Health was focused upon in keeping with the Swasth Bharat initiatives, students reached out to villagers in Dashirbad, Durgapur in 2017 as part of Outreach Programme. Over the last 3 years , there have been Voluntary Blood Donation Drives. More than 100 students and faculty donated blood. In 2018, a Thalassemia Awareness Workshop was organized in collaboration with the Thalassemia Management Forum, Durgapur Chapter. For the last two years in 2018 and 2019, Voluntary Organ Donation Awareness Programmes were organized in association with some NGOs and the Mission Hospital Durgapur.

3) Learning of the students from above Extension Activities: Build up involvement and a fostering attitude to contribute towards societal issues and community problems. Develop a sense of social responsibility and interest in environment-related issues and cater to the students holistic development.

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

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

Response: 1**3.4.2.1 Total number of awards and recognition received for extension activities from Government/ Government recognised bodies year-wise during the last five years.**

2019-20	2018-19	2017-18	2016-17	2015-16
0	1	0	0	0

File Description	Document
Number of awards for extension activities in last 5 year	View Document
e-copy of the award letters	View Document
Any additional information	View Document

3.4.3 Number of extension and outreach programs conducted by the institution through NSS/NCC, Government and Government recognised bodies during the last five years**Response: 42****3.4.3.1 Number of extension and outreach Programmes conducted in collaboration with industry, community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., year-wise during the last five years**

2019-20	2018-19	2017-18	2016-17	2015-16
12	10	4	6	10

File Description	Document
Reports of the event organized	View Document
Number of extension and outreach Programmes conducted with industry, community etc for the last five years	View Document
Any additional information	View Document

3.4.4 Average percentage of students participating in extension activities at 3.4.3. above during last five years

Response: 31.94

3.4.4.1 Total number of Students participating in extension activities conducted in collaboration with industry, community and Non- Government Organizations such as Swachh Bharat, AIDs awareness, Gender issue etc. year-wise during last five years

2019-20	2018-19	2017-18	2016-17	2015-16
774	1060	160	221	465

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

3.5 Collaboration

3.5.1 Number of Collaborative activities for research, Faculty exchange, Student exchange/ internship per year

Response: 0

3.5.1.1 Number of Collaborative activities for research, Faculty exchange, Student exchange/ internship year-wise during the last five years

2019-20	2018-19	2017-18	2016-17	2015-16
0	0	0	0	0

File Description	Document
e-copies of related Document	View Document
Details of Collaborative activities with institutions/industries for research, Faculty exchange, Student exchange/ internship	View Document
Any additional information	View Document

3.5.2 Number of functional MoUs with institutions, other universities, industries, corporate houses etc. during the last five years

Response: 23

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

2019-20	2018-19	2017-18	2016-17	2015-16
8	5	3	3	4

File Description	Document
e-Copies of the MoUs with institution/ industry/corporate houses	View Document
Details of functional MoUs with institutions of national, international importance, other universities etc during the last five years	View Document
Any additional information	View Document

Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

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

Response:

The institution provides sufficient amenities as per the norms of AICTE and Kerala Technological University. As per the requirement, the management has provided and enhanced the infrastructure of the institution from time to time.

The institution is spread across 38.49 acres campus with abundant green landscape with 34759m² built up carpet area and is located in the Thrissur District of Kerala which is easily accessible to the public through train and bus.

Class Rooms: The institution has 33 class rooms with ICT enabled facilities such as LCD projectors, smart interactive board and Wi-Fi and 14 tutorial rooms for teaching and learning process.

Laboratories: There are 42 Laboratories and a central workshop. The laboratories are equipped with adequate number of equipments and machines. Students are allowed to carry out mini projects and major projects in the respective laboratories in different time slots.

Seminar Hall: The institution has two common air-conditioned seminar halls and department seminar halls for the purpose of conducting guest lectures, seminars and other departmental activities.

Board Room: The institution has an air conditioned Board Room with round table attached with cafeteria in the Administrative Block itself with a seating capacity for 30 persons.

Auditorium: The institution has an auditorium with a seating capacity of 850 and equipped with LCD projector, screen and audio system with multimedia capability.

Computing Equipments: The institution has 806 computers, 16 laptops, 5 photocopier, 40 printers, 3 scanners, 127 numbers CC cameras to facilitate computing and internet browsing and surveillance.

Internet and WI-FI: The institution is completely enabled with Wi-Fi facility and the institution has upgraded its internet speed to 100 Mbps (ASIANET). An additional 20 Mbps (BSNL) dedicated internet facility is also provided.

Training and Placement Facility: The institution has an active Training and Placement Cell, which is headed by a qualified and experienced Placement Officer. Department level coordinators are identified in each department to coordinate the activities with the placement cell

Library: The institution has a fully automated library with 12708 titles, 37731 books, 67 printed national journals, 11 printed international journals and 2012 CDs in its inventory along with e-journals and online e-resources and these resources are made available to the students and faculty members of the institution.

Hostel: The institution provides hostel facilities for both girls and boys. Girls hostel with 147 rooms having a capacity of 329 and boy's hostel with 182 rooms facilitating 412 students is situated within the campus.

Transportation Facility: The Institution provides transportation facility for both students and staff. There are 20 buses which take care of commutation of about six hundred students from various locations. There is one exclusive Van for senior staff.

The additional facilities provided by the institution are FAB Lab, Chapel, Bank, Language lab, Canteen, Cafeteria, Alumni Corner, Technology Business Incubator, IEDC and English & Foreign Language Institute (EFLI) supported by Cambridge University

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

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

Response:

The role of physical activities such as athletics, games, weight training etc. will be helpful for one's personality development and good health. We have excellent facilities to conduct different sports and games with good standards and it will be a good experience for our students. All these facilities are provided and easily accessible to the students in the college compound.

There are many facilities to keep our students involved and it helps to maintain good health condition.

Football

We have a football field with a measurement of 100-meter length and 70-meter width and inside the field. The field is well maintained by cleaning and cutting the grass in time. Football is the most popular game in the world and its popularity also reflects in our students. We have a physical education teacher with an AIFF license in football coaching and he is training the college football team with all the required equipment.

Basketball

Basketball is equally popular among college boys and girls because both of them are highly involved in playing this game in the evening and for competition. We have a dedicated P.E teacher and two basketball court with cement floor and acrylic fibre glass backboard with safety padding.

Table Tennis

Table tennis is also a popular game in college. The game played by a large no. of students in the evening. We have some experienced professional players and an ITTF standard table to help the improvement of players in every aspect. Our table tennis college team also achieved several trophies in the university zonal level tournaments.

Cricket

Cricket as we all know is the most popular game in our country. On our campus, we have a natural clay centre wicket and a 50-meter boundary. We also have 22 yards concrete pitch for nets practice.

Handball

The College campus has a handball court with natural grass which is 40 meter in length and 20 meter in width. Also, two standard metal goals are set inside the court. Our college has a handball team with a number of excellent players. The team is newly formed to participate in university zonal level competition.

Sports Activities

Students are encouraged to participate in sports activities. The university is giving activity points if the student has effectively participated. Our college provides facilities/grounds for various indoor and outdoor games. We are also planning to host some inter-collegiate games and tournaments in the coming days to develop a spirit of healthy competition.

Special Achievements: We are proud to have university gold medal winners in the 4x100 meter relay in APJKTU athletic meet. Also we have some national level players for fencing and Pen-Sak silat events.

Gymnasium: To build a sound body and mind all the athletes and players are given special attention to health and fitness. A modern multi-machine gymnasium with 1000sq. Feet area 4 no.s multi-station training machines and 12 no.s single station training machines had been set up in the hostel rooftop and we have appointed a certified gym trainer for the same.

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

4.1.3 Percentage of classrooms and seminar halls with ICT- enabled facilities such as smart class, LMS, etc. (Data for the latest completed academic year)

Response: 78.95

4.1.3.1 Number of classrooms and seminar halls with ICT facilities

Response: 30

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

4.1.4 Average percentage of expenditure, excluding salary for infrastructure augmentation during last five years(INR in Lakhs)

Response: 12.08

4.1.4.1 Expenditure for infrastructure augmentation, excluding salary year-wise during last five years (INR in lakhs)

2019-20	2018-19	2017-18	2016-17	2015-16
43.25	30.73	90.74	60.22	287.89

File Description	Document
Upload Details of budget allocation, excluding salary during the last five years (Data Template)	View Document
Upload audited utilization statements	View Document

4.2 Library as a Learning Resource

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

Response:

Jyothi Engineering College Central Library has an area of 1028.91 m² and is housed in the administrative block spanning 2 floors. It has a seating capacity for 160 clientele and provides information in a serene setting. The library subscribes to 92 journals and has got a collection 38314 volumes consisting of 12998 titles in different domains of Science and Technology.

Library is automated using in house developed library management software integrated with the management information system of the institute. The College Library follows Open Access System. The status of a book can be identified by searching Online Public Access Catalogue (OPAC) in the campus book software. A good collection of reference books are also available in the library along with Newspapers and Periodicals. UG and PG students can borrow 4 and 6 books respectively from the Library. The books are lend for a period of 14days which can be renewed further. The faculty members can borrow 8 books which are lend for a period of 3 months. The books are bar-coded which is printed using Argox Printer having Argobar Pro Software. The smartcard of the readers and Barcode in the books are scanned simultaneously and the books can be issued/returned/renewed through Campus Book Software. Stock

verification is usually carried out on summer vacation.

A good collection of 2060 CD-ROMs and Electronic journals can be accessed through Digital Library. In the digital library we have 36 computers connected to Internet. The library provides IP enabled access to E-books from Wiley Online Library, Proceedings Order Plan (POP) from IEEE and E-Journals in Engineering & Technology by the following three major publishers

1. IEEE ASPP by IEEE
2. Elsevier Engineering+ Computer Science by Elsevier
3. ASCE by American Society of Civil Engineers

The library has membership (Membership No. IM-1353) in Developing Library Network (DELNET) which provides access to Union Catalogue of Books & Journals, Interlibrary Loan and Document Delivery Services etc. It maintains an Online Union Catalogue of books available in its member-libraries, etc. It has 2,92,70,150 bibliographic records in the union catalogue of books.

Library also subscribes to web courses and video lectures developed under National Programme on Technology Enhanced Learning (NPTEL), which is funded by Ministry of Human Resource Development (MHRD), Government of India. This is being carried out by seven IITs and IISc Bangalore as a collaborative project.

Total Number of Web Courses - 123

Total Number of Video Courses- 291

Library has a membership in National Digital Library of India (NDLI) which is sponsored and mentored by Ministry of Education, Government of India, through its National Mission on Education through Information and Communication Technology (NMEICT).

Central Library also has membership in e-ShodhSindhu; consortium for higher education electronic resources which provides access to e-resources of universities, colleges and centrally funded technical institution in India.

JEC Library Digital Repository has been developed with the help of open source software, DSpace (version 1.7.0), in order to collect, preserve and make accessible the scholarly and professional literature. Currently it can be accessed through <http://202.88.225.92/xmlui>

File Description	Document
Upload any additional information	View Document

4.2.2 The institution has subscription for the following e-resources

- 1.e-journals
- 2.e-ShodhSindhu
- 3.Shodhganga Membership
- 4.e-books
- 5.Databases
- 6.Remote access to e-resources

Response: A. Any 4 or more of the above

File Description	Document
Details of subscriptions like e-journals, e-ShodhSindhu, Shodhganga Membership , Remote access to library resources, Web interface etc (Data Template)	View Document

4.2.3 Average annual expenditure for purchase of books/e-books and subscription to journals/e-journals during the last five years (INR in Lakhs)

Response: 25.1

4.2.3.1 Annual expenditure of purchase of books/e-books and subscription to journals/e- journals year wise during last five years (INR in Lakhs)

2019-20	2018-19	2017-18	2016-17	2015-16
20.83	24.56	28.04	24.31	27.77

File Description	Document
Details of annual expenditure for purchase of books/e-books and journals/e- journals during the last five years (Data Template)	View Document
Audited statements of accounts	View Document

4.2.4 Percentage per day usage of library by teachers and students (foot falls and login data for online access) during the latest completed academic year

Response: 8.69

4.2.4.1 Number of teachers and students using library per day over last one year

Response: 141

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

4.3 IT Infrastructure

4.3.1 Institution frequently updates its IT facilities including Wi-Fi

Response:

JECC IT Infrastructure includes 806 computers. All are connected to the LAN. We have a leased line internet connectivity of 100 Mbps and also under NMEICT there is 20Mbps internet connectivity. We have 30 static IPs available. The network was secured by Cyberoam 300 ING UTM firewall from academic year 2015-16 which we upgraded with Sophos XG 310 Firewall on 2nd May 2021. All departments have their own computer labs and we also have a central computing facility centre where we have 210 computers. JECC is equipped with all necessary computers, projectors, printers etc.

