



SELF STUDY REPORT

FOR

1st CYCLE OF ACCREDITATION

VISWAJYOTHI COLLEGE OF ENGINEERING AND TECHNOLOGY

VISWAJYOTHI COLLEGE OF ENGINEERING AND TECHNOLOGY,
VAZHAKULAM P.O, MUVATTUPUZHA
686670

www.vjcet.org

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BANGALORE

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

Viswajyothi College of Engineering and Technology, Vazhakulam was established in the year 2001 and is run by the Diocesan Technical Educational Trust under the aegis of the Syro Malabar Catholic Eparchy of Kothamangalam. As a professional educational institution, VJCET has always strived to educate engineers and management professionals to the next level through innovative activities. Scholars from all over Kerala and abroad seek admission here because of its excellent infrastructure, well experienced faculty, separate hostel facility for ladies and gents, internet connectivity and apt learning environment. Today, Viswajyothi College has grown in name and fame as an NBA accredited professional engineering institution with its alumni as brand ambassadors working globally. It trains undergraduate engineers in seven disciplines and conducts four post graduate courses including MBA. Presently, 1806 students undergo training in all the branches together. Moreover, the Management maintains keen intention to open up more programmes so as to customize to the taste and need of the time.

Viswajyothi has an excellent team of faculty, well-experienced, committed and devoted in imparting holistic training as to make students industry ready. It has state of the art infrastructure with an area of 45944.47 sq.m in a sprawling campus of 25.28 acres with panoramic landscapes, well-planned class rooms, cutting edge labs, workshops, updated library with latest national/international journals and e-journals, R&D block, hostels, playgrounds and gymnasium on the pristine hillock overlooking Punalur-Muvattupuzha state highway.

The Placement and Training Cell makes it a point to pool in training resources as to improve the students' employability. Soft Skill and Technical Training is spread through the academic year utilizing even vacations. Students are given ample opportunities for hands own experience through arranged internship, in-house incubation centre, Fab Lab and Start-Ups. They avail trainings at the in-house coaching centre for German language, industry relevant add-on courses and given exposure to the relevant field through bridge courses. Around 50 reputed companies regularly visit our campus among which Infosys lifts the major haul. The placement team keeps scanning industries for possible openings. Around 85% of all eligible students of the last academic year have already secured placement in reputed companies.

Vision

"Moulding Professionals par Excellence with Integrity, Fairness and Human values"

Mission

- We commit to develop the Institution into a Centre of Excellence of International Standards.
- We guide and mould our students in the attainment of intellectual and professional competence for successfully coping with the rapid and challenging advancements in technologies and the ever changing world of business, industry and services.
- We help and support our students in their personal growth shaping them into mature and responsible individuals.
- We strive to cultivate a sense of social and civic responsibility in our students, empowering them to

serve humanity.

- We promise to ensure a free environment where the quest for the truth is encouraged.

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

- The College is a self-supporting Institution providing quality education to students with AICTE approval and NBA Accreditation for all B.Tech. branches except for the B.Tech Artificial Intelligence and Data Science introduced in 2020-21.
- The Vision, Mission, PEOs and POs of VJCET are framed following KTU and NBA guidelines.
- Dynamic management with young and dynamic staff, ensure quality in every aspect of technical education.
- Our Principal of VJCET, has to his credit 35 years of experience, working as a Scientist in Department of Atomic Energy at Indira Gandhi Centre for Atomic Research, Kalpakkam. He has been graded Distinguished Scientist. His commendable Research/Industrial experience is highly motivating and beneficial to this Institution.
- The College possesses excellent infrastructure facilities, including ICT enabled classrooms, laboratories, library, transportation system, hostel and other support facilities like Wi-Fi and Common Computing Centre.
- Academic collaborations with organizations / industries for increasing employability and improving skill development.
- Senior academicians serve as HODs and Deans of academic departments.
- IQAC imparts quality experience to academic and non-academic activities.
- Incubation Centre and Fab Lab for fostering creativity and innovation among the students and faculty.
- In-Campus start-up initiatives and incubation centre to encourage entrepreneurship.
- To ensure emotional well-being of each student, mentoring is implemented as a part of the curriculum along with the Counselling services offered.
- Institutional Commitment to develop community-oriented activities through NSS, IEEE and CSI.
- Assistance to avail Government Scholarship schemes to meritorious / economically weak students.
- Bridge courses and Induction/Orientation programmes.
- Opportunity to showcase multiple skills and talents of students on campus through Arts Fest, Tech Fest, sports and games etc.
- Institutional membership in technical societies like ISTE, IEEE and CSI.
- Automated e-governance for academic and administrative systems.
- Effective Statutory committees /cells for student grievance redressal.
- Special Programmes for empowering girls/women in the Institution by an active Women's Cell.
- Regular placement training programmes and placement assistance.
- In campus honesty shop and reprography facility.
- Special attention is given to help the differently abled students through connecting bridges, wheel chairs and provision for swapping classrooms.

Institutional Weakness

- The Institution is affiliated to the University which limits academic freedom of the College.
- Absence of family accommodation facility for staff on the campus.
- Distance from airport and railway station.
- Absence of financial grant from external sources.
- Limited industrial exposure.
- Lack of motivation among students in industry oriented hobbies.

Institutional Opportunity

- Strong management support, committed faculty/staff.
- Well-organised Alumni interaction through alumni associations.
- Well-maintained industrial interactions and MoUs.
- Excellent infrastructure with a well maintained college campus on a lovely hilltop.
- Ample scope to conduct different add-on courses and training programmes.
- Opportunities to attract research funding from different sources and government agencies.
- Support from Kerala Start up Mission to encourage Start up initiatives of students.
- Opportunity to collaborate with technical societies like IEEE,ISTE,CSI,IETE, KMA, NIPM, SAE etc.
- Placement and training opportunities and one-year extended service for Alumni.
- Campus and Off-campus recruitment service.
- Opportunity to work along with other major institutions through online programmes.
- Arranged internships and workshops for hands-on experience.
- Healthy competitions among self financing colleges that help to have improvement in overall performance of the Institution.
- Introduction of new programme, B.Tech Artificial Intelligence and Data Science in 2020-21.
- Introduction of courses with honours and other minor courses will provide opportunity for the students to usher in new areas.
- Institution has surplus land for further extension activities.
- Regular talks by industrial experts and experience sharing by the Alumni.
- Free training and spoken tutorial programmes on various ICT topics to staff and students by IIT Bombay under NMEICT, MHRD.

Institutional Challenge

- Difficulty in attracting good students to the College due to:
 - (a) the presence of a large number of engineering colleges in nearby areas
 - (b) preference for admission in the nearby States
 - (c) Changing trend
 - (d) Unemployment
- Maintaining good standards among engineering colleges and to scale greater heights.
- To attract and retain expert faculty.
- To make a mark at the national level in the realm of research with high impact publications, patents and

technology transfer.

- Latest version of mobiles, media and peer-group influence negatively affect the academic orientation of students.
- Tough to maintain excellence in professional engineering education from the remote geographic location of the College.
- With limited time preparing interested students for competitive examinations like GATE, CAT, IAS etc. is too demanding.
- To prepare students within a short time for university examinations together with curricular / extra-curricular activities to make them industry ready.

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

- Curriculum plays the most important role in preserving the standard and robustness of any educational institution.
- Viswajyothi College of Engineering and Technology (VJCET) is affiliated to Kerala Technological University (KTU) and it adopts a methodology that is emphasized by the University.
- The University Board of Studies plans and develops the curriculum and academic calendar, and is disseminated to affiliated institutions for effective implementation.
- The Principal along with Heads of all the departments prepare the calendar of events in accordance with the rules of the University.
- The Institution schedules the institutional and departmental activities with strict adherence to the academic calendar of the University.
- Effective curriculum delivery is ensured through a process of formulation of teaching plan, preparation of adequate learning materials and maintenance of course files by every faculty.
- Departmental meetings are held to discuss about continuous internal evaluation, documentation and then to ensure about its adherence.
- The Institute promotes self-employment through entrepreneurship development programmes.
- The faculty actively involve themselves in various University level activities such as Centralized Valuation, Observer, Project Viva Voce, Members of BOS etc.
- Students' skill sets are improved and developed through add-on programmes along with provision for minor and honours degree tailored into the regular curriculum.
- The active involvement of students in technical activities of professional societies, department clubs, spoken tutorial/NPTEL and Infosys campus connect programme help them to broaden their awareness perspectives.
- The Institute carries out many activities to raise students' awareness on cross-cutting issues such as gender equity, environmental sustainability, human values and professional ethics.
- Experiential learning, which includes project work, internships and fieldwork, is an element of the curriculum that emphasizes the transmission of practical knowledge to students.
- The NSS unit at the College helps to enhance social service skills of the students.
- A brief study on the Indian Constitution, Professional Ethics and Environmental Education, enable students to address societal issues.
- In order to update and to make corrective measures, feedback from stakeholders are collected, assessed and analyzed before taking necessary steps for improvement. All the processes are described and documented.

Teaching-learning and Evaluation

The Teaching-Learning and Evaluation at VJCET ensures the inculcation of professional qualities and results that are necessary for students' overall development.

- Admissions at VJCET are granted to students as per the regulation of AICTE, KTU and the Kerala Government. The First Year class begins with an Orientation Programme which initiates and prepares students to develop their curricular and extra-curricular skills.
- In synchronization with the KTU calendar, a semester plan is prepared and communicated to students, faculty members and to the administrative department.
- Course plans are prepared by each faculty and approved by the respective HoD.
- The advanced and slow learners are identified through internal assessment whereby separate care is given to such groups of students.
- Students are encouraged and supported to participate in various inter and intra technical events like Project & Paper presentations, Poster Making Competitions etc.
- To enhance the learning methodologies, students are given firsthand experience through industrial study mission, invited lectures, hands on sessions etc.
- Faculty at VJCET are utilizing ICT enabled tools for effective Teaching Learning Process with sources from e-journal, e-books etc. In addition, software platforms like Microsoft Teams, Google Meet and Zoom are taking cue on ICT.
- With the intention of improving the teaching learning process, students' feedback is taken twice in every semester.
- Class Committee and Course Committees are formed with senior staff and student representatives to have review and suggestions about academic progression.
- Mentoring system is effectively maintained at VJCET by the teachers and students who need special care are referred to the college counsellor.
- Various faculty development programs are conducted for quality improvement.
- Students are also assessed regularly through assignments, internal examinations, seminars etc.
- The Best Outgoing Student and Academic Performers are honored every year.
- Attainment of COs and POs through direct and indirect methods help to provide Outcome Based Education successfully.