The campus is networked through Optical Fiber, Ethernet and Wi-Fi. Wi-Fi was configured in the campus in the academic year 2015-16 with 30 access points. Additional four access points were purchased in the year 2019-20, which totals the access points to 34.

To provide a prompt IT service we have dedicated four IT-Spocs to each department. Any IT related issues in a particular department will be tackled by them. Also, in order to track the repair of the systems we have a software application which was developed in-house.

Frequency of Update:

Academic Year 2015-16

- 153 PCs were purchased with the following configuration - Intel NUC KIT - Pentium Processor, 4 GB RAM, 500 GB HDD. PCs were used to update the Central Computing Facility.
- 2 PCs were purchased with the following configuration - ASUS - Core i5, 4GB RAM, 500GB HDD.

Academic Year 2016-17

- No Updates

Academic Year 2017-18

- 4 PCs were purchased with the following configuration - HP All-In-One PC, i3 Processor, 4 GB RAM, 1TB HDD
- 5 PCs were purchased with the following configuration - Acer Veriton, i5 Processor, 8GB RAM, 1 TB HDD

- 3 PCs were purchased with the following configuration - Acer Veriton, i7 Processor, 16GB RAM, 1 TB HDD
- 1 PC purchased with the following configuration - Acer Veriton, i7 Processor, 16GB RAM, 128 GB SSD
- 1 APPLE iMac purchased with the following configuration - i5 Processor
- 38 PCs were purchased with the following configuration - Intel NUC KIT - Pentium Processor, 2GB RAM, 500GB HDD

Academic Year 2018-19

- 2 PCs were purchased with the following configurations - Dell Optiplex 3060 Core i5 8th Gen 8500T, 8GB RAM, 1 TB HDD.

Academic Year 2019-20

- No Updates

Total number of computers in the institution connected with the LAN facility is 806.

Wi-Fi

Campus is networked through Optical Fiber, Ethernet and Wi-Fi.

Academic Year 2015-16

- Wi-Fi was configured in the campus in the academic year 2015-16 with 30 access points.

Academic Year 2016-17

- No updates

Academic Year 2017-18

- No updates

Academic Year 2018-19

- No updates

Academic Year 2019-20

- Four additional access points were purchased

File Description	Document
Upload any additional information	View Document

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

Response: 2:1

File Description	Document
Upload any additional information	View Document
Student – computer ratio	View Document

4.3.3 Bandwidth of internet connection in the Institution

Response: A. 750 MBPS

File Description	Document
Upload any additional Information	View Document
Details of available bandwidth of internet connection in the Institution	View Document

4.4 Maintenance of Campus Infrastructure

4.4.1 Average percentage of expenditure incurred on maintenance of infrastructure (physical and academic support facilities) excluding salary component during the last five years(INR in Lakhs)

Response: 32.45

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

2019-20	2018-19	2017-18	2016-17	2015-16
228.46	272.57	246.44	262.44	277.61

File Description	Document
Details about assigned budget and expenditure on physical facilities and academic support facilities (Data Templates)	View Document
Audited statements of accounts	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:

The institution has established systems and procedures for maintaining and optionally utilizing physical, academic and support facilities to enhance the quality of teaching and learning. The institution has a Campus Maintenance System (CMS) where maintenance related issues are discussed and resolved.

Utilization of Laboratory:

Laboratory sessions are carried out in accordance with the schedule as per the university curriculum plan.

In each laboratory, there has a stock register and maintenance of laboratory equipments where each machine / instrument is clearly mentioned so that the proper monitoring and usage of the equipment is assured.

Before students start performing the experiment, laboratory instructor or the faculty in charge will deliver special instructions that are to be followed by the students in handling the equipment / instrument in every laboratory session.

Maintenance of Laboratory:

The laboratory equipments are periodically inspected by a team of technicians / instructors for the accuracy and working conditions. Repair and replacements of equipments has been initiated as and when required. This is a common practice across all the departments.

Cleaning of laboratory floors, machines, equipments and instruments etc., are taken care by both attenders and housekeeping workforce.

A separate Stock Register for each laboratory is maintained and updated with regard to procurement and internal stock transfers. Every year, annual stock verification and inspection has been carried out by the various departments of the institution. The final stock verification and inspection report is submitted to the management for follow up action.

Utilization of Library:

The institution has a Library Committee which monitors the procurement and regular follow ups to ensure effective utilization of library and maintain all reference books, articles, text books, magazines, competitive examination books, journals, e-books, e-magazines and e-journals.

Maintenance of Library:

Using campus book software maintenance of books, journals and periodicals, stacking, shelf arrangement, clearing, stock verification are carried out. Binding of documents and reconditioning of old books is also a part of the library maintenance. The college Librarian is a Ph.D holder in Library and Information Science who attended number of national and international conferences. He has publications in reputed journals.

Sports Complex Utilization:

Physical Education instructor along with one faculty from each department meet and to discuss sports related issues such as planning and organizing events, training, shortlisting of sports students and necessary preparations for the sports activities. Students are allowed to practice before and after regular class hours.

Maintenance of Sports Facilities:

Maintenance of sports facilities includes preparation of pitch for cricket, ground for various other sports including athletics, kabbadi, kho-kho, volley ball, basket ball etc.

Utilization of Computers:

All the departments in the institution are equipped with computer laboratories and these laboratories are used by the students in accordance with the schedule prepared by the particular department as per the curriculum.

Maintenance of Computers:

The Computer Centre is responsible for maintaining the computer systems and other IT equipments such as Projectors, Printers, Photo Copier machines, Scanners, Servers, Bio-metric machines etc. A UPS backup facility is provided against power failures and other related faults to avoid any damage during power outages.

Classroom Utilization:

As per the AICTE norms, each department is provided with the required number of classrooms for conducting class room activities. The classroom allocation in accordance with class time table is done by HOD of that particular department.

Classroom Maintenance:

The podium, black board, benches and windows are cleaned everyday by housekeeping staff. The project office is to identify any problem related to the infrastructure maintenance of the class rooms and conveyed to Project Manager for necessary actions.

File Description	Document
Upload any additional information	View Document

NAAC

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 last five years

Response: 16.91

5.1.1.1 Number of students benefited by scholarships and free ships provided by the institution, Government and non-government bodies, industries, individuals, philanthropists during the last five years (other than students receiving scholarships under the government schemes for reserved categories)

2019-20	2018-19	2017-18	2016-17	2015-16
267	287	352	330	244

File Description

Document

upload self attested letter with the list of students sanctioned scholarship

[View Document](#)

Upload any additional information Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years (Data Template)

[View Document](#)

5.1.2 Average percentage of students benefitted by scholarships, freeships etc. provided by the institution / non- government agencies during the last five years

Response: 26.35

5.1.2.1 Number of students benefited by scholarships and free ships provided by the institution, Government and non-government bodies, industries, individuals, philanthropists during the last five years (other than students receiving scholarships under the government schemes for reserved categories)

2019-20	2018-19	2017-18	2016-17	2015-16
570	508	417	501	274

File Description	Document
Upload any additional information	View Document
Number of students benefited by scholarships and freships institution / non- government agencies in last 5 years (Date Template)	View Document

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

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

Response: A. All of the above

File Description	Document
Details of capability building and skills enhancement initiatives (Data Template)	View Document
Any additional information	View Document
Link to Institutional website	View Document

5.1.4 Average percentage of students benefitted by guidance for competitive examinations and career counselling offered by the Institution during the last five years

Response: 8

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

2019-20	2018-19	2017-18	2016-17	2015-16
236	85	72	157	132

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

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

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

Response: B. 3 of the above

File Description	Document
Upload any additional information	View 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: 24.17

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

2019-20	2018-19	2017-18	2016-17	2015-16
110	126	150	106	80

File Description	Document
Upload any additional information	View Document
Self attested list of students placed	View Document
Details of student placement during the last five years (Data Template)	View Document

5.2.2 Average percentage of students progressing to higher education during the last five years

Response: 34.69

5.2.2.1 Number of outgoing student progression to higher education during last five years

Response: 170

File Description	Document
Upload supporting data for student/alumni	View Document
Details of student progression to higher education (Data Template)	View Document
Any additional information	View Document

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

Response: 100

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

2019-20	2018-19	2017-18	2016-17	2015-16
4	5	2	5	7

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

2019-20	2018-19	2017-18	2016-17	2015-16
4	5	2	5	7

File Description	Document
Upload supporting data for the same	View Document
Number of students qualifying in state/ national/ international level examinations during the last five years (Data Template)	View Document
Any additional information	View Document

5.3 Student Participation and Activities

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

Response: 6

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

2019-20	2018-19	2017-18	2016-17	2015-16
1	1	0	2	2

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

5.3.2 Institution facilitates students' representation and engagement in various administrative, co-curricular and extracurricular activities following duly established processes and norms (student council, students representation on various bodies)

Response:

The college has an active student association consisting of student members. The student members of the association are elected through the democratic process of election in which students cast their votes to candidates of their choice to select the class representative. From the class representatives, the student union is formed. The constitution of the student association comprises Chairman, Vice Chairperson general secretary, Joint Secretary, Magazine editor, Arts secretary two UUCs, and year wise representatives. The association is monitored by senior faculty members who are responsible for the smooth conduct of the association meetings and events. The student association plays a dominant role in many activities related to fine arts, sports, and other co-curricular activities of the department and the students. Various co-curricular activities organized by the association include Special Lectures by experts, Seminars, Workshops, National Level conferences and Intercollegiate meet to develop the personality and skills of the student's ability. Eminent speakers and industrialists deliver speeches on topics relevant to the current educational scenario. Student members of the associations also observe important days like National Festivals, Birth/Death Anniversaries of important leaders, International Women's Day, International Yoga Day, Sports Day,

Teachers Day, Farewell Party, World AIDS Day, they also organize cultural festivals like Inter-collegiate Meet 'Tharang', College Day, Onam, Christmas Celebration, etc. Students from each department participate in class committee meetings and faculty feedback will be given.

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

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

Response: 7.2

5.3.3.1 Number of sports and cultural events/competitions in which students of the Institution participated year-wise during last five years

2019-20	2018-19	2017-18	2016-17	2015-16
8	6	4	9	9

File Description	Document
Upload any additional information	View Document
Report of the event	View Document
Number of sports and cultural events/competitions in which students of the Institution participated during last five years (organised by the institution/other institutions (Data Template)	View Document

5.4 Alumni Engagement

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

Response:

Jyothi Engineering College has an unregistered Alumni Association (JECAA - Jyothi Engineering College Alumni Association) since 2007. It has strong bonding with the alumni ever since the first batch that passed out. A lush green area in the front of the college called "Alumni Corner" was set up by JECAA and is completely sponsored by them, including the maintenance. The facility is for students to spend their leisure in this park during break times. Our alumni have been very supportive in interacting, networking

and had been constantly in touch with the college and placement department, in particular with job hunts, sponsorships, start-ups, and internships. Their strong presence in the Gulf countries has immensely helped the institution with job offers, admissions, internships, and funding prospects for the discerning students. As our institution is almost two decades old, a number of alumni are in top positions in various fields. We have a few of our former students in honorable positions in the Indian Air force and Navy besides being CEOs in India and abroad. The alumni are invited for webinars / talks / workshops and these interactive sessions help the current prospective students gain a foot in the door to employability and educational opportunities in India as well as abroad. These interactions are also beneficial for the college to keep track of the alumni's progress and identify those we can reach out to, for mentorships. On many occasions, JECAA was able to connect with influential alumni and invite them for campus placements. Our alumni are in touch with current students on social media and share their opinions on blogs, WhatsApp, and forums. This has helped our students in developing their interpersonal and managerial skills. An amount of Rs. 2 lakhs was contributed to CM's Flood Relief Fund to support the victims of the 2018 flood. Every year we are conducting Alumni Meets and maintaining a continuous rapport with alumni members. In connection with these alumni programs football matches, film-making competitions, and various co-curricular activities are also conducted. Our alumni had over many years supported financially the well-deserving students from the economically poor background by providing laptops for the needy ones. In addition to the assistance with the fee payment, there are also several scholarships and endowments sponsored by the alumni to boost the academic excellence of the students. Our strong JECAA aims to instill a sense of pride and loyalty in our current students, which will make them emotionally invested and nudge them to give back to the college, when they leave us, as they move on in their lives. In this strategy lies the motivation as well as reward, for both the alumni and our college.

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

5.4.2 Alumni contribution during the last five years (INR in lakhs)

Response: C. 3 Lakhs - 4 Lakhs

File Description	Document
Upload any additional information	View Document
Link for any additional information	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 and in tune with the vision and mission of the institution

Response:

COLLEGE VISION

Creating eminent and ethical leaders through quality professional education with emphasis on holistic excellence.

COLLEGE MISSION

- To emerge as an institution par excellence of global standards by imparting quality engineering and other professional programs with state-of-the-art facilities.
- To equip the students with appropriate skills for a meaningful career in the global scenario.
- To inculcate ethical values among students and ignite their passion for holistic excellence through social initiatives.
- To participate in the development of society through technology incubation, entrepreneurship and industry interaction.

Jyothi Engineering College (JEC) under Trichur Educational Trust founded by the Catholic Archdiocese of Trichur started functioning at Cheruthuruthy in the year 2002. With visionary management, a team of dedicated faculty, and a set of devoted staff, and with comparable infrastructural and instructional facilities in a quiet and studious rural environment, Jyothi has emerged as a model among the self-financing colleges in Kerala. The college is approved by AICTE and affiliated with APJ Abdul Kalam Technological University (KTU).

JEC has developed a vision and mission statement in consensus with the declared policy of the promoters, 'Empowering through Education'. Here we inspire, nurture and foster to create technology leaders of tomorrow. JEC emphasizes creating eminent and ethical leaders through quality professional education with holistic excellence.

The Management strictly adheres to the recommendations of its Governing Council. The governing council meeting is convened periodically and important aspects of academic and non-academic matters are discussed and decisions are taken to benefit all the stakeholders of the system.

JEC is committed to provide all requirements in curricular and co-curricular areas of Technical Education to our students and mould them with technical knowledge, soft skills, extra-curricular activities, and ethical values to become true professionals of international standards. The College is also committed to striving for continual improvement of its Quality Management System through customer satisfaction duly monitoring their feedback from time to time to achieve Academic Excellence, Total Personality Development, and Social commitment of students, and provide excellent placement opportunities for them. The students are trained for acquiring soft skills and thus make them employable while on campus. Also, to empower our faculty and staff to update their knowledge from time to time for facilitating our

students in their learning process. Faculty members are given representation in various committees/cells nominated by the college council, in the Governing body, in the IQAC, and other committees.

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

6.1.2 The effective leadership is visible in various institutional practices such as decentralization and participative management

Response:

Decentralization

The institution has a mechanism of providing operational autonomy to various functionaries in order to ensure a decentralized governance system.

1. Principal Level

The principal is the member secretary of the Board of Governors and Chairperson of the IQAC. The Principal in consultation with the college council constitutes different committees for planning and implementing different academic, administrative, and related tasks. All academic and operational policies are based on the consensual decision of the Board of Governors, the IQAC, and the college council.

2. Faculty level

Faculty members are given representation in various committees/cells, the Board of Governors, the IQAC, and other committees. Every year, the composition of different committees is changed to ensure uniform exposure of duties for the academic and professional development of faculty members. Following are the different sub-committees that have been constituted by the Principal :

- Strategic Planning Committee - Internal Quality Assurance Cell (IQAC) -Admission Sub-committee
- Library sub-committee · Discipline Management Committee -TBI Committee · Canteen committee
- Research Monitoring and Steering Committee · Purchase Committee -Transport Committee -Hostel Committee

The following committees are constituted in accordance with government guidelines:

- Internal Academic Audit Cell -Internal Complaint Committee · Placement & Training Cell · Grievances and Appeal Committee
- Innovation Entrepreneurship Development Cell (IEDC) - Women's Empowerment Cell / WDC · Anti Ragging Committee ·Right to Information Act Cell - Public Relations Committee -Students Welfare Committee -SC/ST Grievance

3. Student level

Students are empowered to play an important role in different activities. The functioning of different secretaries of students' unions further reinforces decentralization.

Participative management

The institution promotes the culture of participative management at the strategic level, functional level, and operational levels.

• Strategic level:

The Principal, Board of Governors, College council, and the IQAC are involved in defining policies & procedures, framing guidelines and rules & regulations pertaining to admission, examination, discipline, grievance, support services, finance, etc.

• Functional level:

Faculty members share knowledge among themselves, students, and staff members while working in a committee. Principal and faculty members are involved in joint research and have published papers in reputed journals.

• Operational level:

The Principal interacts with Government, University, AICTE, UGC, and external agencies. Faculty members maintain interactions with the concerned departments of the affiliating university. Students and office staff join hands with the Principal and faculty for the execution of different academic, administrative, extension-related, co-curricular, and extra-curricular activities.

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

6.2 Strategy Development and Deployment

6.2.1 The institutional Strategic / Perspective plan is effectively deployed

Response:

Jyothi Engineering College (JEC), set up in 2002, under the aegis of Trichur Educational Trust, founded by the Catholic Archdiocese of Trichur, is a leading Engineering College in Kerala. We are affiliated with APJ Abdul Kalam Technological University and offer various UG and PG courses in engineering.

In the years 2013 and 2014, JEC was ranked the second-best engineering college among the colleges affiliated with Calicut University. In 2016, JEC was accredited by NBA for four B. Tech programmes i.e., Computer science and Engineering, Electronics and Communication Engineering, Electrical and

Electronics Engineering and Mechanical Engineering. In 2019, our Civil Engineering department got NBA accreditation. JEC is also a NAAC accredited institution implying we have a clearly defined process to ensure our desired outcomes are as objective as possible. JEC has recently applied to UGC for Autonomy status.

In line with JEC's stated vision to be an innovation-driven institution, we are in the process of setting up a state-of-the-art incubation centre, Integrated Industrial Incubation Centre (IIIC), in association with TATA Technologies. Additionally, we run a Technology Business Incubator (TBI) and a Fabrication lab (FABLAB) primarily for our students. We plan to offer these facilities to the industry located in and around Thrissur and subsequently the entire state of Kerala, especially the MSMEs located in Thrissur/Kerala. Jyothi Engineering College has set up a centre for Innovation and Entrepreneurship Development (IEDC) under the aegis of Kerala Start-up mission with an aim to provide students with a platform for experimentation and innovation.

Jyothi Engineering College's long-term objectives flow from our stated vision and mission.

Long-term goals

1. To create industry ready "T" professionals, students whose skills and knowledge are both deep and broad, by offering industry-relevant programmes
2. To create student entrepreneurs by providing a conducive start-up ecosystem
3. To create a vibrant, research-driven institution
4. To attain NAAC accreditation with A++
5. To attain NBA accreditation for all programmes
6. To become an autonomous institution of excellence by 2021
7. To achieve deemed university status by 2025

File Description	Document
Upload any additional information	View Document
strategic Plan and deployment documents on the website	View Document
Paste link for additional information	View Document

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

Response:

Organogram

Jyothi engineering college under Trichur Educational Trust (TET) was founded by the Catholic Archdiocese of Trichur. The involvement of effective leadership is achieved through a well-defined system and organizational structure.

The Chairman of the TET is our Metropolitan Archbishop of the Catholic Archdiocese of Trichur His Grace Mar Andrews Thazhath. He aims to impart quality higher education and to boost the promotion of Engineering and Technology education.

The Manager is next who is Msgr. Thomas Kakkassery. A decision-maker of our college, he had been the corporate manager of all educational concerns under the Archdiocese of Trichur.

Next is the Executive Director Fr. Roy Joseph Vadakkan. He is the Secretary and campus head. He is also the project manager and Finance manager of the college. He implements the approved policies and decisions of the TET. He is also the chief warden of our boys' hostel.

Next is the Academic Director Dr. Fr. Jos Kannampuzha. He is the academic head who monitors the overall functioning and growth of the Institute.

Next is Dr. Lazar John, Director of Industry and Human Relations whose job is to maintain a liaison between our college and the allied industries for your industrial training and competitions in various colleges.

Next is the Director of research Dr. Sr. Rose Anitha. She coordinates and implements policies with respect to, research and development.

Next is our Principal Dr. Sunny Joseph Kalayanthankal. He is the executive head of the institution and is vested with the powers to ensure the proper conduct of the academic programmes.

Next is our Administrator Engineer Thomas Mathew who takes care of the administrative part oversees the student admissions and student life on the campus.

Next is Mr. Ratnan, he is the Vice-Principal and also the UG Dean. He takes care of the industrial training correspondence, project duty leaves, and placement training schedules.

Assistant Administrators Mr. Bobby Peter and Lt. Col. Jacob E D assists the administrator in handling tasks like student needs, projects, and academic records. Mr. Bobby Peter is in charge of the college office, canteen, PTA, University affairs and the Govt. affairs for industry relations. Lt. Col. Jacob ED is also the project engineer of the college. Besides he oversees the transportation, security, and the outsourced cleaning agency (CMC)

Next is the System Administrator Mr. Vinod, who maintains the E-governance systems of the campus. He is in charge of our computer lab, TBI, Public Relations dept, JCS, and Fab Lab. He also manages the computer software systems of the college, servers, hardware, maintenance, and ensures strong network connections.

PG Dean Dr. Shijoh V is the dean for MTech students. He had been a guide for several postgraduate students for their projects.

Next is the Placement officer Mr. Bibin Joy, He engages in career counseling classes, external resource personnel for training in aptitude and soft skills.

Next is the HOD's of various departments who are responsible for the teaching and non-teaching staff, day-

to-day academic activities, and administrative functions of the department.

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document
Link to Organogram of the Institution webpage	View Document

6.2.3 Implementation of e-governance in areas of operation

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

Response: A. All of the above

File Description	Document
Screen shots of user interfaces	View Document
ERP (Enterprise Resource Planning) Document	View Document
Details of implementation of e-governance in areas of operation, Administration etc	View Document
Any additional information	View Document

6.3 Faculty Empowerment Strategies

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

Response:

Teaching: Staff Club, Medical Leave, Gratuity, Duty Leave, Compensation Leave, Maternity Leave, Casual Leave, Early leaving permission, Vacation

Medical Leave:

All staff members are eligible for medical leave @ 12 days for every completed year of service after the probation period. Medical leave can be accumulated up to a maximum of 180 days.

Maternity Leave:

All women employees are entitled to maternity leave for a period of 90 days. Complete monthly salary and benefits shall be paid during the period of maternity leave.

Compensatory Leave:

All employees are eligible for Compensatory Leave for work performed in the field or at the place of duty, on official holidays to complete assigned work within the time frame.

Casual leave is granted @ 12days per annum for vacation staff and 15 days for other staff. However, for temporary and probationary staff of each category, the eligible casual leave is only @ 1 day for every completed month of service.

Study Leave (S.L):

Study leave shall ordinarily be granted only to the faculty who have completed at least 3 years of service. Request for S.L will be considered on the merit of the individual case. Prior sanction is required to avail of this leave

Vacation:

All staffs who have put in one year of service are eligible for a six-week vacation per year of which one week will be in the form of Onam holidays and one week in the form of Xmas holidays. Four weeks of vacation shall ordinarily be given during the month of April/May.