Research, Innovations and Extension

- VJCET always gives prime importance to research and development of faculty. It encourages them to pursue research in their field of study and work, to publish papers and to organize workshops in the area of innovations and research. It supports the faculty in applying for various project funding schemes of the government.
- VJCET has several projects funded by government (BRNS, KSCSTE) and non-government agencies (IEEE) where faculty act as supervisors or Principal Investigator (PI).
- A few of our faculty are honoured with Ph.D guideship affiliated to Kerala Technological University, Mahatma Gandhi University and Bharathiar University, Coimbatore.
- Innovation and Entrepreneurship Development Centre (IEDC) of VJCET has been very active since its inception with the technical and financial support of Kerala Startup Mission (KSUM). IEDC is

dedicated in providing support to students enabling them to convert their noble ideas into prototype and for further scaling up.

- IEDC of VJCET is always committed in consistently delivering several technical, motivational programs and entrepreneurship development related workshops, and is organizing Idea Fest every year with the goal of making a profound platform at our College for encouraging start-up programs.
- VJCET strongly believes in imparting a sense of social responsibility into our students, empowering them to serve humanity better. Participation of its students and faculty in socially useful activities will contribute significantly to the overall efforts made for the upliftment of the society and to promote well-being.
- To this end, the Institute encourages the students to be active members with student bodies like NSS, IEEE, CSI, & UNAI.
- Faculty at VJCET, consistently publish papers in SCI/SCOPUS/UGC indexed journals and in conference proceedings of international repute.
- The College has an in-house journal named Technology and Future having an ISSN, and an annual R&D newsletter to document R&D activities and to maintain the research acumen of faculty.
- Our College has a full-fledged Industry Institute Interaction Cell (IIIC) which always keeps track of the industrial collaboration through MoUs and continuous learning enhancement.

Infrastructure and Learning Resources

The Institution has an extensive campus spread over **25.28 acres** of land with **45944.47 sq.m** built-up area comprising modern buildings with ease of access to both students and faculty.

- The College has 45 classrooms with ICT facilities, 50 department laboratories, 4 common laboratories, common computing centre, discussion rooms and guest rooms.
- It has internet facilities, separate hostels for men and women, indoor diesel powered generators, sewage treatment plant, solid waste incinerator, rain water harvesting, on grid solar power generation to create a learner-centric environment.
- The College has 938 computers and the student computer ratio is 2.76.
- The Institution has a main auditorium of 802.22 sq.m with a capacity of 1500 pax, mini auditorium of 293.48 sq.m with a capacity of 250 pax. and 10 seminar halls with a seating capacity of 100 pax. each, for conducting various programmes.
- The FAB Lab and R&D wing are the highlights of our College.
- The College library is housed in an area of 1531.42 sq.m and uses and uses an open source software called "KOHA".
- The College provides full-fledged internet and Wi-Fi network facility. The whole campus is under CCTV surveillance.
- The College has a playground for cricket and football, separate courts for basketball, badminton, indoor games and a multipurpose synthetic court.
- There is a well-equipped Multi Gym and Fitness Centre in an area of 230 sq.m, which can accommodate 35 aspirants at a time.
- Canteen, cafeterias and transportation facilities (19 buses) are provided.
- Four units of solar power plant with a total capacity of 280 kWp are installed to promote green energy and reduce carbon emission.
- Business Incubation Centre (V-BIC) is launched to enable entrepreneurial development among the students and also to incubate start-up companies in the campus.
- VJCET is equipped with ramps and sanitary facilities for the benefit of Persons with Disabilities

(PwDs), water filters and coolers in each floor, reprographic centre, ATM, medical room, counselling centre and separate rest rooms for boys and girls.

- VJCET has a well-established and systematic procedure for maintaining its physical, academic and other support facilities.

Student Support and Progression

- A well-established student support system is in place at VJCET with an objective to groom our graduates into full-fledged professionals. VJCET has developed systems for academic as well as personal mentoring of students.
- VJCET has a dedicated Student Welfare and Counselling Centre. Progress and development of students are ensured by way of academic mentoring, co-curricular and extra-curricular activities and technological activities.
- Through Management scholarships as well as Government instituted scholarships, more than 35% of the students enjoy fee relaxation benefits.
- The Students' Grievance Redressal cell, Women's cell, Anti-Ragging Committee and Anti -Ragging Squad, create a conducive environment for students within the campus and ensure their wellbeing.
- A dedicated Placement and Training Cell (PTC) organizes programmes for Aptitude training, Communication skills and Soft-skills development; well paced over the academic tenure. The PTC monitors students' progress through assessment tests. The active engagement of student participation is ensured by constituting a Placement Committee.
- Pre-employment training programmes are organized in association with prominent institutions and industries. VJCET partners with INFOSYS in its INFYTQ programme .
- Students are encouraged to pursue higher education and many students have enrolled for such courses in India and abroad. Branch- specific interactive sessions are arranged for students with personalities of eminence from academia and industry.
- An active Student Council takes a lead role in conducting cultural & technical programmes, project exhibitions and sports events in the College.
- Students get actively involved in service organisations and social outreach programmes which help them bloom as professionals with integrity, fairness and human values.
- The student engagement in professional societies greatly supports their academic progress as well.
- VJCET has a vibrant Alumni network which supports student community through internships, job opportunities and career guidance by way of interactions.

Governance, Leadership and Management

The Vision of Viswajyothi College of Engineering and Technology (VJCET) is to mould Professionals for tomorrow for the welfare of mankind and society.

The Strategic plans of the Institution are:

- Improving the teaching learning process.
- Enhancing the industry institute interaction.
- Rendering successful entrepreneurs.
- Providing personality development programs for students.
- Achieving Placement in reputed establishments.

- Implementing e-governance in all areas.
- Encouraging R & D by faculty and students.
- Developing the campus to a clean and green one.
- Implementing welfare measures for faculty .
- Other initiatives of the institution

The Principal in association with the Governing body, staff and student council is proactively engaged to accomplish the vision and mission. Various committees headed by faculty are functioning in the Institute for the overall development of the Institution.

- Institution has implemented e-governance in the areas of operation such as Administration, Finance and Accounts, Examination and also Student Admission and Support.
- Faculty Empowerment programmes / General Welfare measures include, guest lectures, seminars and workshops on recent technologies, Quality Improvement Programme (QIP) and sponsorship for Doctoral Research (Ph.D.) with stipend. Faculty are eligible for availing casual leave, medical leave, maternity leave and duty leave. EPF, ESI, Gratuity & Medical Insurance are provided. The Institution has implemented Performance Appraisal System for teaching and non-teaching staff.
- For financial management, annual budget is prepared for every academic year based on the requirements of each department. The Institution conducts internal and external audits every year. The income and expenditure of the Institution is audited regularly by registered chartered accountants on an annual basis.
- Internal Quality Assurance Cell (IQAC) that plays a proactive role in continuous improvement includes : Students Assessment Record Monitoring Committee, Exam Cell, Test & Retest Monitoring Committee, Attendance Monitoring Committee, Course File & Lab Manual Monitoring Committee, IIC and IEDC, Academic Advisory Committee, Research & Faculty Development Committee, Placement Committee, Student Disciplinary Committee, NPTEL, Spoken Tutorial & Guest Lecture Monitoring Committee, Feedback Committee, Students Grievances and Ethics Monitoring Committee, Library Committee and Project Monitoring Committee.

All these efforts help VJCET to accomplish the Vision, “Moulding Professionals par Excellence with Integrity, Fairness and Human Values.”

Institutional Values and Best Practices

Viswajyothi College of Engineering and Technology is a stellar organisation focusing on empowering young people to develop social values and to become eco conscious and democratic citizens right from an influenceable age.

- Equity literacy is promoted by established frameworks. The College organises events and talks; invites write-ups in college magazine.
- The entire campus is under surveillance and has well maintained hostels.
- Sensitization of students into becoming responsible citizens is a priority of the College; various commemorative festivals and events of national and constitutional importance are celebrated. Blood donation camps, supply of food, money, clothing and distribution of other facility enhancements to local communities are regularly conducted.
- The adverse impacts of climatic change have made huge dents in the Kerala Scenario and the College has taken keen initiatives like tree planting, water harvesting, energy conservation, carbon neutrality and

awareness creation about renewable energy projects.

- Out of the 280 kWp Solar power plant, the 30 kWp project was funded by the Diocese of Rottenburg which contributes to power requirements of the College and will continue to grow exponentially when the benefits are translated into entrepreneurial support projects started for women from the local community.
- VJCET practices an integrated waste management approach using biogas plants, sewage treatment plant and incinerator.
- Two best practices: - 'Philanthropic Stance & Corporate Social Responsibility through student activities and projects' and 'Industry collaborative education' of the College have programmes to make the students industry ready. The Institute has signed MOUs with many organisations for student and faculty training, preparation for competitive exams and placements. Senior Experten Service (SES) Germany, trains students by conducting workshops. The incubation facility of the College provides a launch pad for budding student entrepreneurs by conducting funded, skill building training programmes.
- Adoption of green principles by promoting the concepts of solar energy, rain water harvesting, waste water treatment and water reuse. 'Net Zero Energy' building is our first step towards 'Achieving Net Zero' in the built environment in terms of Carbon, Water and Waste.
- Such concerted efforts of the College has helped students from rural background reach positions of excellence at national and international levels.