Non-teaching: ESI, Staff Club, Medical Leave, Provident Fund, Duty Leave, Compensation Leave, Maternity Leave, Casual Leave, Early leaving permission, Vacation

Provident Fund:

JECC is committed to complying with statutory provisions of Employees Provident Fund Deduction will be made from the salary of employees and will be deposited to the designated provident fund accounts along with the contribution of the organization as per the provisions of the said Act. Employees must comply with the statutory requirements like nomination and can avail of such ensuing benefits as prescribed by law.

ESI: ESI Scheme is that the contributions are related to the paying capacity as a fixed percentage of the worker's wages, whereas, they are provided social security benefits according to individual needs without distinction.

Gratuity: Gratuity is given to an employee who has worked in the college for over five years.

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

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: 1.94

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

2019-20	2018-19	2017-18	2016-17	2015-16
1	7	1	1	1

File Description	Document
Upload any additional information	View Document
Details of teachers provided with financial support to attend conference, workshops etc during the last five years	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: 8.2

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

2019-20	2018-19	2017-18	2016-17	2015-16
13	3	7	11	7

File Description	Document
Upload any additional information	View Document
Reports of the Human Resource Development Centres (UGC ASC or other relevant centres)	View Document
Details of professional development / administrative training Programmes organized by the University for teaching and non teaching staff	View Document

6.3.4 Average percentage of teachers undergoing online/ face-to-face Faculty Development Programmes (FDP)during the last five years (Professional Development Programmes, Orientation / Induction Programmes, Refresher Course, Short Term Course).

Response: 52.91

6.3.4.1 Total number of teachers attending professional development Programmes viz., Orientation / Induction Programme, Refresher Course, Short Term Course year-wise during the last five years

2019-20	2018-19	2017-18	2016-17	2015-16
73	31	61	61	67

File Description	Document
Upload any additional information	View Document
Reports of the Human Resource Development Centres (UGC ASC or other relevant centers)	View Document
IQAC report summary	View Document
Details of teachers attending professional development programmes during the last five years	View Document

6.3.5 Institutions Performance Appraisal System for teaching and non-teaching staff

Response:

Our Appraisal system is an attempt to standardize the system, taking note of the various activities and rendering credit to each of the efforts. The objective at the back of this is to evaluate everything that is done for the college community and to encourage and appreciate the same.

In an effort to recognize and reward the performance of employees, it is the organization's philosophy that the principal component to enhance compensation shall be through annual increments based on performance evaluations. All regular employees are eligible for yearly increments based on the results of their Performance Appraisal conducted annually. Employees are informed in writing about their annual increments after the Performance Appraisal.

Jyothi has incorporated the innovative practice of 360-degree Appraisal in making the appraisal process foolproof and comprehensive. 360-degree Appraisal is a process through which feedback from an employee's subordinates, colleagues, and supervisor(s), as well as a self-evaluation by the employee themselves, is gathered. Since the self-appraisal form is already filled-in, all other stakeholders evaluate the performance of staff based on the following parameters:

- Planning, procedural adherence, and sound judgment
- Academic excellence and competency
- Student engagement

- Peer engagement
- Organizational commitment

The appraisal system accommodates every activity each one undertakes with clear weightage and credit points. This is an exercise to acknowledge and appreciate each one's hard work and contributions to our college community which in turn, will encourage all to engage in more creative and productive activities.

The appraisal system gives the score in the criteria of planning, procedural adherence, technical knowledge, and also the organizational commitment of the staff. It also provides action plans to improve the quality of staff.

A brief note on this review and related counseling provided shall be prepared and signed by both the employee and the HOD/Principal and maintained in the employee's personal file.

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

6.4 Financial Management and Resource Mobilization

6.4.1 Institution conducts internal and external financial audits regularly

Response:

1.Internal Audit

The institution has provided sufficient financial resources for all the departments and this has enabled it to sustain and achieve the institutional objectives. Based on the requirement, heads of departments prepare the annual budget proposal and submit it to the Principal. Accordingly, the central office conducts discussion with HoDs and reviews the budget proposals, and approves it. After that purchase will be made according to the budget proposal submitted by the respective department heads. If any deviation occurs, the Principal will address the issue and give justification and will be followed by the approval. This procedure helps in avoiding unnecessary expenses, effective budgetary control, and optimum utilization of funds. The internal audit is done by an in-house team and will carry out the accounting procedure of internal control of finance on a day-to-day basis. Since the institution follows a good system of internal control like calling quotations, comparison of rates, preparation of purchase order for each and every requirement needed, preparation of wage sheets, all the employee benefits are vouched for conducting and participating in seminars, conferences, faculty development programs, etc. No expenses are incurred without proper approval or sanction by the head of the institution or head of the various departments.

2.External Audit

The institution also has an external audit mechanism carried out by Abraham and Jose Chartered Accountants. This statutory auditor audits the annual account and examines on a test basis evidence like fees collection with the approved list of students on such verification any discrepancies will be discussed and sorted out with the management. Once all financial transactions are accounted for, based on those financial statements like balance sheet and Income and Expenditure Statement are prepared for the financial year. Such financial statements will be signed and approved by the Auditor and Management. Based on the audited financial statements, the auditor will issue a Final Audit Report.

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

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

Response: 4.87

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

2019-20	2018-19	2017-18	2016-17	2015-16
2.09	1.284	0.231	1.021	0.247

File Description	Document
Details of Funds / Grants received from of the non-government bodies, individuals, Philanthropers during the last five years	View Document
Any additional information	View Document
Annual statements of accounts	View Document

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

Response:

Jyothi Engineering College is a private self-financing Engineering College and it has only limited scope for raising funds. The institution doesn't have either grants or aid from the Government or University. It is the responsibility of the Management of Jyothi Engineering College to find out the source of financial resources.

The important source of financial resources is the student fee collection. The state fee regulatory commission has decided the fee structure of the B. Tech program and the college is collecting fees based on the guidelines of the fee regulatory commission and within the framework of the agreement signed between the Government of Kerala and Kerala Catholic Engineering College Management Association. The surplus of the fee income is used for the development of the college.

Another source of fund mobilization is the refundable interest-free deposits for four years provided by the students. There is a clear-cut provision in this respect of the consensual agreement between the Government of Kerala and Kerala Catholic Engineering College Management Association. This provision gives the college an opportunity to mobilize the fund for infrastructure development without an interest burden. The refundable deposit has been suspended for the last two years considering the pandemic situation and the recession in Engineering admission.

There is limited scope for raising funds by sharing college facilities with external agencies like NTA, TCS iON e.t.c. The college has two hostels for gents and ladies. Hostel mess is managed by a committee with student representatives. The mess fees are charged based on the dividing scheme (no loss no profit). The college has substantial income from hostel rent, water, and electricity charges as an initial investment for this has been done by the trust. Another source of income is the contribution by the PTA which is a proud arm of the college right from the inception of the college.

Jyothi Engineering College has been utilizing its various resources for various activities since its inception. One of the main resources that have been utilized in this institution is the Computer Centre. There are nearly 200 computer systems in the center. For the last five years, these have been used for various exams and training like GATE, JIPMER, RRB, SBI, TCS iON, CUSAT, JEE, JNU, ICAR, UGC NET, CSIR, ICAI CAT, etc. Many students and trainees have benefited from this for the last few years.

The other resource utilization is On Job Training (OJT) on Web Designing which is conducted for nearby schools. The main aim of this training was to impart skill education for the students of these schools.

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

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 institution has an active IQAC committee that looks into the proper functioning and quality of output of the different activities undertaken. At the academic level, it monitors the syllabus coverage. Three sets of question papers are presented for internal examinations from which the IQAC can select one for any given exam. Feedback from students is regularly collected, analyzed, and then passed on to the faculty

concerned for further action. Further, online teaching modules are uploaded in the Google Classroom which is regularly monitored. There is an ongoing process to organize FDPs and webinars for updating the academic knowledge of teaching faculty. Monthly reports of the extent to which the syllabus is covered are collected. Regular internal auditing of the course files and tutor files is done by the IQAC committee.

A 360-degree appraisal system for the faculty members is based on the various academic performance and duties. This was an attempt to standardize the system taking note of our various activities and rendering credit to each of the efforts. The objective at the back of this is to evaluate everything we do for the college community and to encourage and appreciate the same. We utilize this feedback for developmental purposes, providing it to faculty members to assist them in developing work skills and behaviors.

The Department of Research and Development (R&D) is formed to encourage innovation and to harmonize the research activities of the various disciplines in the institute. The R&D department of JEC consists of eminent faculty and academicians to promote the research activities on the campus. R&D takes every initiative to support and encourage faculty members to apply for research projects to different funding agencies (Govt./Non-Govt.), for Research Promotion Scheme, and other projects. Initiatives are taken to organize different Faculty Development Programs, Short Term Training Programs, Technical Workshops, Seminars, Industrial Visits, National and International Conferences for the creation and transfer of knowledge among the students and faculty members. R&D supports research publication of the faculty in peer-reviewed, UGC-approved journals and conference proceedings. Financial support & rewards are offered to those faculty who present papers in National and International Conferences and Seminars and to those who publish papers in reputed National and International Journals. R&D initiated Jyothi Research Fellowship programs to encourage Talented Graduates to be a part of research activities in the State-of-the-art facility for design, prototype development, testing, implementation, and technical documentation – Conference / Journal papers / IPR.

File Description	Document
Upload any additional information	View Document
Paste 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 and recorded the incremental improvement in various activities (For first cycle - Incremental improvements made for the preceding five years with regard to quality For second and subsequent cycles - Incremental improvements made for the preceding five years with regard to quality and post accreditation quality initiatives)

Response:

Jyothi Centre for Research and Development dedicates itself to creating a sustainable research and product development ecosystem by collaborating with industry and research organizations with the main focus of producing entrepreneurs and innovators with hands-on experiences in solving real-world research and development problems. The R&D department of JEC consists of eminent faculty and academicians to

promote the research activities on the campus. There are faculty members with guideship and several research scholars are pursuing Ph.D. under their guideship. Many faculty members of JEC are doing Ph.D. on a full-time/ part-time basis. The number of faculty members with Ph.D. has increased over the years. The institution has always maintained a Research Culture and has taken up several minor and major research projects. Research publications, Ongoing Research and Consultancy have added to the professional development of the Faculty. R&D takes every initiative to support and encourage faculty members to apply for research projects to different funding agencies (Govt./Non-Govt.), for Research Promotion Scheme, and other projects. Several grants have been obtained from Government and non-Government agencies for research projects, endowments, Chairs in the institution during the last five years. Many workshops/ seminars were conducted on Research methodology, Intellectual property rights, and entrepreneurship during the last five years. Special care has been done to improve the number of MoU's signed during the past five years.

The College has various Add-On Certificate Courses that have been started to enhance and enrich the students' learning experience in the College. This ensures a holistic approach to learning and develops the necessary skills for various vocations and careers. Add-On courses are aligned with the KTU academic calendar. Apart from the curriculum offered by the University, the college has offered several add-on/certificate programs in the past five years for the benefit of the students. A student during his four years of the undergraduate programme could easily enroll in more than two or three such courses, thereby substantially increasing his skills. Colleges have the flexibility to suggest new courses as the job market needs to dictate, and also advice from industry is taken into account. Through this scheme the college aims at imparting crucial job skills to the students through various certificate programs, thus enabling them to acquire an additional certificate along with their Degree certificates.

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

6.5.3 Quality assurance initiatives of the institution include:

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

Response: A. All of the above

File Description	Document
Upload e-copies of the accreditations and certifications	View Document
Upload details of Quality assurance initiatives of the institution	View Document
Upload any additional information	View Document
Paste web link of Annual reports of Institution	View Document

NAAC

Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

7.1.1 Measures initiated by the Institution for the promotion of gender equity during the last five years.

Response:

Safety and security

- Identity cards (ID) are required for all students and staff. Any higher authorized person can easily validate the authenticity of a person using the ID card itself. No one is allowed to enter the campus without a valid ID card.
- In order to prevent any adverse events, the campus and hostels are monitored by CCTV 24 x 7.
- The Anti-Ragging Committee will serve as the supervisory and advisory committee for maintaining a ragging-free environment in the campus, conducting several awareness programs and drives, and instilling a sense of discipline by sending a strong message that no act of ragging will be tolerated and that any act of ragging will not go unnoticed and unpunished. The Anti-Ragging Squad will function under the supervision of the Anti-Ragging Committee and will seek recommendations from them to maintain vigilance and avoid ragging incidents
- The college's Anti-Narcotic cell was developed to ensure a drug-free campus by implementing a complete prohibition on the possession, use of drugs and alcohol by college students, both on and off campus/hostels. And also make aware of the adverse social and health effects of illegal drugs and the steps to be taken to discourage their use.
- Women Development Cell (WDC) in JECC named as "SANSKRITHI" acts as a forum for providing self-empowerment of girl students and lady faculties, to take care of the problems and matters related to them and also create power in women to live a happy and respectable life in a society. WDC with the help of our students conduct a variety of academic, technical, medical, cultural, and social events for the upliftment of women and to spread the importance of gender equality in society.
- Grievance and Appeal Committee was formed to register the complaints of the students regarding all aspects like library issues, bus service, water facility etc. Students will file their complaints to the coordinator and it will be discussed in the council meeting and action will be taken accordingly.
- The Student Welfare Committee strives to assist students in their academic and personal development by providing assistance to the educational process.
- For each laboratory course, a laboratory manual explaining Do's and Don'ts has been prepared to ensure a peaceful and sustainable laboratory environment for students and teachers.
- To ensure everyone's safety, fire extinguishers and first-aid kits have been positioned in prime areas of the campus.

Counselling

The recent adult behavior by the students creates a lot of anxiety among parents and the college authorities. To overcome this counselling sessions separately for boys and girls are arranged by renowned counsellors. Students who are not able to cope with the academics or have some personal issues will be noted by the respective tutors.

Common Restrooms

The College has well-furnished rest rooms for boys and girls which are used by them when they are sick or when they need any physical rest.

File Description	Document
Link for specific facilities provided for women in terms of: a. Safety and security b. Counselling c. Common Rooms d. Day care center for young children e. Any other relevant information	View Document
Link for annual gender sensitization action plan	View Document

7.1.2 The Institution has facilities for alternate sources of energy and energy conservation measures

1. Solar energy
2. Biogas plant
3. Wheeling to the Grid
4. Sensor-based energy conservation
5. Use of LED bulbs/ power efficient equipment

Response: B. 3 of the above

File Description	Document
Geotagged Photographs	View Document
Any other relevant information	View Document
Any other relevant information	View Document

7.1.3 Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste (within 500 words)

- Solid waste management
- Liquid waste management
- Biomedical waste management
- E-waste management
- Waste recycling system
- Hazardous chemicals and radioactive waste management

Response:

Jyothi Engineering College is strongly committed towards waste management and strongly advocates conservation of resources, especially natural resources, to generate minimal waste and manage it from its

inception to its final disposal. Segregation of waste at source is administered for effective waste management strategy- Reduce, Reuse and Recycle. The first step towards an efficient waste management strategy is to reduce at source. The institution has initiated a practice of reducing the waste generation by each individual, by inculcating a habit through the display of reminder posters around the campus on judicious water usage, minimization of plastics and also reinforcing the less print communications for paper saving.

Solid Waste Management

The solid waste generated in the campus and hostels includes wrappers, glass, metals, paper and plastics. Most of the official communications like notices, programme communications, minutes are shared through WhatsApp or e-mails. The single side papers are re-used for writing and printing circulars or course files in all departments. For all common events, an e-filing system by means of a repository is maintained at a common folder location in the computer. The solid waste except the food waste from the hostels is managed with the help of an incinerator installed in the campus. The processed food waste per day from canteens and hostels are sent to piggeries periodically. Ban on usage of plastics below 40 microns is strictly followed in the campus. Students and faculty in the campus are directed to deposit the used plastic pens in a designated basket in the campus corridor for a plastic waste segregation. Routine solid waste collected in dustbins on a daily basis at different locations (classroom, laboratory, rest room, canteen), are emptied in containers and carts, segregated into different types of bio and non-bio degradable waste and a dedicated CMC housekeeping staff is in service for the same. Old newspapers, used papers, journal files, plastic scrap and workshop metal scrap are arranged to be given to scrap dealers which are finally destined to recycling to external agencies. Leaf litter is periodically collected and allowed to decompose systematically over a period of time to be used as manure for the gardens in the institute.

Liquid Waste Management

The institution is a forerunner in educating the young minds by organising events like World Water Day each year on relevant theme, to reinforce the idea of valuing water and conserving it. The institution believes that the stringent use of water for our daily needs invariably reduces the production of liquid waste. Liquid waste or sullage generated in the institution is treated and disposed into soak pits.

E- waste management

The institute gives diligent importance to E-waste management by ensuring that the majority of the electronic goods are put to optimum use; the minor repairs and periodic maintenance is assured by the technical staff and the Laboratory assistants. The rest of the e-waste is arranged to be collected by an e-waste collection agency which ensures it is managed in an environment friendly manner.

File Description	Document
Any other relevant information	View Document
Link for Relevant documents like agreements/MoUs with Government and other approved agencies	View Document
Link for Geotagged photographs of the facilities	View Document

7.1.4 Water conservation facilities available in the Institution:

1. Rain water harvesting
2. Borewell /Open well recharge
3. Construction of tanks and bunds
4. Waste water recycling
5. Maintenance of water bodies and distribution system in the campus

Response: B. 3 of the above

File Description	Document
Geotagged photographs / videos of the facilities	View Document
Any other relevant information	View Document
Link for any other relevant information	View Document

7.1.5 Green campus initiatives include:

1. Restricted entry of automobiles
2. Use of Bicycles/ Battery powered vehicles
3. Pedestrian Friendly pathways
4. Ban on use of Plastic
5. Landscaping with trees and plants

Response: Any 4 or All of the above

File Description	Document
Various policy documents / decisions circulated for implementation	View Document
Geotagged photos / videos of the facilities	View Document
Any other relevant documents	View Document
Link for any other relevant information	View Document

7.1.6 Quality audits on environment and energy are regularly undertaken by the Institution and any

awards received for such green campus initiatives:

- 1.Green audit
- 2.Energy audit
- 3.Environment audit
- 4.Clean and green campus recognitions / awards
- 5.Beyond the campus environmental promotion activities

Response: C. 2 of the above

File Description	Document
Reports on environment and energy audits submitted by the auditing agency	View Document
Certification by the auditing agency	View Document
Any other relevant information	View Document
Link for any other relevant information	View Document

7.1.7 The Institution has disabled-friendly, barrier free environment

- 1.Built environment with ramps/lifts for easy access to classrooms.
- 2.Divyangjan friendly washrooms
- 3.Signage including tactile path, lights, display boards and signposts
- 4.Assistive technology and facilities for Divyangjan accessible website, screen-reading software, mechanized equipment
- 5.Provision for enquiry and information : Human assistance, reader, scribe, soft copies of reading material, screen reading

Response: C. 2 of the above

File Description	Document
Geotagged photographs / videos of the facilities	View Document
Any other relevant information	View Document
Link for any other relevant information	View Document

7.1.8 Describe the Institutional efforts/initiatives in providing an inclusive environment i.e., tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and other diversities (within 500 words).

Response:

The Institution shows immense pleasure and responsibility in the aspect of tolerance and harmony in the fields of cultural, regional, linguistic, communal socio-economic and other diversities. With the precise inputs from Management and Principal, the Institution is conducting initiatives and programmes within the

campus to achieve a pleasant environment for all the students and staff. By conducting such events and celebrations, the students learn experience and cultivate social responsibility, and inculcate interpersonal and intrapersonal skills through participation. Institution promotes various activities of students that promote harmony towards cultural, regional, linguistic, communal socioeconomic and other diversities.

As with any recruiting method, hiring from an outside organization instead of promoting within is encouraged. When an organization recruits externally from the state, it opens the organization up to a larger pool of applicants, which increases its chance of finding the right person for the job. Hiring an external candidate also opens up many opportunities to find experienced and highly-qualified and skilled candidates who will help a company meet its diversity requirements. External recruitment supports various cultural diversity which will help the institution to cope with different culture where students are also exposed to various culture

Students from outside the state are encouraged to join the college and such of those students are required to meet the Principal in person and seek admission. Subject to eligibility certificate and migration certificate issued by the concerned universities, admission is made either on the basis of merit or from the Management quota.

Scholarships are meant to promote the education of pupils at the undergraduate level. The students, after passing class 12, look up for undergraduate programs in different streams like Engineering, Medical, Architecture, Arts/Humanities, Science, Commerce, etc. To support the education of these learners at the undergraduate level, many organizations and institutions award undergraduate scholarships. These scholarships give monetary liberty to those students, who face economic limitations in seeking their dream education. A lot of intelligent students often miss achieving their dream for higher education with the expense of education having grown quite an expensive affair. The requirement for scholarships is compelling and important for our students more than ever since. In this situation our management is keen on helping the meritorious and financially backward students. Different slabs on the basis of the KEAM rank are formed right from the formation of the Institution. The Institutions has been kind enough to spend a large amount as scholarship every year to these students.

File Description	Document
Link for supporting documents on the information provided (as reflected in the administrative and academic activities of the Institution)	View Document

7.1.9 Sensitization of students and employees of the Institution to the constitutional obligations: values, rights, duties and responsibilities of citizens (within 500 words).

Response:

Civic duties are not only restricted to books for children but it is a foundation on which the future of any country rests. College should leave no stone unturned to make it interesting for students so that they are compelled to implement the learning in their lives. The best way to inculcate the importance of civic duties in students is by imbibing patriotic values. Various days of national importance, Birth and death

anniversaries of freedom fighters are commemorated. Every year the Institute celebrates Republic Day, and Independence Day on January 26, and August 15 respectively. The celebration is attended by Students, Teaching and Non-teaching Staff, Invitees, guests and any attendees. Flag hosting with the National anthem and oath of national integrity followed by distribution of sweets is the regular decorum of the programme.

Gandhi Jayanthi is celebrated in college which includes cleaning activities in nearby regions of the college. International Yoga day is celebrated in college to inculcate values that are necessary for responsible citizens. Constitution day is observed along with various programs as a mark of respect to Dr B R Ambedkar. A quiz pertaining to the Constitution of India was conducted and the winners were awarded certificates. The programme initiates with Preamble reading of the constitution followed by lectures on the sensitization of students on responsibility towards the constitutional values, rights, duties and responsibilities of citizens. Students are encouraged to participate in activities like essay competitions on related themes. viz. 'Economic Thoughts of Dr. B. R. Ambedkar'.

A Youth Parliament was conducted where volunteers raised, discussed and debated various issues of National interests. It was an initiative to closely understand our legislative system and mould the dynamic leaders of tomorrow.

Blood Donation

Every year the institute organizes blood donation camps in association with Hospitals. The students are sensitized on the importance of the activity and are encouraged to participate in saving the life of citizens of India.

Cleanliness/Plantation drive

Students consistently and regularly participate in the cleaning activities on several occasions including Mahatma Gandhi Jayanti on October 02, every year. Moreover, students are encouraged for active participation in the plantation.

Induction of the students on values, rights, duties and responsibilities

Students are made aware about the code of ethics, human values, rights, duties and responsibilities as a citizen of India during induction as well as other programmes throughout the year.

File Description	Document
Link for details of activities that inculcate values necessary to render students in to responsible citizens	View Document

7.1.10 The Institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic programmes in this regard.

1. The Code of Conduct is displayed on the website

2. There is a committee to monitor adherence to the Code of Conduct
3. Institution organizes professional ethics programmes for students, teachers, administrators and other staff
4. Annual awareness programmes on Code of Conduct are organized

Response: B. 3 of the above

File Description	Document
Details of the monitoring committee composition and minutes of the committee meeting number of programmes organized reports on the various programs etc in support of the claims	View Document
Code of ethics policy document	View Document
Any other relevant information	View Document

7.1.11 Institution celebrates / organizes national and international commemorative days, events and festivals (within 500 words).