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the College	
Name	VISWAJYOTHI COLLEGE OF ENGINEERING AND TECHNOLOGY
Address	Viswajyothi College of Engineering and Technology, Vazhakulam P.O, Muvattupuzha
City	Vazhakulam
State	Kerala
Pin	686670
Website	www.vjcet.org

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal	K. K Rajan	0485-2262211	9072964417	0485-2262211	principal@vjcet.org
IQAC / CIQA coordinator	Anoop C. K	0485-2262311	9497189607	-	anoopck@vjcet.org

Status of the Institution	
Institution Status	Private and 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 VJCET.pdf
If Yes, Specify minority status	
Religious	Christian
Linguistic	
Any Other	

Establishment Details	
Date of establishment of the college	23-07-2001

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	25-09-2020	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	13-10-2020	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_1624774745.pdf
If yes, has the College applied for availing the autonomous status?	No

Recognitions	
Is the College recognized by UGC as a College with Potential for Excellence(CPE)?	No
Is the College recognized for its performance by any other governmental agency?	Yes
If yes, name of the agency	National Board of Accreditation
Date of recognition	08-06-2018

Location and Area of Campus				
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.
Main campus area	Viswajyothi College of Engineering and Technology, Vazhakulam P.O, Muvattupuzha	Rural	25.28	45944.47

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	Plus Two	English	63	24
UG	BTech,Computer Science And Engineering	48	Plus Two	English	126	123

UG	BTech,Electronics And Communication Engineering	48	Plus Two	English	63	32
UG	BTech,Electrical And Electronics Engineering	48	Plus Two	English	63	23
UG	BTech,Mechanical Engineering	48	Plus Two	English	63	34
UG	BTech,Information Technology	48	Plus Two	English	63	42
UG	BTech,Artificial Intelligence And Data Science	48	Plus Two	English	63	45
PG	Mtech,Computer Science And Engineering	24	B.Tech	English	18	0
PG	Mtech,Electronics And Communication Engineering	24	B.Tech	English	18	0
PG	Mtech,Mechanical Engineering	24	B.Tech	English	9	0
PG	MBA,School Of Management Studies	24	UG	English	60	51

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	4				14				132			
Recruited	3	1	0	4	10	4	0	14	51	81	0	132
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				45
Recruited	21	24	0	45
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				52
Recruited	44	8	0	52
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.	0	0	0	0	0	0	0	0	0	0
Ph.D.	3	1	0	8	1	0	1	1	0	15
M.Phil.	0	0	0	0	0	0	2	3	0	5
PG	0	0	0	2	3	0	48	77	0	130

Temporary Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	1	4	0	5

Part Time Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0

Details of Visting/Guest Faculties					
Number of Visiting/Guest Faculty 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
PG	Male	46	0	0	0	46
	Female	62	0	0	0	62
	Others	0	0	0	0	0
UG	Male	834	0	230	1	1065
	Female	544	0	89	0	633
	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	5	4	3	1
	Female	2	3	2	0
	Others	0	0	0	0
ST	Male	0	0	0	2
	Female	0	1	2	2
	Others	0	0	0	0
OBC	Male	56	38	22	17
	Female	30	30	26	30
	Others	0	0	0	0
General	Male	338	303	247	281
	Female	213	202	159	169
	Others	0	0	0	0
Others	Male	7	0	7	5
	Female	6	0	2	5
	Others	0	0	0	0
Total		657	581	470	512

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
400	410	430	420	384
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
10	10	10	10	10

2 Students

2.1

Number of students year-wise during last five years

2019-20	2018-19	2017-18	2016-17	2015-16
2036	2152	2306	2325	2204
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
176	186	195	195	195

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
614	610	599	570	501

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
150	165	183	178	164

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
150	165	183	178	164

File Description	Document
Institutional data in prescribed format	View Document

4 Institution

4.1

Total number of classrooms and seminar halls

Response: 51

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
897.46	936.64	765.7	653.47	539.39

4.3

Number of Computers

Response: 921

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:

Viswajyothi College of Engineering and Technology, Vazhakulam, is affiliated to APJ Abdul Kalam Kerala Technological University, Thiruvananthapuram and adheres to **curriculum regulations, academic calendar and syllabus** of each programme of the University.

- Effective **implementation of curriculum delivery for Outcome Based Education** is ensured by conducting meeting of Head of Departments followed by **subject allocation meeting** in each department at the beginning of each semester.
- **Time-table and semester plan** of institution will be prepared prior to start of semester under the guidance of IQAC. **Department Advisory Committee and Programme Assessment Committee** meetings are conducted every year for **planning various activities and strengthen the department's goals** and academic standards.
- The Department Head allocates **courses and workload** to individual faculty members. Faculties prepare **course plan** based on **academic calendar, semester plan, syllabus and department time table** and get approved by Department Head.
- Prior to beginning of each semester **contents beyond the syllabus and gap in syllabus, its delivery plan, assignment and tutorial topics** are planned. Before starting of regular class **induction program is planned and executed** for first year students to have an exposure to the field of technology and social awareness.
- Faculty in-charge gives students a brief introduction about **course objectives and outcomes** at the beginning of course. Based on **course plan, course delivery** is carried out and **course coverage** is entered in **course diary** of faculty. Faculties maintain a **course file** for all courses including laboratory courses. Different **methods of teaching** adopted by faculty are **board and chalk, PPT, online videos, recorded video** etc.
- **Course and class committee meetings** are conducted by chairman twice in a semester to encourage students to improve their **academic performance** and to collect their opinion to ensure attainment of effective curriculum delivery. **Minutes** of course and class committee meetings are reviewed by Department Head and class committee Chairman. **Suggestions** are given to faculty in-charge of course for **improvement**.
- **Student's academic performance is evaluated and monitored** through **internal tests, assignments, quizzes and seminars**. Bright and weak students are identified based on their performance in internal tests. **Bright students** are encouraged to secure higher grades and **weak students** are advised to undergo **remedial classes and tests** to perform better.
- Department staff meetings are conducted monthly to **check progress of teaching learning process**. Student's participation in MOOC courses like **NPTEL and Coursera** are ensured towards **contents beyond syllabus**. Industrial interactions have been enhanced by **guest lectures, workshops and hands-on trainings by industrial experts**. Industry involvement is further enhanced by **internship** and various professional bodies including **IEDC, IIC, ISTE and**

IEEE. Students are encouraged to write competitive examinations like **GATE, CAT and IELTS.**

- **Academic audit** is conducted **twice in a semester** to ensure effective implementation of teaching learning process and curriculum. **Student's feedback** is collected twice during each semester and faculty members are motivated to **improve course delivery methods** based on this feedback.

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:

- In executing all academic activities, VJCET consistently adheres to the **academic calendar** provided by **KTU**. The **college** develops an **academic calendar** that is aligned with the **KTU** calendar that incorporates both **academic and extracurricular events**. The departmental activities are planned based on the **institutional academic calendar** and directions from **IQAC**. They include **seminars/workshops/technical talks** to accomplish the curriculum gaps and enhance the knowledge of the students.
- Students' progress is continually assessed based on **course outcome attainment levels** in all courses. Measures taken for **CIE** are **internal examinations, presentations, assignments, and quizzes**. **CIE question papers and assignments** are created based on **course outcomes and Bloom's taxonomy**, and they are authorized by the stream coordinator and Head of Departments.
- The faculty handling each course will evaluate the answer sheets based on the **answer key** as per the **scheme**. After each **CIE**, **consolidated marks** are submitted to the Principal through Department Heads. After the analysis and evaluation, it is uploaded to the **college portal**. Students who were unable to take the internal examinations due to legitimate reasons are eligible for a retest. **Remedial classes** and assessments are conducted, which help students to raise their grades.
- During the last five academic years the institution has undergone three regulations : **MG University, KTU-2015 & KTU-2019** schemes for **UG and PG** programs. Academic evaluation of courses depends upon corresponding regulations. The academic evaluation comprises of **end-semester examination and internal assessment**. For internal evaluation, two exams are conducted per semester, student's final internal marks are computed using the average of both of these exams and assignments. As per **MGU and KTU-2019** regulations, marks for attendance are also considered for internal marks of both **UG and PG**.
- **Laboratory** sessions evaluate **experimental capabilities and problem-solving skills** of students. Assessment is based on performance, records of practical experiments, viva-voce, output, and final lab exam. The final lab examination is conducted in the presence of an external examiner.
- In the third year, students as a team may choose any **design/mini-project** under their discipline. This course is designed to inspire students to think beyond the box to develop innovative design ideas. It is evaluated according to regulations.
- **Comprehensive Examination** is evaluated based on written cum oral examination, covering all courses completed till the sixth semester by a team of the departmental committee and an academic/industry expert.

- The **seminar presentation** is conducted in the seventh semester. Students must choose a topic based on current technology for the seminar and have to submit the seminar report. A departmental committee consisting of the Department Head, a coordinator, and a senior faculty member will assess it.
- **Project work** is divided into two stages: phase I in the seventh semester and phase II in the eighth semester. Each phase is evaluated separately. Students must present a project report at the end of each semester. The project will be evaluated by a departmental committee during the first phase. In project phase II, the committee additionally includes an external examiner.

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: 100

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

Response: 10

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: 27

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
4	8	5	5	5

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: 40.14

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
952	977	779	881	813

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:

The curriculum of KTU addresses the crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability.

Gender Equality:

- In VJCET each student irrespective of his/her gender, is given equal opportunities and accessibility to resources along with ensuring the active participation in decision making and policy formation involving in the developmental activities of the institute.
- Various committees such as **Staff Welfare Committee, Students' Grievance Redressal Committee, Students' Welfare/Counselling Centre, Women's Grievance Redressal Forum, Anti-Ragging Committee** have been formed to ensure this equality. These cells enable lady faculty members and girl students to explore their imminent potential in all aspects, providing a congenial working environment for them.
- **Women development seminars** are also conducted to improve their confidence and personality.
- College Magazine is being published each year in which both genders are getting opportunities for publishing their articles.
- To facilitate our female students and male students, the Campus has established separate spacious and comfortable resting room which give students a place to relax and have informal discussions.
- The various professional body chapters of VJCET are headed by both male and female students which enhance their professional skills.
- The Placement cell also provides equal importance to girls and boys while giving training and during placement drive.