Response:

College makes high efforts and importance to celebrate national and international days. International Days are celebrated to mark important aspects of human life and history. Every year Gandhi Jayanthi was celebrated in college with cleaning activities in the nearby region of the college. Every year the college celebrates Independence Day with flag hoisting. On the very proud day for the Nation, the college students gathered together in the college portico for the auspicious flag hoisting ceremony at 9am. Every year college celebrates Republic day with flag hoisting. International yoga day is also celebrated in college to inculcate values that are necessary to render students into responsible citizens. Every year the college celebrates national science day with invited talk from eminent persons. The main objective of National Science Day is to bring awareness to students about the importance of science in our daily life. Every year natura (Environmental forum in college) celebrates the environmental day in college in an auspicious way. Gandhi Jayanthi is celebrated in college which includes cleaning activities in nearby regions of the college. International Yoga day is celebrated in college to inculcate values that are necessary for responsible citizens. Constitution day is observed along with various programs as a mark of respect to Dr B R Ambedkar. A quiz pertaining to the Constitution of India was conducted and the winners were awarded certificates. The programme initiates with Preamble reading of the constitution followed by lectures on the sensitization of students on responsibility towards the constitutional values, rights, duties and responsibilities of citizens. Institute celebrates International commemorative days like Engineer's Day, Teacher's Day, World Palliative care Day, Martyr's Day, World Environment Day, World Nature Day. International days are celebrated to educate and aware the students on issues of concern to address global problems. Institution organizes various activities for students to create awareness among the students

File Description	Document
Link for Geotagged photographs of some of the events	View Document
Link for Annual report of the celebrations and commemorative events for the last five years	View Document

7.2 Best Practices

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

Response:

BEST PRACTICE: 1

Title:

Social and Technical activities through Centre for Water Research and Education

Objectives of the Practice:

The CWRE aims:

- To provide services to the people on remediation of various water issues such as water quality, water shortage, rain water harvesting, water treatment and with special focus on maintenance of domestic water sources of Kerala.
- To impart the practical knowledge on water quality and testing to the students.
- To educate the common people about the importance of water, impact of water pollution and remedies to the water issues.

The Context:

Jyothi Engineering College has keenly interested on social well-being and environmental consciousness which is the key idea to establish the Centre for Water Research and Education (CWRE). For the benefit of the society Jyothi Engineering college is providing free website information to the people on water and sanitation. There are opportunities for the people to ask questions on water and sanitation related issues. For all queries through the website answers will be given by a panel of expert. The answer will go to the email of the questioner and it will be documented for reference of other viewers. As part of CWRE, the training is arranged to the relevant people on water and sanitation and our college student's involvement in

water quality remediation activities are encouraged. The establishment of CWRE provides to test the water samples of local community with our lab facilities

Practice:

Personal Interaction: Regular discussions are conducted related to water issues with the experts in the college during normal working hours. The discussions provide an answer to the questions of people through web site facility. The center analyses private water samples, whose intention is remediation of water quality issues.

Trainings: Conducting training to various categories of people on water related subjects. The major focus on training is to test the basic properties like Turbidity, pH value, and etc., which brings technical awareness on water quality management to the students and technical persons. Every year group of students are encouraged to pursue projects on water quality management in association with pollution scenario of Bharatahapuzha.

In addition to this, Awareness Training program is given to the society on Water Conservation in connection with Unnath Bharath Abhiyan activities. This training was aimed to focus mainly on the health department workers.

Inspection: Water samples from local communities as well college premises are taken periodically. Water quality deterioration, especially of individual water sources like wells, bore wells etc are monitored. The normal water quality problems such as Bacterial presence, Deviation in pH value, Excess iron, turbidity, fluoride, chloride, conductivity, hardness and etc are observed from the samples and the required remedial measures are undertaken.

Handbook for Water and Life: “Jalavum Jeevitavum” handbook about water and life published by Jyothi Engineering College, whose main motto is to educate the local people on various aspects of water related issues. The book is published in Malayalam, to create awareness among the local community regarding the basic properties of water, impact of water pollution and the importance of water quality. Handbook concentrates on Clean water, Water pollution, water quality, Standard scales to measure the quality and Solutions to water pollution. These books are being distributed free of cost to the local community and staff associated with the water testing laboratory.

Collaboration: An MOU with local bodies and other agencies such as Kerala Water Authority (KWA), Kerala Rural Water Supply and Sanitation Agency (KRWSA) was signed to study the Water quality and similar water related issues of a particular area. There are two MoU one with the FOB and the other with the Vyapari Vyavasayi Association of Cheruthuruthy, the purpose of MOU with FOB is to carry out study on Bharatahapuzha and with Vyapari Vyavasayi association is to facilitate their water quality analysis and other water related works

Evidence of Success:

Water Samples in each year:

Continuous monitoring by CWRE related to the quality of water and their issues with suitable remedial measures are provided to the society. The number of sample analysis are increasing considerably every year whose proof is the evidence.

Sl no	Year	No of samples analysed
1	2016-2017	8
2	2017-2018	20
3	2018-2019	68
4	2019-2020	76
5	2020-2021	44
	Total	216

Water samples were collected in different modes like:

- a) Private water samples
- b) Water samples pertaining to college water supply system
- c) Analysis of water samples for training the students
- d) Analysis of water samples under the save Thrissur program

The positive responses from the community are recorded.

JECC with FOB:

Through CWRE Jyothi Engineering College provides quality analysis on water issues along with organization like Department of Water Resources, Government of Kerala and Friends of Bharathpuzha (FoB) to rejuvenate the Bharathapuzha river. In connection with this activity FOB made a Memorandum of Understanding with Jyothi Engineering College. The National Green Tribunal (NGT) has ordered the rejuvenation of 21 critically polluted rivers in the state, and as a first step from NGT a report was prepared and submitted to the Water Resource department.

Problems Encountered and Resources Required:

CWRE of Jyothi Engineering College receives numerous requests from various communities of South Malabar through phone calls and website for the water quality checking. Collection and Analysis of numerous water samples is the major issue. Interested students and local communities are encouraged to participate in the water quality training program to increase the number of water samples

BEST PRACTICE: 2

Title: Revamped Teaching Learning (RTL) Process

Objectives of the Practice:

The RTL aims

- To develop the conceptual skills to the students, the cross functional learning methodology is focused
- To apply the knowledge of basic engineering fundamentals and engineering specialization to the solutions of the complex engineering problems is inculcated through student centric learning.
- Enrichment of skillset of students is imposed to identify & formulate and solve problems innovatively
- To mechanize the students on their regularity, punctuality, and congeniality, as well as the growth of a holistic personality.
- Networking with parents and peers to observe, educate, empower, regulate, and inspire students' progress.

The Context:

Teachers facilitate student learning in the classroom, encouraging them to practice skills, expertise, and critical thinking abilities. Teaching with pedagogy includes evaluating the students' educational standards in skill sets. Redesigned teaching and guidance are used to analyse sociocultural, health, safety, legal, and cultural concerns pertinent to professional engineering practise in order to meet the requirements of all students in the classroom. In multidisciplinary environments, student-centered learning is facilitated to demonstrate knowledge and grasp of engineering principles. Students want an educated, competent, and empathic buddy who can provide continual nourishment, support, and methodical mentoring in order to attain their objectives and become decent citizens. The college is dedicated to providing such assistance through the Mentoring System, which assists parents in learning about their children's progress as well as students in pursuing their dream offers or attending institutions overseas.

Practice:

Cross Functional Learning:

In learning process, every student is put through a judicious blend of concepts and practices . The institute pursues innovative Pedagogy: - Info Talk / Induction Program / Confabulation Talk / Class Room Teaching /Extension Lecture / Guest Lecture / Assignments / presentation / GDs/

- **Tech Talk Series:** A platform for discussion about recent technological aspects and issues faced by society. Being the technology leaders faculty members from Jyothi Engineering college takes a lead role in presenting the issues and related topics in addition to talks by the external experts for an hour.
- **JEC Talk:** JEC Talk series initiated by the institution through YouTube throws open an opportunity to the academicians to educate the common people on technology selection and their usage, during their daily life.

Student Centric Learning:

The Reformed Teaching Learning (RTL) process exists with classroom as student centric. Teachers e-Course Book is a custom-built digital application for the Institute that uses Google Docs and Apps to ease the process of sustainable growth for Outcome Based Education (OBE) . Answer repository system and MCQ helps the students to enhance their ability and making them confident in competitive exams like GATE.

Mentoring System:

The primary focus of the RTL method is to give students a wide-ranging knowledge, exceptional creativity and more comfort, to bring out their hidden potentials into the limelight. The teachers meet students periodically and counsel them to remove the difficulties in their academic performance, this method is called 'Mentoring system'.

Enrichment of Skill Sets of Student:

- i. Promoting the students for their involvement in co-curricular activities within and outside the campus by assigning additional credit under an able guidance of faculty
- ii. Industrial training and internship commences from second year of program

English Proficiency Test:

Every year English professions test is take for the students and detail diagnosis is prepared for improvement.

Aptitude Test

On line aptitude test of final year students will be held in the beginning of 7th semester. This provides an idea how to crack the non-technical test in recruitment process

Project Based Learning

Graduates gain both conceptual and applied capabilities in the curriculum. Both are enriched in the classroom and laboratories. Project-based learning will be possible in the research environment by RTL. The students are receiving desired practical and system development capabilities by Add- on courses, giving the industry the impression that the degree of practical skills imparted to students is up to par.

Evidence of Success:

- Obedience, engagement, effective communication, punctuality, and academic performance of mentees improve is the prominent impact of the mentoring system.
- Students can engage in a variety of technical events/competitions through project-based learning, such as Hackthon. This helps them to participate in the social contribution such as Designing of Power Bank during Flood.
- Student centric learning helps them to participate in various competition exams such as GATE.
- English proficiency training makes the students clear in BEC examinations.
- Enrichment of skill set of student's program in RTL imparts the confidence among the students

Problems Encountered and Resources Required:

- Achieving a balance between industrial expectations and educational curriculum.
- Creating an environment in which everyone, regardless of socio - economic or ethnic diversity, can cohabit peacefully.
- Faculty and students should take project-based learning seriously. It should include sections on exploration and development. It is impossible to implement without the involvement of academics.
- Creating a platform for delivering skill development programmes

File Description	Document
Link for Best practices in the Institutional web site	View Document
Link for any other relevant information	View Document

7.3 Institutional Distinctiveness

7.3.1 Portray the performance of the Institution in one area distinctive to its priority and thrust within 1000 words

Response:

Global Standards, Ethical leadership, Interdisciplinary Research, and quality professional education are the four pillars of the Institute's vision. The Institute has developed its unique approach towards this broad vision.

Academic excellence:

High standard academic teachings will provide students with valuable and professional learning experience. Effective outcomes are achieved by teaching-learning approaches that incorporate ethical principles. It lays out the expectations for all students in terms of academic success. Reformed Teaching Learning is a unique method that will enable the student's quality to excel in their career advancement.

Skills enrichment through research:

Jyothi Centre for Research and Development dedicates itself in creating sustainable research and product development ecosystem by collaborating with industry and research organizations with main focus of producing entrepreneurs and innovators with hands-on experiences in solving real-world research and development problems. We believe that collaborative research and development activities play a vital role in empowering students.

Students are taught through a holistic learning experience that includes professional development, deep practical knowledge, and moral character. The institute strives to be a leader in pedagogy through different activities like Tech talk, Jecc Talk and journal club. College is conducting monthly technical talks at Thrissur town to create awareness among the public about recent developments in the field of science and technology. College staff is conducting a weekly programme JEC TALK on youtube channel about recent advancement in engineering.