Environment & Sustainability:

- A course "**Introduction to Sustainable Engineering**" is introduced in the curriculum by the university to impart awareness to the students about sustainability. This course enables the student to understand the role and influence of engineering in environmental problems.
- The courses such as **Environmental Engineering, Disaster Management, Environment Impact Assessment, Environment Health and Safety** help students to learn about the ecosystem and other environmental factors. The said subject includes the Scope & Nature of Environment Science, Natural Resources, Biodiversity, Pollution, Social Issues and Population and global warming and other related issues.
- **The National Service Scheme (NSS)** unit in VJCET stands for its commitment towards the

sustainable development of the environment and the society, utilising its expertise in finding pragmatic solutions to the prevailing issues. In order to sensitize students about the environment and sustainability issues college celebrates World Environment Day by planting tree saplings at various locations in college campus. As a part of NSS activities students participate in various activities like, blood donation, Swachh Bharat Abhiyan, Distribution of School Supplies, tree plantation and cleanliness programs.

Human Values & Professional ethics: Courses on Human values and Professional Ethics:

- The courses **like Life Skills and Business Economics** give awareness to the student about Human Relations and Professional Ethics. The ethics of human relations include the principles of honesty, allegiance, openness, dignity, respect, justice and precise communication.
- The course **Responsible Engineering** creates consciousness on responsibilities and Human Values.
- The course **Industrial Psychology and Organisational Behaviour** creates an awareness on human psychology.
- **Organizational Behaviour, Business & Society, Soft Skills, Human Resource Management and Business Ethics & Corporate Governance** are the courses which enable students to improve their behavioural skills in an organization. They help the students to transit from personal ethics to professional ethics.

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: 30.78

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
109	123	137	130	130

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: 76.57

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

Response: 1559

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

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: 72.06

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

2019-20	2018-19	2017-18	2016-17	2015-16
512	470	581	657	660

2.1.1.2 Number of sanctioned seats year wise during last five years

2019-20	2018-19	2017-18	2016-17	2015-16
744	787	819	819	819

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: 40.39

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
62	64	76	106	76

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:

The college organizes an orientation program for students at the commencement of new batch every year. It helps students to get familiarized with the institution, curricular and co-curricular activities, rules and regulations.

Advanced learners and slow learners identification

- Identification is based on the performance in internal tests in the case of theory subjects. After each test, the faculty member will analyze the results and categorize the students into two groups.
- The students who scored above 80% belong to the group of advanced learners and less than 45% of marks belong to the group of slow learners.
- Tests will be conducted in the laboratory to assess the performance of the students. The first test will be conducted after completing 50% of laboratory experiments. After the first practical examination, the results are analyzed to categorize students into two groups. The students who score above 80% belong to the group of bright students and less than 45% of marks belong to group of weak students.
- Student-faculty interaction in classroom also helps to identify slow learners.

Advanced Learners:

- Students are encouraged to participate in various contests and programmes like **Tech Fest, Hackathon, Webinars, Workshops, Conferences and Online courses** conducted within the college as well as other colleges and outside agencies.
- Students are advised to take **membership in various professional bodies** and participate in technical events.
- Special coaching for **GATE** is provided and encouraged to take up other various competitive exams.
- Students are encouraged to apply for **funded projects**.
- At the end of each academic year batch toppers are identified and appreciated with Certificate and Cash award. Also University Rank holders are honored. The best outgoing student of the year is selected from the group of short-listed students from each department based on a set of criteria, assessing both academic and non-academic performance. However every student in the aforesaid group is given due honor and recognition.

Slow Learners:

- Departments conduct **remedial classes** and provide **handouts** for slow learners.
- The number of hours taken for remedial class is decided by the faculty members as required.
- A **remedial test** will be conducted for the weaker students thereafter.
- **Previous years' university question papers with answer keys** are disseminated among slow

learners and also encourage collaborative learning.

In order to motivate **both the slow learners and advanced learners**,

- Workshops, technical talks etc. are organized to enhance their skills.
- Placement cell of the college organizes training which includes quantitative aptitude and soft skills. Technical courses are given to the students based on their interests and learning ability.
- Various club activities help to strengthen the commitments of students towards the development of their inner potential and skills.
- As an add-on to the university prescribed syllabus, open ended experiments, advanced experiments, design experiments and extra lab facilities like FAB lab are also provided to enhance the practical knowledge of the students.

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: 14:1

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:

Student centered active learning methodology is the instruction philosophy of VJCET. Faculty members prepare their course plan incorporating students centered learning methods such as seminars, assignments, mini projects, case studies, article analysis, industry study mission, industry interactions etc.

- **Online courses:** Students are encouraged to do additional courses using online platforms like NPTEL, Coursera, Swayam etc.
- **Students Participation:** Participation in project competitions, paper presentations, design contests, technical and management fests are always encouraged. The achievers are recognized in public. Teachers support them in preparing for the events. VJCET is the only education institution in India which has participated in the prestigious International Technology Competition Cybathlon by ETH, Zurich in 2020.
- **Curriculum Enrichment Programs:** Curriculum is reviewed by experts through Programme

Assessment Committee (PAC), Department Advisory Committee (DAC) and course committee. Gaps identified by the course coordinator are approved by these committees. These gaps are filled and curriculum is enriched by Industry experts or Academicians from premium institutions by conducting guest lectures, seminars and workshops.

- **Students Seminars:** Students take seminars on certain areas of their curriculum. Students are encouraged to analyze articles from reputed journals which are made available in online digital database like IEEE, ASME, EBSCO etc.
- **Industry study missions:** Industry study missions are short visits to industries and interactions with the practicing engineers, managers and technocrats to get a firsthand feel of what they learn in the class. It is arranged once in every year.
- **Projects, Internships and Industrial Training:** Students undergo internships of different duration depending upon the course. They spent a stipulated period of time in industry to learn things by doing it in the industrial standards. It has always enhanced the confidence of students to take up jobs. Final year student projects are usually problem based and they find viable solutions using scientific research methodology. Good quality projects are converted into research papers with the support of faculty guides.
- **Professional Body Memberships:** VJCET is an institutional member in many professional bodies like IEEE, CSI, ISTE, IETE, KMA, NIPM, SAE etc. and students enjoy the golden opportunity to interact with highly experienced persons in the field of Business and Technology. The discussions, seminars and conferences organized by these professional bodies are attended by the students. This help them to catch up with latest trends in their fields.
- **News and Apps for daily updations:** There are programmes and apps designed based on the current affairs for the daily updation of the field like news analysis, business quiz etc. Students are made to use Apps like Inshorts and Instagram for daily updation. Whatsapp groups are formed for every class for active discussions and sharing of informative contents.
- **ICT enabled teaching facilities:** All class rooms, seminar halls and auditoriums are enabled for digital teaching methods. Info-graphics rich presentations, online classes, tutorials, videos and internet based activities are widely used by the faculty in their classes to make the session interesting and effective.

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:

VJCET always promotes ICT enabled instruction methodology for effective learning. Familiarizing faculty with the ICT tools and providing infrastructural support were the two dimensions of this approach. A lecture or discussion using ICT enabled audio-visual element is found to be more effective in understanding the concept.

- **e-Resources:** College ensures sufficient resources for the various courses we offer. Our common

library is endowed with large amount of digital resources. A total of 1249 e-journals including IEEE (ASPP), ASME, ASCE, SPRINGER, E Books etc. provide sufficient back up resources for teachers and students for effective learning. EBSCO business Elite which we have subscribed gives access to large amount of world class research journals, company information, case studies, SWOT analysis and business news. Through institutional membership of NDL and DELNET we provide access to the networked library e-resources.

- **Software Support:** We have purchased Microsoft Academic Alliance comprising of all softwares of Microsoft including Microsoft Teams which we use for online classes. We have G-Suite and occasionally purchases Zoom for larger gatherings and webinars. We are having licences for courses and guided projects from Coursera and are made available for students and faculty for enhanced learning. Online courses of NPTEL are considered for the internal assessment in our campus. 35 Legal Application softwares including Altair Hyperworks, Creo, MiPower, G-suite and 13 legal system softwares are available in the campus.
- **Wi-Fi Campus:** VJCET campus is having 255 Mbps connectivity and every faculty is provided with a personal computer for academic activity. We have 45 Class rooms equipped with LCD projectors and 12 seminar halls and two auditoriums with audio visual facilities. The college have 938 desktop computers out of which 737 exclusively for students accessible in department laboratories, digital library and language laboratory. We have 9 servers maintained in the campus to support our various IT services. Our library management system is KOHA an open-source software. We also have a dedicated team of software and hardware experts for the maintenance of our IT infrastructure.

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: 15:1

2.3.3.1 Number of mentors

Response: 133

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: 100

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: 8.9

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
15	15	20	16	9

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: 9.45

2.4.3.1 Total experience of full-time teachers

Response: 1417

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 Institute is affiliated to APJ Abdul Kalam Technological University, Kerala. The University regulations for conducting the Continuous Internal Evaluation (CIE) are followed for both UG and PG programmes. The CIE components are attendance, test papers and assignment/seminars. The mode of evaluation of theory courses, laboratory courses, design project, comprehensive examination, seminar and final year project are as follows:

Theory course: 1/3rd weightage is given for internal examinations and 2/3rd weightage is given for the end semester examination. The maximum marks for internal evaluation and end semester examination for theory courses are fixed as 50 and 100 respectively for all courses except, a few.

For the internal evaluation of theory courses the following guidelines are used:

- The Internal Examination Committee consisting of coordinators from each department, schedules executes and strictly monitors the evaluation process.
- Test papers are conducted in a centralized manner.
- The question paper is set, based on the pattern given in the syllabus and each question is mapped to the corresponding course outcome as well as to the Bloom's Taxonomy.
- The question paper of each course is scrutinized by the stream coordinator and the Head of the Department.
- The results of both tests are declared within two weeks after the examination and result analysis is done by the faculty adviser.
- The students can see their respective answer sheets and discuss their queries with concerned staff.
- Remedial classes are conducted for weak students based on the marks achieved in the internal exam.

Internal evaluation of other courses

- **Practical course:** The assessments of practical courses are done internally/externally by the college as per the University guidelines. Continuous assessment is done by considering regular laboratory work, regular class viva and end semester examination.
- **Design Project:** Three internal evaluations are mandatory for awarding the final grade
- **Comprehensive Examination:** Oral examination is conducted by the college covering all the topics up to and including 5th semester.
- **Seminar and Project preliminary:** Each student shall identify a topic of current relevance and prepare own report and present in the class. Students should also form a project team and identify

suitable project relevant to the branch of study and social importance. There are two progress evaluations.

- **Project:** Evaluations are done by project supervisor, and the assessment board including an external expert. Project team should submit their final report.

Full fledged campus automation system (portal) is functioning in VJCET. Regular attendance and results of internal exams are made available in this system. The internal assessment date, rules, regulations and results are made known to students through notice boards. After evaluation, the answer scripts are returned to the students and if there is any discrepancy, the necessary corrections are carried out. The final marks are officially documented in course diary. The HOD and Principal approve the internal marks of all classes. The results of internal examination are discussed in class/course committee meetings. Students can provide their suggestions during the meeting and these suggestions may be considered based on its merit.

File Description	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:

The College is having a two-tier Grievance Redressal Mechanism. The lower layer is at the College level and the upper level is at the University.

Level 1: College level

- A **series exam committee** is constituted for the smooth conduct of internal exams.
- If any students failed to appear for the examination they can **request for re-examination**. Re-examination will be given for valid reasons with the approval from the Principal.
- **Convenient classrooms** are allotted to students facing health issues.
- **Examination dates are rescheduled** if students have any inconvenience on the scheduled date.
- After valuation the corrected **answer scripts are given to students**. The concerned Faculty member will discuss the questions and its evaluation scheme with the students. If students need clarification or correction regarding marks in the answer script it is resolved immediately. It ensures the transparency and reliability of the internal evaluation process. If the issue is not resolved then students can meet the Head of department and the Principal.
- The **consolidated statement of marks** after each internal examination is displayed in class notice boards and shown to parents during PTA meeting.
- At the end of each semester the finalised internal marks are **displayed in the department notice board** for the students to verify for any discrepancies.
- **Additional support like extra classes and examinations** are conducted for students who have not secured the minimum pass mark. The finalised mark is entered in the University portal by the faculty member and followed by the approval from Principal.
- **Grievances Redressal/appeal** committee is functioning in the college. Students can also give their complaints or grievances regarding the conduct of internal examination to this committee

Level 2: At the University level

- Malpractices found are reported to the Examination committee by the invigilator. **Examination committee will initiate an enquiry** giving the concerned student a chance to explain the case. They submit an enquiry report to the Principal and it is forwarded to the University. Final course of action is taken by the University.
- For **Grievances related to the content of question paper**, the concerned faculty member writes a letter to the Controller of examination after getting approval from the Head of department and the Principal.
- After publication of the result, students can apply to view their answer sheets, give for revaluation or both. The revaluation fee will be **fully refunded to the students**, if he/she has secured more than 15 percentage improvement in the mark obtained.
- Students can also register their complaints or grievance related to examinations and results in the KTU University portal. Kerala Higher Education Minister's Students Grievance Redressal Portal is also functioning for the students to file their grievances. Each grievance will be rightly handled by nodal officers at the University and Institution levels, and also will be closely monitored by the office of the Higher Education Minister.

File Description	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:

Programme Outcomes (POs), as stated by NBA based on Washington Accord, represent the **knowledge, skills and attitudes** exhibited by the graduates of the program.

The **Course Outcomes (COs)** are the resultant knowledge, skills and attitudes the student acquires at **the end of a course**. Course Outcomes are formulated based on the **syllabus** of that particular **course**. The **Course Outcomes** are mapped with the **Program Outcomes** and **Program Specific Outcomes (PSOs)**.

Communication to the teachers

- The college has organized various seminars on **Outcome Based Education (OBE)** to familiarize teachers with **OBE Assessment, Program Outcomes** and **Bloom's Taxonomy**.
- The **POs, PSOs, PEOs** and **COs** are made a **part of the course file of every course**.

Communication to the students

- POs, PSOs and COs are well **displayed on the website**.
- POs and PSOs are displayed in the **HODs Room**.

- POs are also displayed in the **Department Notice Boards, Staff Rooms, Seminar Halls, Library, Class Rooms and laboratories of the college.**
- COs of the courses taught in that particular semester is also displayed in the **Class Room Notice Board.**
- Head of the Department and the corresponding class tutor explain various Programme Outcomes to the students during the **department orientation meeting.**
- Teachers who handle various courses explain **course outcomes and relate such outcomes to POs and PSOs.**
- Teachers also explain the pattern of questions in the **internal question papers and its correlation with the Course Outcomes.**
- From 2019 regulation B-Tech Programme, COs are included in the **University Syllabus itself.**
- The POs and COs are given in the **Laboratory Manuals prepared by the faculty members**

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:

Attainment process involves rubrics to measure the learning levels of students. These rubrics measure Course Outcomes(COs) for courses, Program Outcomes(POs) and Program Specific Outcome(PSOs) for a program. The five POs(MBA) and twelve POs(Engineering) are proposed by NBA, two to four PSOs defined by the program and COs defined by the faculty/affiliating university are taken into consideration. The attainment of COs, POs and PSOs are measured using a well-defined process by the affiliating university (APJ Abdul Kalam Technological University). All the courses including Theory, Lab, Seminar and Projects are evaluated for attainment of COs and POs.

Student progress in a course can be directly and indirectly assessed by direct and indirect CO and PO assessment tools. The direct assessment tools involve direct computation of attainment from marks scored by students. The indirect assessment tools are mainly surveys.

CO Assessment

- The **CO attainment** for a course is calculated as a percentage weightage of direct and indirect assessment tools of the ratio 80:20, for Engineering programs. There is no indirect tool for MBA.
- These **direct assessment tools** are composed of internal and end semester examination of the ratio 30:70(20:80 for MBA).
- The **internal assessment tools** comprises of assignments, tests, projects and seminars are given weightage based on their total marks.
- Each question in an internal assessment tool is mapped to the corresponding CO. But this process

cannot be applied to end semester examinations as the question wise CO marks distribution is unavailable. The final grade obtained by students for a course in the **end semester examination** is used for direct assessment calculations.

- The **indirect CO assessment tool** (Course End Survey) is taken from students and the average of each CO is taken for computations.
- The set target levels (percentage of marks) are variable for each direct assessment tool.
- The **levels of CO attainment** defined for direct assessment tools are 0, 1, 2 and 3 as in Table 1.

Table 1: Attainment Levels

Levels	Correlation
0	Not attained
1	50% students scored more than set target level
2	60% students scored more than set target level
3	70% students scored more than set target level

PO and PSO Assessment

- The faculty member handling the course has to **map the COs to POs and PSOs** with levels as in Table 2.

Table 2: Mapping Levels

Levels	Correlation
-	No Correlation
1	Slight Correlation
2	Moderate Correlation
3	High Correlation

- The **PO attainment** of each PO in a course is composed as a percentage weightage of direct and indirect assessments of the ratio 70:30(80:20 for MBA).
- The **direct assessment of a PO** is calculated as the sum product of the CO-PO mapping and CO attainment of the course.
- The **indirect assessment of PO** is taken from Program Exit Survey, Alumni Survey and Employer Survey of the ratio 1:2:1.
- PSOs are also calculated using the same methodology as POs.

The CO and PO attainments are used to propose corrective measures in the course level and program level respectively.

File Description	Document
Upload any additional information	View Document

2.6.3 Average pass percentage of Students during last five years**Response:** 73.22**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
450	426	443	424	355

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
602	602	599	567	494

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:**

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: 42.7

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
9.02	0.60	33.08	0	0

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: 3.33

3.1.2.1 Number of teachers recognized as research guides

Response: 5

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: 14.29

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
3	1	1	0	0

3.1.3.2 Number of departments offering academic programmes

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

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:

Our Institution grooms the students to be technically oriented, innovative and lifelong learners with the aim of creation and transferring knowledge through the following programs.

- **IEDC:** Innovation and Entrepreneurship Development Centre (IEDC) of VJCET has been actively functioning since its inception with the technical and financial support of Kerala Startup Mission. IEDC is keen in providing support to students, for conversion of their idea into prototype. Many orientation and motivational programs are being organized by IEDC.
- **IDEA FEST:** VJCET organizes an Idea Fest every year with the objective of making a strong platform in VJCET for the promotion of entrepreneurship and startup programs. Hundred and twelve student groups from VJCET had applied for the KSUM Idea Fest–2018 and out of which, nineteen groups were selected for the final presentation. For KSUM Idea Fest–2019 there were 63 teams from VJCET and 8 teams were selected for the final presentation. One VJCET team was selected for receiving the funding support of Two Lakhs in 2019. The name of the project was **AGR-E** (AGR-E is a CNC based Farming Machine). This was one of the 18 projects selected out of 1600 projects from all over Kerala.
- **ELAM STYLE:** A group of VJCET students had started a firm by name "**Elam Style**" with the support of IEDC, which is an online retail shop which supplies apparels. This firm had been

shortlisted by “IDEA DAY”, an entrepreneur supporting & development program of Kerala Start-up mission, in the month of February 2018.

- **V-BIC:** Realising the need for providing infrastructure for entrepreneurship development to students and faculty, **Viswajyothi Business Incubation Centre (V-BIC)** was launched in VJCET on 26.04.2019. Objective of this venture is to create an ambience for the transformation of young minds of the students from being job-seekers to entrepreneurs, thereby becoming job providers by effectively utilizing the theoretical and practical knowledge they have acquired from the institution. Seven start-ups are registered under V-BIC.
- **NISP (National Innovation and Startup Policy):** VJCET has a **Startup Policy** in place which clearly outlines the aim and objective of the entrepreneurship development program of the college.
- **Centre for R& D:** R&D Centre helps and motivates students and faculty on issues related to patentable research and skill based training programs for lifelong learning. VJCET has got several funding support for student projects sanctioned by funding agencies like BRNS, KSCSTE, KSUM etc.
- **FAB LAB :** An innovative product named **Powered Prosthesis Arm** developed indigenously in the FABLAB of VJCET ranked 9th in the international contest CYBATHLON 2020 hosted in the SWISS Arena in Kloten, Zurich. It is a unique competitive event in which people with physical disabilities compete with each other to carry out their routine tasks using state of the art technical assistance systems.
- **IIIC:** Realizing the relevance and importance of better interaction between technical institutions and industry, Industry Institute Interaction Cell (IIIC) was formed and had intensified its activities.