Institute has a unique platform to enrich the student skills with the recent emerging technologies through technical talk by institute faculty as well as an external expert. This platform helps the students to be aware of recent technological aspects and issues facing society along with corresponding technologists from various industries. Being the technology leaders of this geographical area, faculty members from Jyothi Engineering college take a lead role in presenting the issues and related topics and followed by the talks by the external experts. This research-oriented skill development talk makes the student involved in research activities. Scientific findings and technical topics from faculties and research scholars through Journal club promote our students into research and development.

Innovation & Entrepreneurship Development:

The institute helps the students to become an entrepreneur by transforming their innovations into commercially viable products through IEDC by providing a forum. INNOVATION AND ENTREPRENEURSHIP DEVELOPMENT CELL (IEDC) started in October 2015 helps the students in strengthening their skills. The implementation of IEDC helps the students to enhance interpersonal and leadership skills by organising workshops, invited lectures, project exhibitions etc. The IEDC core committee approves budding ideas submitted from students and recommends them to the Startup centre or tbi@jec based on the maturity phase of the idea. Ideation to Prototype activities are recommended and supported at the Startup Centre, which houses the IoT lab. College has started a mini fab lab (mini fabrication laboratory) with support of APJ Abdul Kalam Technological university and Kerala Startup Mission (KSUM) in the college campus.

tbi@jec is Jyothi Engineering College's own Technology Business Incubator under the IEDC approved by Kerala Startup Mission (KSUM). tbi@jec is set up to enable students and entrepreneurs to begin their startup journey in a formal, corporate environment. We facilitate incubation of new enterprises with innovative technologies by admitting them into TBI and providing them with physical infrastructure, technical know-how, mentoring and networking related support and services. The IEDC core committee approves budding ideas submitted from students and recommends them to the Startup center or tbi@jec based on the maturity phase of the idea. Ideation to Prototype activities are recommended and supported at the Startup Center, which houses the IoT lab. Prototypes which are ready to be incubated into a company and are ready to take on the world are housed in the tbi@jec.

Srishti, a National Level Project exhibition and competition is used to conduct every year. The major focus of this program is to provide a platform for creative minds to showcase various innovative and revolutionary ideas and compete with their counterparts contributing constructively to the existing knowledge base. The event was being conducted in association with IEDC –JECC. The first day was open entirely for our students to showcase their innovative projects

Technical skill enhancement for the Growth of a Well-rounded Individual with a Global Perspective and Social Responsibilities:

The college is supporting activities for students to improve their ability to carry out tasks associated with technical roles. The aim is to improve the confidence among the students and make them more valuable candidates as employers. It also helps in improving the technical skills which are often better at multi task challenging and complex roles. The college encourages students in participating in different technical skill development workshops, competition, technical fest etc creating a platform for excelling their skills. Mini Fab lab is one of the first 20 mini fab lab in Kerala. Each Mini fab lab contains machinery, tools and consumables costing 50 lakh Indian rupees. Students are encouraged to do projects using the facilities of the lab. Introduction of add on courses also helps the students to strengthen their skills.

File Description	Document
Link for appropriate web in the Institutional website	View Document

5. CONCLUSION

Additional Information :

The institution puts forward the idea of holistic excellence by keeping the social and environmental welfare at par with academic achievements. Centre for Water Research and Education (CWRE), instituted under the Department of Civil Engineering, has a full-fledged commercial laboratory accredited by Kerala State Pollution Control Board (in 2015), that continues to contribute to the civil society by addressing their queries regarding water quality and suggesting remedial measures. With the setting up of FAB LAB- Digital Fabrication Lab in 2017, the students are encouraged to develop their ideas to reality such that the innovations light up the lives of the society at large. The institution has always valued environmental sustainability to the core and took the initiative to go for greener form of energy with Bamboo green campus, solar power plant and rain water harvesting. The campus also transformed itself into a hub of medicinal plants and bamboo plants. A primary health centre is functioning in the campus under the auspices of Jubilee Mission Medical College and Health care check up by Jeevodaya Hospital Chelakkara. Thrissur-Kerala.

Among the recent achievements, College's rank in top 50 self-financing colleges of ARIIA –national ranking, International Women Hackathon Prize and AICTE Chathra Viswakarma Award for Lyza team, first position of Braille Printer in Yuva mastermind state level project competition and participation in 2019 and 2020 IEEE YESIST programme, are notable.

Concluding Remarks :

Jyothi Engineering College, Cheruthuruthy is committed to provide all requirements in curricular and co-curricular areas of Technical Education to our students and mould them with technical knowledge, soft skills, Physical Education and Ethics to enable them become Engineering Professionals of International Standards. The College is also committed to strive for continual improvement of its Quality Management System through customer satisfaction in terms of achieving Academic Excellence, Total Personality Development and excellent placement opportunities for the students

6.ANNEXURE

1.Metrics Level Deviations

Metric ID	Sub Questions and Answers before and after DVV Verification																				
1.2.2	<p>Number of Add on /Certificate programs offered during the last five years</p> <p>1.2.2.1. How many Add on /Certificate programs are offered within the last 5 years. Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> </tr> </thead> <tbody> <tr> <td>14</td> <td>11</td> <td>8</td> <td>6</td> <td>4</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1"> <thead> <tr> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> </tr> </thead> <tbody> <tr> <td>13</td> <td>9</td> <td>6</td> <td>4</td> <td>3</td> </tr> </tbody> </table>	2019-20	2018-19	2017-18	2016-17	2015-16	14	11	8	6	4	2019-20	2018-19	2017-18	2016-17	2015-16	13	9	6	4	3
2019-20	2018-19	2017-18	2016-17	2015-16																	
14	11	8	6	4																	
2019-20	2018-19	2017-18	2016-17	2015-16																	
13	9	6	4	3																	
1.2.3	<p>Average percentage of students enrolled in Certificate/ Add-on programs as against the total number of students during the last five years</p> <p>1.2.3.1. Number of students enrolled in subject related Certificate or Add-on programs year wise during last five years Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> </tr> </thead> <tbody> <tr> <td>820</td> <td>579</td> <td>400</td> <td>501</td> <td>521</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1"> <thead> <tr> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> </tr> </thead> <tbody> <tr> <td>624</td> <td>442</td> <td>275</td> <td>185</td> <td>149</td> </tr> </tbody> </table>	2019-20	2018-19	2017-18	2016-17	2015-16	820	579	400	501	521	2019-20	2018-19	2017-18	2016-17	2015-16	624	442	275	185	149
2019-20	2018-19	2017-18	2016-17	2015-16																	
820	579	400	501	521																	
2019-20	2018-19	2017-18	2016-17	2015-16																	
624	442	275	185	149																	
1.3.2	<p>Average percentage of courses that include experiential learning through project work/field work/internship during last five years</p> <p>1.3.2.1. Number of courses that include experiential learning through project work/field work/internship year-wise during last five years Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> </tr> </thead> <tbody> <tr> <td>376</td> <td>381</td> <td>367</td> <td>313</td> <td>312</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1"> <thead> <tr> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>13</td> <td>12</td> <td>11</td> <td>11</td> </tr> </tbody> </table>	2019-20	2018-19	2017-18	2016-17	2015-16	376	381	367	313	312	2019-20	2018-19	2017-18	2016-17	2015-16	10	13	12	11	11
2019-20	2018-19	2017-18	2016-17	2015-16																	
376	381	367	313	312																	
2019-20	2018-19	2017-18	2016-17	2015-16																	
10	13	12	11	11																	

1.3.3	<p>Percentage of students undertaking project work/field work/ internships (Data for the latest completed academic year)</p> <p>1.3.3.1. Number of students undertaking project work/field work / internships Answer before DVV Verification : 853 Answer after DVV Verification: 464</p> <p>Remark : Considered project work/field work/ internships for the latest completed academic year only.</p>																				
2.4.2	<p>Average percentage of full time teachers with Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. during the last five years (consider only highest degree for count)</p> <p>2.4.2.1. Number of full time teachers with Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. year wise during the last five years Answer before DVV Verification:</p> <table border="1" data-bbox="306 831 1046 965"> <thead> <tr> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> </tr> </thead> <tbody> <tr> <td>30</td> <td>23</td> <td>16</td> <td>14</td> <td>8</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1" data-bbox="306 1043 1046 1178"> <thead> <tr> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> </tr> </thead> <tbody> <tr> <td>18</td> <td>13</td> <td>10</td> <td>8</td> <td>6</td> </tr> </tbody> </table> <p>Remark : Edited based of PhD certificates provided. Excluded librarian.</p>	2019-20	2018-19	2017-18	2016-17	2015-16	30	23	16	14	8	2019-20	2018-19	2017-18	2016-17	2015-16	18	13	10	8	6
2019-20	2018-19	2017-18	2016-17	2015-16																	
30	23	16	14	8																	
2019-20	2018-19	2017-18	2016-17	2015-16																	
18	13	10	8	6																	
2.4.3	<p>Average teaching experience of full time teachers in the same institution (Data for the latest completed academic year in number of years)</p> <p>2.4.3.1. Total experience of full-time teachers Answer before DVV Verification : 881.02 Answer after DVV Verification: 751</p> <p>Remark : Considered completed year of service of full time teachers.</p>																				
3.1.1	<p>Grants received from Government and non-governmental agencies for research projects, endowments, Chairs in the institution during the last five years (INR in Lakhs)</p> <p>3.1.1.1. Total Grants from Government and non-governmental agencies for research projects , endowments, Chairs in the institution during the last five years (INR in Lakhs) Answer before DVV Verification:</p> <table border="1" data-bbox="306 1895 1046 2029"> <thead> <tr> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> </tr> </thead> <tbody> <tr> <td>0.5875</td> <td>25.16</td> <td>2.15</td> <td>0.315</td> <td>12.724</td> </tr> </tbody> </table>	2019-20	2018-19	2017-18	2016-17	2015-16	0.5875	25.16	2.15	0.315	12.724										
2019-20	2018-19	2017-18	2016-17	2015-16																	
0.5875	25.16	2.15	0.315	12.724																	

Answer After DVV Verification :

2019-20	2018-19	2017-18	2016-17	2015-16
0.59	24.96	2.00	0	12.72

3.1.2 Percentage of teachers recognized as research guides (latest completed academic year)

3.1.2.1. Number of teachers recognized as research guides

Answer before DVV Verification : 10

Answer after DVV Verification: 9

3.1.3 Percentage of departments having Research projects funded by government and non government agencies during the last five years

3.1.3.1. Number of departments having Research projects funded by government and non-government agencies during the last five years

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
2	4	2	3	1

Answer After DVV Verification :

2019-20	2018-19	2017-18	2016-17	2015-16
2	4	2	0	1

3.1.3.2. Number of departments offering academic programmes

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16

3.2.2 Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the last five years

3.2.2.1. Total number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship year-wise during last five years

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
4	2	2	2	4

Answer After DVV Verification :

2019-20	2018-19	2017-18	2016-17	2015-16
4	1	0	1	0

3.3.1	<p>Number of Ph.Ds registered per eligible teacher during the last five years</p> <p>3.3.1.1. How many Ph.Ds registered per eligible teacher within last five years Answer before DVV Verification : 7</p> <p>3.3.1.2. Number of teachers recognized as guides during the last five years Answer before DVV Verification : 10 Answer after DVV Verification: 9</p>																				
3.3.2	<p>Number of research papers per teachers in the Journals notified on UGC website during the last five years</p> <p>3.3.2.1. Number of research papers in the Journals notified on UGC website during the last five years. Answer before DVV Verification:</p> <table border="1" data-bbox="308 712 1046 846"> <thead> <tr> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> </tr> </thead> <tbody> <tr> <td>49</td> <td>51</td> <td>14</td> <td>17</td> <td>17</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1" data-bbox="308 925 1046 1059"> <thead> <tr> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> </tr> </thead> <tbody> <tr> <td>16</td> <td>7</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table>	2019-20	2018-19	2017-18	2016-17	2015-16	49	51	14	17	17	2019-20	2018-19	2017-18	2016-17	2015-16	16	7	0	0	0
2019-20	2018-19	2017-18	2016-17	2015-16																	
49	51	14	17	17																	
2019-20	2018-19	2017-18	2016-17	2015-16																	
16	7	0	0	0																	
3.3.3	<p>Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years</p> <p>3.3.3.1. Total number of books and chapters in edited volumes/books published and papers in national/ international conference proceedings year-wise during last five years Answer before DVV Verification:</p> <table border="1" data-bbox="308 1339 1046 1473"> <thead> <tr> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> </tr> </thead> <tbody> <tr> <td>31</td> <td>46</td> <td>24</td> <td>14</td> <td>17</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1" data-bbox="308 1552 1046 1686"> <thead> <tr> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> </tr> </thead> <tbody> <tr> <td>12</td> <td>10</td> <td>23</td> <td>9</td> <td>16</td> </tr> </tbody> </table>	2019-20	2018-19	2017-18	2016-17	2015-16	31	46	24	14	17	2019-20	2018-19	2017-18	2016-17	2015-16	12	10	23	9	16
2019-20	2018-19	2017-18	2016-17	2015-16																	
31	46	24	14	17																	
2019-20	2018-19	2017-18	2016-17	2015-16																	
12	10	23	9	16																	
3.4.2	<p>Number of awards and recognitions received for extension activities from government/ government recognised bodies during the last five years</p> <p>3.4.2.1. Total number of awards and recognition received for extension activities from Government/ Government recognised bodies year-wise during the last five years. Answer before DVV Verification:</p> <table border="1" data-bbox="308 2040 1046 2089"> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>																				

2019-20	2018-19	2017-18	2016-17	2015-16
6	3	3	2	1

Answer After DVV Verification :

2019-20	2018-19	2017-18	2016-17	2015-16
0	1	0	0	0

Remark : Awards and recognitions only considered.