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: 23

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
10	3	5	4	1

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: 1.29	
3.3.1.1 How many Ph.Ds registered per eligible teacher within last five years	
Response: 9	
3.3.1.2 Number of teachers recognized as guides during the last five years	
Response: 7	
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: 0.38				
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
13	21	21	8	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: 0.2

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
9	7	7	3	7

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:

VJCET strongly believes in cultivating a sense of social responsibility in our students, empowering them to serve humanity better. Involvement of its students and faculty in social activities will contribute significantly to the overall efforts made for the upliftment of the society and will help to promote its well-being. Simultaneously it is important to motivate and prepare each student to realise his/her intrinsic abilities which can be channelized effectively to attain individual goals and to contribute to the society. To meet this objective, the institute has encouraged the students to actively associate with student bodies like NSS, IEEE, CSI & UNAI which has given them enough opportunities to make them adaptive to challenging situations in life.

Flood Relief Activities:

The students of VJCET actively participated in the flood relief operation by

- Collecting and distributing essential materials to the flood victims.
- Cleaning and doing chlorination so as to make the homes ready for living.
- Distribution of 200 Chekutty Dolls in the College campus to support the weavers of Chendamangalam handloom society, who lost their livelihood after the floods.

Helping the Needy:

With an aim of developing care and concern for the physically disabled and needy, the college has conducted programs such as

- **POTHICHORU:** Distributing lunch packets in orphanages every Friday.
- **Solo Marathon:** Fundraiser for the inmates of Emmanuel Charitable Trust
- **SWAPNAVEEDU:** A Home for a family with differently abled children.
- Community hall construction for a tribal group in Kuttampuzha
- **LIONATHALON:** Sports Meet for Differently abled
- **Solar Panel Donation** for 3 families in Mamalakandam, Kothamangalam for providing electricity connection.
- Distribution of Note books, Dresses, Toys for the needy.
- **“Smart Classroom Among the Woods”:** Installing a smart classroom, with electricity connection in Kunjipara tribal-settlement colony school in Kuttampuzha.
- **“Let's Unchain It”:** Initializing automatic hand sanitizer and automatic tap at Adimali taluk hospital and Government taluk hospital, Muvattupuzha.
- **Powered Prosthesis Arm:** An innovative product developed in the FABLAB of VJCET, for helping the physically disabled.

Helping Hand towards the Local Community:

As part of a commitment to the local community, the college has conducted many medical camps and awareness programs such as

- Medical Diagnostic Camp
- HAIR –A-THON- Hair Donation Camp for cancer patients
- Blood Donation Camp
- Stem Cell Donor Registrations and Donation
- Technology Enrichment programmes for Kudumbasree officials
- Organ Donation & Blood Donation Survey
- “Sundhara Kochi” Project
- Participation in building of a Biodiversity Park at Govt. L.P. School, Neerampuzha.
- Computer Maintenance Camp
- Cleaning up of Road Sign Boards
- Assembled LED bulbs at low cost and distributed to nearby houses

Swachh Bharath Abhiyan:

The college has organized events such as:

- Cleaning the water bodies.
- Removing over 1000 plastic bottles from nearby areas, for proper recycling and disposal.
- Beautifying the surroundings of a nearby LP School.
- Making of disposable waste bins and manure pits.
- Cleaning the premises and reinstating various hospital equipment of Government hospitals in local areas.
- Cleaning the Private Bus-stand, Vazhakulam and KSRTC Bus-Station Muvattupuzha, and a few buses.
- Planting tree saplings at various neighbouring locations.
- Construction of Organic Vegetable Farm.

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: 13

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
2	3	3	3	2

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

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

Response: 122**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
22	24	33	16	27

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

3.4.4 Average percentage of students participating in extension activities at 3.4.3. above during last five years**Response:** 59.83**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
818	939	1382	1817	1703

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

3.5 Collaboration**3.5.1 Number of Collaborative activities for research, Faculty exchange, Student exchange/ internship per year****Response:** 34

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
9	5	6	7	7

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: 17

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
3	3	3	8	0

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 college, established in the year 2001 is located on a calm and quiet area with a sprawling campus spread over **25.28** acres with **45944.47 sq.m** built-up area comprising of all modern facilities for effective teaching- learning process. It offers 7 under graduate programmes and 4 post graduate programmes for which state of the art infrastructural facilities are provided across 7 blocks (A, B, C, D, R&D Block, Civil Block and Laboratory Block).

Classrooms Facilities:

- 45 classrooms which are ICT enabled, equipped with LCD projectors.
- All classrooms have Wi-Fi/LAN facilities to make effective teaching learning process.
- Classrooms are well-ventilated, spacious and provided with green boards, adequate furniture and speakers of public address system.
- 6 seminar halls, each having seating capacity of 100 pax. with Wi-Fi/LAN and Audio Visual facilities.
- All departments have separate faculty rooms and provided with printers, intercom and desktops for each faculty.
- Examination halls are equipped with CCTV cameras.

Laboratories Facilities:

The laboratories are equipped with state-of-the-art equipment and laboratories with licensed software to conduct experiments as per the KTU curriculum.

Department wise Laboratories

Sl. No	Department	No. of Labs
1	Civil Engineering	8
2	Computer Science and Engineering	7
3	Electrical and Electronics Engineering	6
4	Electronics and Communication Engineering	9
5	Information Technology	4
6	Mechanical Engineering	14
7	Science & Humanities	2

Common Laboratories

Sl. No	Common Laboratories
1	Language Lab
2	Common Computing Center, Computer Lab
3	FAB Lab
4	R&D - Nano Materials and Smart Materials Lab

Computer Facilities:

- Total of 938 computers
- 8 servers
- Internet leased lines of 155 Mbps and 100 Mbps each.

Other Facilities:

- Discussion rooms, Guest rooms, VIP lounges.
- Separate rooms for IEDC, IIC, IEEE, NSS and for various clubs and cells.
- Separate space and office for Controller of Examination and Centralized University Valuation.
- Two auditoriums, Main auditorium of 802.22 sq.m with Capacity of 1500 pax and Mini auditorium of 293.48 sq.m with capacity of 250 pax.
- R&D Seminar Hall and Conference hall.
- Ramps and sanitary facilities for the benefit of PwDs.
- Canteen, cafeterias and transportation facilities with 19 buses for students and staff.
- Water filters and coolers in each floor of all blocks.
- Reprographic Centre and bank ATM.
- Special room for medical and counseling centre.
- Boy's and Girl's hostels.
- Separate rest rooms for boy and girl students.
- UPS, indoor diesel powered generators, on grid solar power generation

Professional bodies

- Indian Society for Technical Education (ISTE)
- Institute of Electrical and Electronics Engineers (IEEE)
- Computer Society of India (CSI)
- Institution of Electronics and Telecommunication Engineers (IETE)
- Indian Meteorological Society (IMS)
- Society of Automotive Engineers (SAE)
- Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE)
- Indian Green Building Council (IGBC)
- Society of Energy Engineers and Managers (SEEM)

Technical cells

- Innovation and Entrepreneurship Development Centre (IEDC)
- Viswajyothi Business Incubation Centre (VBIC)
- Industry Institute Interaction Cell (IIIC)
- United Nations Academic Impact (UNAI) & Action by Students to Promote Innovation and Reform through Education (ASPIRE)

Non-technical clubs

- Nature Club
- Photography Club

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 college has a dedicated **Physical Education Department** which gives ample opportunities for the students to showcase their talents in sports. **Outdoor courts** and a **multipurpose playground** are available for various sports activities. Students participate regularly in different sports events and have won several championships. The annual sports event of the college '**DRONA**' gives the students the right opportunity to explore their talent. Interdepartmental competitions give exposure for students as well as staff members to engage in various sports events.

Outdoor Sports Facilities

- Football
- Cricket
- Volleyball
- Basketball
- Badminton

Indoor Sports Facilities

- Badminton
- Table Tennis
- Chess
- Carrom

The college has **individual teams** in men's basketball, cricket, football and badminton and women's badminton.

Sports Facilities

Sl. No	Name of the Facility	Availability for Usage (Nos.)	No. of Student Utility	Area (sq.m)
1	Volleyball	1	12	957
2	Basketball	1	10	770
3	Badminton	7	28	1225
4	Table Tennis	2	8	66
MULTI -PURPOSE SYNTHETIC COURT				
5	Basketball	1	10	1189
6	Volleyball	1	12	
7	Tennis	1	4	
MULTI -PURPOSE PLAY GROUND				
8	Football	1	22	10848
9	Cricket	1	22	

The college has a multipurpose Gymnasium and fitness center equipped with 19 equipment which can accommodate 35 members at a time. It spreads over an area of 230 sq.m.

Equipment

- Pec deck
- High Lat & Rowing
- Cable Cross over
- Squat Machine
- Leg Curl and Extension
- Biceps Curl
- Triceps Curl
- Wrist Curl
- Bench Press Parallel
- Bench Press Incline
- Tread Mill(Manual)
- Abdominal Board
- Ab-King Pro
- Double twister
- Weight Bar and Dumb-bells
- Gym Bench
- Gym Stool
- T-Bar
- Barbells

Cultural Activities

The college has a **Cultural Committee** headed by **Arts Club Secretary** assisted by faculty members and students. Various inter collegiate and intra-departmental competitions are held to provide a creative outlet for students to exhibit their artistic talents. The college has an active **College Band**. 'DRISHYA' is the arts festival of the college conducted every year to promote and showcase talents of students in all cultural areas.

'BODHI' is the technical festival conducted every year, which gives a platform to showcase technical expertise of student community. The festival gives a good technical exposure to own students of the college as well as a large outside fraternity through technical events and expos.

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: 100

4.1.3.1 Number of classrooms and seminar halls with ICT facilities

Response: 51

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

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

Response: 25.67

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
16.28	105.25	135.00	261.23	311.19

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
Upload any additional information	View Document

4.2 Library as a Learning Resource

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

Response:

The college library follows set of norms laid by college authorities based on standards and guidelines formulated by AICTE. The college library is housed in a total area of 1531.42 sq.m, with special designated stack area of 772 sq.m and reading area of 460.52 sq.m. Total of 38290 volumes are available. The books are categorized according to Dewey Decimal Classification Scheme and stacked on racks as per call number. The VJCET library is automated with leading library management software **Koha**, which gives a user friendly interface for searching resources in the library along with the position and availability status.

ILMS software Koha

- Name of the ILMS software : Koha
- Nature of automation: Fully
- Server Version: 18.05.00.000
- Year of Automation: 2018

Features of Koha

- Operating system - Linux
- Web based interfaces
- Full MARC 21 and UNIMARC support for professional cataloguing
- Multi Lingual and Multi-user support
- Customized web based OPAC system
- Customized circulation system
- Stock verification
- Barcode generation and printing
- Export and import records, ISO 2709
- Customized Serials control
- Customized patrons management
- Customized report generation

Library Sections

- News House
- Property Counter
- E-gate Register
- Reference Section
- Periodical Section
- Digital Library
- Reading Area
- OPAC
- Circulation Section
- Stack Area
- Career House
- CD/DVD Section
- Bound Volume Section
- Physical and Technical Processing Section
- Reprographic Section – Photocopy, Print, Scan

Library Facilities and Services

- Reference and Lending Services
- E- gate register
- Web OPAC
- Bar-coded Books
- Barcode Based Transaction
- Dewey Decimal Classification (DDC) Scheme
- IP Based access of E-Journals, E- Books, web-OPAC and Digital Library
- Digital library facility with 55 computers and 25 Head phones
- Multimedia Facility
- E- journals from IEEE (ASPP), ASME, ASCE, EBSCO
- Institutional Membership with NDL and DELNET. NDL provides support for all academic levels including researchers and life-long learners in all disciplines, even for differently-abled learners. It helps students to prepare for all kinds of competitive examination and to carry out inter-disciplinary research.
- Member of NDLI Club
- Video/Audio Library
- Multimedia search facility
- Institutional Repository
- Reprographic Facility
- Document Scanning Facility
- Document Printing Facility
- Surveillance Camera
- Signage Display
- User Orientation
- Display New Arrivals
- Current Awareness Service
- Bound Volumes of periodicals
- Previous Year University Question Papers access through digital library

- Open access system
- Wi-Fi
- High speed internet -255 Mbps via OFC
- Installed Braille Software

Library also has access to various NPTEL courses which will be useful for both faculty members and students for extended learning.

The library follows an open access system, which allows the students to borrow books for duration of 15 days in a semester (with one renewal option of additional 15 days) to enhance their knowledge. All books are bar-coded with unique reference id.

File Description	Document
Upload any additional information	View Document
Paste link for 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
Upload any additional information	View 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: 21.95

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
13.84	17.98	25.76	21.60	30.59

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
Any additional information	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 last completed academic year

Response: 28.36

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

Response: 620

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:

Viswajyothi College of Engineering and Technology is well equipped with IT infrastructure facility. Institution frequently updates its IT facilities including Wi-Fi, Computer Systems, and other IT related equipment.

- The institution has Wired Network (vjcet-fiber star topology) and Wi-Fi Network (vjcnnet). The college has two internet 1:1 leased line connections, Asianet-155Mbps and BSNL-100Mbps.
- The college is equipped with seven different servers and two storage servers. The servers (configured with RAID5) are Domain Controller Server, Backup Domain Controller Server/Automation Server, Digital Library Server, Antivirus Server, Automation Backup Server, License/Tally Server, and Database Server. One Storage Server (NAS) (configured with RAID 6 and a hot spare) for data backup systems and other for CCTV camera Data.
- The college has a centralized domain authentication and centralized data storage for data backup.

- Wi-Fi is provided using Ruckus controller and CISCO/ D-Link/ Digisol /TP Link access points.
- The wired network is managed with 98 network switches.

Gigabyte web manager switches -36
 Gigabyte unmanaged switches-55.
 POE Gigabyte web manager switches -4
 L3 fiber core switches- 3.

- The Campus is having SonicWall NSA 5600 hardware firewall through which the internal network and external leased line are routed and shared to all the servers and computers.
- The campus is equipped with more than 800 desktop computers (with core i7, i5, i3 processors with 16/8/4/2 GB RAM, 1TB/500 GB hard disk with 1000/100Mbps LAN connectivity) and printers.
- The whole campus is monitored through CCTV network
- The college has a dynamic website (developed in-house) and active in social media platforms.
- Bulk SMS service to communicate with parents and alumni.
- Learning Management system such as Microsoft Teams.
- Koha Library Management Software.
- College has licensed version of G suite.
- Admission Management Software.
- Total Campus Solution (TCS) software for the automation of the day to day activities.
- Biometric Authentication system like Fingerprint reader and face recognition system are used for recording staff attendance.
- Campus Agreement with Microsoft Corporation.
- Line printers print a complete line at a time and have speeds in the range of 150 to 2500 lines per minute. We use line printer to provide the programs written by students in various computer labs in water marked paper for making their lab records.

File Description	Document
Upload any additional information	View Document
Paste link for 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: 75.46

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
617.27	700.67	572.66	487.25	454.91

File Description	Document
Upload any additional information	View 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:

VJCET has a well-established and systematic procedure for maintaining its physical, academic and other support facilities.

Laboratories:

- Technical Staff in-charge reports the repairs/ maintenance required to the Faculty in-charge. Technical staff in-charge checks whether the repair works can be done in laboratory itself using available expertise. If it cannot be done in house, Faculty in-charge tenders a submission to the Director through HOD and Principal stating the requirement and approximate estimate of charges proposed to be incurred.
- Intimation to the concerned supplier is made after obtaining sanction from the Principal / Director.

Concerned supplier undertakes the repair work and presents the bill of charges to the Faculty in-charge.

Computers and accessories:

- Computers, Wi-Fi, Internet facilities and UPS are checked routinely by the System Engineer.
- The college is having in-house Maintenance team and Annual Maintenance Contract with agencies to carry out repairs and maintenance work
- Computing facilities are used optimally by staff and students for studies and research purposes.

Classrooms:

- All the classrooms are monitored through CCTV cameras and are equipped with LCD projectors and Wi-Fi connection for better teaching-learning interactions.
- Classrooms with good space are optimally utilized to provide healthy and hygienic study conditions to students and they remain occupied throughout the working hours for studies and related activities.

Library:

- Library maintenance includes continuous monitoring and inspection of the stack, display of new materials on display racks, and arrangement of books on racks. The stock verification is carried out by a team of members appointed by the Principal.
- Procurement of books is done by collecting the request from all the departments. Quotations are called for from leading suppliers. On the basis of quotations, a comparative statement is prepared and put up for approval from Principal
- Books received using purchase orders are cross-checked and written in the accession register and library software, which are ready for use only after physical and technical processing. Damaged books are outsourced for binding. Circulation statistics of books and a report of daily transactions are maintained.
- Students are motivated to make use of library facility for their intellectual growth.

Sports Complex:

- Fitness room maintenance

Extra measures are taken considering the safety and care of the staff and students. Regular check-ups are done on the machine strings to confirm the strength and balance.

- Multi-purpose synthetic courts

An extra protective coverage is constructed around the basketball post so as to protect the players from any injury. Annual pressure watering is done on the court surface. Regular check-ups are done to confirm the wellness of the area and if any crack or crevices are found, they are sealed immediately.

Transportation Facility:

The college bus committee makes proposals and decisions taken by management are implemented. A

driver is assigned to each bus and he reports all the maintenance related works to PRO.

- Preventive maintenance is performed which includes fuel and fluid level checks.
- Breakdown maintenance is also carried out for worn-out components by sending for repair or replacement. Vehicle records with all maintenance tasks performed and vehicle miles are maintained.

Hostels:

- Hostel facility is available in the campus for both gents and ladies which is under the control of Management.
- Attendance marking is automated and students have to punch in the morning and evening.

Air Conditioners:

- Periodical check-up is done once in every month by the staff in-charge. Defects if any are reported to the concerned staff.
- The faults which are beyond our capacity are reported to the PRO and arrange the works through an external agency.

Fire Extinguishers:

- Safety officer / safety committee members inspect all fire extinguishers and make arrangements for servicing / refilling.
- Any pressure drop, emptying and physical damages are reported to the safety officer by the concerned staff.

Solar Power Plant:

- VJCET has a solar power generation of 280kWp installed capacity worth 1.6 crores which annually produces around 365000 units per year. Power generation readings are taken daily and panel cleaning is done monthly. As it is under warranty period all the complaints are attended by the provider.

Campus Infrastructure:

For the smooth functioning of the college all works related to repairs, maintenance, upkeep and beautification of the campus is done by repairs and maintenance section working under the supervision of a work supervisor.

- Electrical, Plumbing, Carpentry, Painting & Civil Works

Permanent staff are assigned to do the electrical works with reference to complaint register and other electrical related maintenance work is assigned to a daily worker. All the plumbing, carpentry, painting and civil works are done under daily wages.

- Upkeep and Beautification of Campus

For the purpose of upkeep and beautification of campus, some staff are working under daily wages.

- Water Distribution System

The total water requirement is met with the help of two water sources, a natural pond and a dug well. Water is pumped from the well to an intermediate concrete storage tank of 3 lakh litre capacity in the campus. From the above storage tank or from the natural pond, water is pumped to an overhead tank of 2.5 lakh litre capacity from which water is supplied through gravity flow to the entire campus. The water from both sources is of excellent quality and is in conformation with drinking water quality standards specified by BIS and WHO.

- Waste Management

There are sorting stations for itemized segregation of recyclable waste and proper handling of non-recyclable waste. Solid waste management involves organic waste processing using the Biogas Plant. For treating the liquid wastes generated, a Sewage Treatment Plant with High Pressure Sand Filter and Activated Carbon Filter has been installed in the campus. The entire treated water is used for watering the gardens and lawns maintained in the campus and agricultural purposes in the hostel. The sludge settled in the STP is removed, dried and used as manure for the gardens

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

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: 19.31

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

2019-20	2018-19	2017-18	2016-17	2015-16
401	523	555	490	163

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: 17.46

5.1.2.1 Total number of students benefited by scholarships, freeships, etc provided by the institution / non- government agencies year-wise during last five years

2019-20	2018-19	2017-18	2016-17	2015-16
623	515	336	153	256

File Description

Document

Upload any additional information

[View Document](#)

Number of students benefited by scholarships and freeships 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: 19.61

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
572	409	465	406	294

File Description	Document
Number of students benefitted 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: A. All 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: 43.6

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
257	296	197	260	246

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: 26.87

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

Response: 165

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: 30.54

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
54	20	21	20	6

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
138	87	72	67	19

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: 14

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
2	2	3	3	4

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

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 representation of students in academic and administrative affairs of the college is ensured by way of constituting a Student Council.