3.4.3 Number of extension and outreach programs conducted by the institution through NSS/NCC, Government and Government recognised bodies during the last five years

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

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
16	16	11	7	16

Answer After DVV Verification :

2019-20	2018-19	2017-18	2016-17	2015-16
12	10	4	6	10

Remark : Considered activities which benefit the community only.

3.4.4 Average percentage of students participating in extension activities at 3.4.3. above during last five years

3.4.4.1. Total number of Students participating in extension activities conducted in collaboration with industry, community and Non- Government Organizations such as Swachh Bharat, AIDs awareness, Gender issue etc. year-wise during last five years

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
1063	1308	365	261	720

Answer After DVV Verification :

2019-20	2018-19	2017-18	2016-17	2015-16
774	1060	160	221	465

3.5.1 Number of Collaborative activities for research, Faculty exchange, Student exchange/

internship per year**3.5.1.1. Number of Collaborative activities for research, Faculty exchange, Student exchange/ internship year-wise during the last five years**

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
285	92	35	27	56

Answer After DVV Verification :

2019-20	2018-19	2017-18	2016-17	2015-16
0	0	0	0	0

Remark : Internship certificates without formal collaboration documents not considered.

3.5.2 Number of functional MoUs with institutions, other universities, industries, corporate houses etc. during the last five years**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**

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
10	5	5	3	9

Answer After DVV Verification :

2019-20	2018-19	2017-18	2016-17	2015-16
8	5	3	3	4

Remark : MoUs of 2014 and MoU with alumni not considered.

4.1.3 Percentage of classrooms and seminar halls with ICT- enabled facilities such as smart class, LMS, etc. (Data for the latest completed academic year)**4.1.3.1. Number of classrooms and seminar halls with ICT facilities**

Answer before DVV Verification : 38

Answer after DVV Verification: 30

Remark : 28 fixed LCD projectors and 2 portable LCD projectors.

4.1.4 Average percentage of expenditure, excluding salary for infrastructure augmentation during last five years(INR in Lakhs)**4.1.4.1. Expenditure for infrastructure augmentation, excluding salary year-wise during last five years (INR in lakhs)**

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
174.61	188.67	109.90	138.27	295.00

Answer After DVV Verification :

2019-20	2018-19	2017-18	2016-17	2015-16
43.25	30.73	90.74	60.22	287.89

4.2.3 Average annual expenditure for purchase of books/e-books and subscription to journals/e-journals during the last five years (INR in Lakhs)

4.2.3.1. Annual expenditure of purchase of books/e-books and subscription to journals/e-journals year wise during last five years (INR in Lakhs)

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
20.96	24.69	28.16	24.42	27.88

Answer After DVV Verification :

2019-20	2018-19	2017-18	2016-17	2015-16
20.83	24.56	28.04	24.31	27.77

4.2.4 Percentage per day usage of library by teachers and students (foot falls and login data for online access) during the latest completed academic year

4.2.4.1. Number of teachers and students using library per day over last one year

Answer before DVV Verification : 253

Answer after DVV Verification: 141

Remark : Considered average use of selected 5 days.

4.4.1 Average percentage of expenditure incurred on maintenance of infrastructure (physical and academic support facilities) excluding salary component during the last five years(INR in Lakhs)

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

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
471.75	519.81	505.00	511.06	676.27

Answer After DVV Verification :

2019-20	2018-19	2017-18	2016-17	2015-16
228.46	272.57	246.44	262.44	277.61

Remark : Edited based on the clarification documents provided by HEI

5.1.4 Average percentage of students benefitted by guidance for competitive examinations and career counselling offered by the Institution during the last five years

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

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
362	143	435	346	542

Answer After DVV Verification :

2019-20	2018-19	2017-18	2016-17	2015-16
236	85	72	157	132

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

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

Answer before DVV Verification : A. All of the above

Answer After DVV Verification: B. 3 of the above

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

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

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
4	5	2	5	7

Answer After DVV Verification :

2019-20	2018-19	2017-18	2016-17	2015-16
4	5	2	5	7

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

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16

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

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

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
5	1	1	9	5

Answer After DVV Verification :

2019-20	2018-19	2017-18	2016-17	2015-16
1	1	0	2	2

Remark : Team events considered as one. Only state and University level awards are considered.

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

5.3.3.1. Number of sports and cultural events/competitions in which students of the Institution participated year-wise during last five years

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
27	33	40	41	21

Answer After DVV Verification :

2019-20	2018-19	2017-18	2016-17	2015-16
8	6	4	9	9

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

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

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
1	10	1	1	1

Answer After DVV Verification :

2019-20	2018-19	2017-18	2016-17	2015-16
1	7	1	1	1

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

6.3.3.1. Total number of professional development /administrative training Programmes organized by the institution for teaching and non teaching staff year-wise during the last five years

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
13	3	7	11	9

Answer After DVV Verification :

2019-20	2018-19	2017-18	2016-17	2015-16
13	3	7	11	7

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

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

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
4.591	1.284	0.231	1.021	0.247

Answer After DVV Verification :

2019-20	2018-19	2017-18	2016-17	2015-16
2.09	1.284	0.231	1.021	0.247

7.1.2 The Institution has facilities for alternate sources of energy and energy conservation measures

	<ol style="list-style-type: none"> 1. Solar energy 2. Biogas plant 3. Wheeling to the Grid 4. Sensor-based energy conservation 5. Use of LED bulbs/ power efficient equipment <p>Answer before DVV Verification : A. 4 or All of the above Answer After DVV Verification: B. 3 of the above</p>
7.1.4	<p>Water conservation facilities available in the Institution:</p> <ol style="list-style-type: none"> 1. Rain water harvesting 2. Borewell /Open well recharge 3. Construction of tanks and bunds 4. Waste water recycling 5. Maintenance of water bodies and distribution system in the campus <p>Answer before DVV Verification : A. Any 4 or all of the above Answer After DVV Verification: B. 3 of the above</p>
7.1.5	<p>Green campus initiatives include:</p> <ol style="list-style-type: none"> 1. Restricted entry of automobiles 2. Use of Bicycles/ Battery powered vehicles 3. Pedestrian Friendly pathways 4. Ban on use of Plastic 5. landscaping with trees and plants <p>Answer before DVV Verification : A. Any 4 or All of the above Answer After DVV Verification: A. Any 4 or All of the above</p>
7.1.6	<p>Quality audits on environment and energy are regularly undertaken by the Institution and any awards received for such green campus initiatives:</p> <ol style="list-style-type: none"> 1. Green audit 2. Energy audit 3. Environment audit 4. Clean and green campus recognitions / awards 5. Beyond the campus environmental promotion activities <p>Answer before DVV Verification : B. 3 of the above Answer After DVV Verification: C. 2 of the above</p>
7.1.7	<p>The Institution has disabled-friendly, barrier free environment</p> <ol style="list-style-type: none"> 1. Built environment with ramps/lifts for easy access to classrooms. 2. Divyangjan friendly washrooms 3. Signage including tactile path, lights, display boards and signposts 4. Assistive technology and facilities for Divyangjan accessible website, screen-reading software, mechanized equipment 5. Provision for enquiry and information : Human assistance, reader, scribe, soft copies of reading material, screen reading

Answer before DVV Verification : B. 3 of the above
 Answer After DVV Verification: C. 2 of the above
 Remark : Edited based on clarification document. Sl.no 1 and 2 considered. Installation of lift is beyond the assessment period.

7.1.10 **The Institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic programmes in this regard.**

1. **The Code of Conduct is displayed on the website**
2. **There is a committee to monitor adherence to the Code of Conduct**
3. **Institution organizes professional ethics programmes for students, teachers, administrators and other staff**
4. **Annual awareness programmes on Code of Conduct are organized**

Answer before DVV Verification : A. All of the above
 Answer After DVV Verification: B. 3 of the above
 Remark : Edited based on the clarification document. Sl.no 1.3 and 4 considered.

2.Extended Profile Deviations

ID	Extended Questions																				
1.1	<p>Number of courses offered by the Institution across all programs during the last five years</p> <p>Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> </tr> </thead> <tbody> <tr> <td>435</td> <td>446</td> <td>436</td> <td>361</td> <td>360</td> </tr> </tbody> </table> <p>Answer After DVV Verification:</p> <table border="1"> <thead> <tr> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> </tr> </thead> <tbody> <tr> <td>335</td> <td>382</td> <td>374</td> <td>311</td> <td>310</td> </tr> </tbody> </table>	2019-20	2018-19	2017-18	2016-17	2015-16	435	446	436	361	360	2019-20	2018-19	2017-18	2016-17	2015-16	335	382	374	311	310
2019-20	2018-19	2017-18	2016-17	2015-16																	
435	446	436	361	360																	
2019-20	2018-19	2017-18	2016-17	2015-16																	
335	382	374	311	310																	
1.2	<p>Number of programs offered year-wise for last five years</p> <p>Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> </tr> </thead> <tbody> <tr> <td>13</td> <td>12</td> <td>10</td> <td>7</td> <td>7</td> </tr> </tbody> </table> <p>Answer After DVV Verification:</p> <table border="1"> <thead> <tr> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> </tr> </thead> <tbody> <tr> <td>12</td> <td>11</td> <td>10</td> <td>7</td> <td>7</td> </tr> </tbody> </table>	2019-20	2018-19	2017-18	2016-17	2015-16	13	12	10	7	7	2019-20	2018-19	2017-18	2016-17	2015-16	12	11	10	7	7
2019-20	2018-19	2017-18	2016-17	2015-16																	
13	12	10	7	7																	
2019-20	2018-19	2017-18	2016-17	2015-16																	
12	11	10	7	7																	
2.2	<p>Number of seats earmarked for reserved category as per GOI/State Govt rule year-wise during last five years</p> <p>Answer before DVV Verification:</p>																				

2019-20	2018-19	2017-18	2016-17	2015-16
217	236	236	202	226

Answer After DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
228	245	245	206	206

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

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
126	116	122	124	118

Answer After DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
93	115	121	121	115

4.2 **Total Expenditure excluding salary year-wise during last five years (INR in Lakhs)**

Answer before DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
757.47	819.87	734.50	734.02	879.58

Answer After DVV Verification:

2019-20	2018-19	2017-18	2016-17	2015-16
750.44	820.09	734.46	734.67	948.21