Functioning of Student Council

The Student Council is constituted based on a parliamentary model, in accordance with stipulated University norms. Two student representatives selected from each class are vested with the voting power to elect members of the Council. Elections are held for the posts of Chairman, Vice chairperson, General Secretary, University Union Councillors, Arts Club Secretary, Sports Club Secretary, Magazine Editor and Lady Representatives.

Students are offered pro-active involvement in administrative processes by nominating them in class/course committees which monitor the adherence to course plan and schedules; and evaluation processes.

Extra curricular Activities of Student Council

The college ensures a healthy and enabling environment within the campus by encouraging students to actively participate in various Cultural events, Sports, Games etc. All such activities are conducted by the

Student Council. Two Faculty Advisors are assigned to the Student Council to support and advise them in undertaking those activities. Budgetary allocations are set aside annually for the Council. A Budget proposal is put up by the Student Council which duly gets scrutinized and approved by the Management. The institution encourages the creativity and artistic skills of students by providing them ample opportunities by way of hosting an annual Arts & Cultural Fest DRISHYA coordinated by the Arts Club Secretary. An inter-collegiate Technical Fest-BODHI is also conducted to exhibit the technical aptitude and creativity of students.

An Editorial Board headed by the student magazine editor publishes a college magazine annually; where in the literary skills of the students are show-cased.

The Annual Sports meet is also held, by the name “DRONA” coordinated by the Sports Club Secretary. The Department of Physical Education organises Sports and Games periodically. Special coaching camps are held for Basketball, Volleyball, Badminton, Football and Cricket. The college conducts a state-level Basketball Tournament “MAGNUM” by mid February every year. Extensive playground for outdoor games like Football, Basketball, Volleyball, Cricket etc. and facilities for indoor games such as Shuttle, Table Tennis and Chess are provided in the campus. A multi-purpose Synthetic Court and Multi-Gymnasium are additional facilities.

Academic, Administrative and Co-curricular Activities

Students conduct various activities of professional societies such as IEEE, ISTE, IEDC, IETE, IGBC, UNAI-ASPIRE, CSI etc. by organising Student conventions, Technical events and quizzes under the guidance of faculty members.

To inculcate a professional culture in students and to groom them ‘industry-ready’, a dedicated Placement & Training Cell (PTC) organizes regular co-curricular programs on Aptitude and soft skill development and imparts technical trainings.

Each class has two representatives in Placement Committee who interact with the students on a regular basis. A placement liaison officer monitors the activities of the PTC and suggestions from students are incorporated in training sessions.

In planning and undertaking activities during the course of the academic year, all these student-centric activities work closely with the college management, teachers and parents, and involve as many students as possible to ensure their active representation.

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: 13.4

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
12	15	14	19	7

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:

The VJCET Alumni Association is registered under Section 12 of The Travancore Cochin Literary and Scientific and Charitable Societies Registration act 1955, Government of Kerala.

Established in 2005, VJCET Alumni Association creates and maintains a life-long connection between the college and its alumni, who number more than 6,500.

- **Alumni Association**

The students who graduated from VJCET are the members of alumni association. All the members of alumni constitute the General Body of Alumni Association. It is governed by the Executive Council appointed by the General Body. Executive Council consists of 19 members including 5 office bearers – President, Vice President, Secretary, Joint Secretary and Treasurer. Principal of VJCET is ex-officio the President of the association. The other Executive Council Members are appointed by the General Body. The college maintains a dedicated office space for the Alumni Association.

The College hosts Annual meetings regularly which comprise of a formal session followed by entertainment programs and dinner. Alumni also conducts induction programs for final year students.

- **Alumni Chapters**

VJCET has a very committed and vibrant alumni network with six chapters centered at Kochi, Trivandrum, Chennai, Bangalore, Qatar and UAE. Alumni are the most trusted brand ambassadors of our college and VJCET remains grateful to them for their constant support.

Alumni Contributions

- **Alumni Lectures**

VJCET Alumni Association is keen on the overall grooming of students in their Alma Mater and extends support in various avenues by offering technical talks in their respective domains of expertise and conducting interactive sessions with our students. Such activities help our students to get exposed to current advancements in the realm of Engineering and management studies. Industry Institute Interaction cell, Alumni Association and Department Associations jointly host technical events of this genre in the campus.

- **Advisory Boards**

Eminent Alumni of VJCET are included in Department Advisory Boards so that their expertise and experience are also put to use in formulating academic plans.

- **Resource persons**

Those alumni who are Research Fellows in the elite institutions in India and abroad are invited as Resource Persons in FDPs.

- **MoUs**

The college have signed MoUs with the companies owned by alumni.

- **Startup Ventures**

The Incubation centre functioning under the aegis of Innovation and Entrepreneurship Development Centre of the college has start-up ventures from VJCET Alumni.

- **Alumni Newsletter**

The association annually publishes its newsletter highlighting its important activities

- **Awards**

The Alumni Association recognizes and honors achievers among our students by way of instituting awards for the “Best Final Year Student Project” which is presented on the “Merit and Farewell Day”.

The Alumni of VJCET supports our institution in our strife for excellence by inculcating in our students the much- needed quest for knowledge and contributing to their multi – faceted development.

The VJCET Alumni Association maintains an updated and current information database of all members of the Association and provides a forum for the Alumni to interact with the college on a regular basis.

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: A. ? 5 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:

Viswajyothi College of Engineering and Technology (VJCET) is run by **Diocesan Technical Educational Trust**, under Catholic Diocese of Kothamangalam. Institution is founded on the values of integrity and commitment.

Vision

"Moulding Professionals par Excellence with Integrity, Fairness and Human Values"

Mission

- We commit to develop the institution into a Centre of Excellence of International Standards.
- We guide and mould our students in the attainment of intellectual and professional competence for successfully coping with the rapid and challenging advancements in technologies and the ever changing world of business, industry and services.
- We help and support our students in their personal growth shaping them into mature and responsible individuals.
- We strive to cultivate a sense of social and civic responsibility in our students, empowering them to serve the humanity.
- We promise to ensure a free environment where quest for the truth is encouraged.

Governance

Governance mechanism with efficient management leadership and dedicated staff ensures that activities of institution are allied with institute vision and mission.

- **Diocesan Technical Education Trust (DTET)** comprising of 277 members including 28 institutional and 249 hereditary members supports **better learning facility in Engineering and Technology** to youth so as to **foster them in human values and equip them with world class technical qualifications.**
- **Board of Trustees** frames directive principles, policies and is empowered with overall administration, management and control of affairs of institution. **Vicar General** of the Diocese of Kothamangalam is ex-officio President of the College Trust and present **Manager** of the **College.**
- **Executive Committee** monitors and approves academic plan and budget proposed by the Principal, staff policies and oversees overall development.
- **Governing Body** guides institution in academics, research, student and faculty development.
- **Advisory Board** monitors academic performance, encourages and supports exploration of innovative ideas.
- **Principal** is entrusted with the responsibility to oversee institution, conveys timely instructions through meetings, and ensures periodic monitoring and evaluation of all institutional activities.

- **College Council** manages discipline of students, discusses new proposals and FDPs.
- **Academic Council** oversees teaching learning process, result analysis and suggest corrective measures.

Institution strives for its holistic development in an envisioned, organized and progressive manner.

- Ensures world class Technical education and training, adequate to meet challenges of modern society.
- Imparts need based training in Engineering and Technology to increase employment potential of youth.
- Establishes, assists and organizes the institution for benefit of public especially students and equip with world class technical qualification.

Faculty members are involved in various academic and administrative committees to improve quality of technical education and enhance employability of graduates.

- **R&D Centre** promotes research propensity among staff and students.
- **Innovation and Entrepreneurship Development Centre (IEDC)** established with a mission to create entrepreneurial culture.
- **Industry Institute Interaction Cell (IIIC)** aims at effective interaction between industry, research organizations and reputed institutes.
- With vision of sharing culture of Intellectual social responsibility, VJCET joined as a member of **United Nations Academic Impact (UNAI)** and started **ASPIRE student chapter**.
- **Viswajyothi Business Incubation Centre (V-BIC)** is launched in the institute to nurture startup companies within the Campus.

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:

VJCET carries out absolute transparency in decision making process with Management and staff collectively involved in academic and administrative practices to fulfill vision and mission and to lead the institution on the growth path in line with the framed objectives.

VJCET promotes a participative and decentralized work culture in the institution. **Principal, Vice-Principal, Deans and HoDs** assess performance of institution and distribute various responsibilities to appropriate levels. **Administrative Officer** executes administrative matters in consultation with Principal. **Management** has delegated **financial power** on Principal and HoDs to the extent of **imprest money** (Rs. 25,000/- and Rs.10, 000/- respectively).

- **HoD** evaluates performance assessment of staff, conducts meetings and review department work. **Assistant HoD** monitors annual academic activities of department in collaboration with HoD. **Department Secretary** consolidates result analysis of internal and external examinations.
- **Department Advisory Committee (DAC)** and **Program Assessment Committee (PAC)** are actively involved in the functioning of department.
- **Faculty Advisor** assigned for each class, give support to academic and non academic progress of students.
- **Class/ Course committee** formed with senior faculty, staff handling subjects and two students.
- **Mentorship** introduced in all departments, monitored by HoD and Principal.
- **Examination** work delegated to **Exam Committee**.
- **Co-curricular & Extra-curricular activities** are assigned to faculty in-charge of various clubs.
- **Students** under **Student Council** banner, supervised by faculty to organize events in the institution.

Various cells and committees headed by faculty are functioning in the Institute for conducting different activities to achieve the vision, mission and overall development of the institution.

- IQAC
- Academic Monitoring
- Academic Council
- AICTE
- Arts, Sports
- Transportation
- Canteen
- NSS
- ECO Club
- E-Waste Management
- FAB LAB
- Hostel
- KTU
- Library
- NBA,NAAC Accreditation
- Performance Evaluation
- Solar Power Plant
- Staff Welfare
- Students' Grievance Redressal
- Student Council Advisors
- UNAI
- Virtual Lab
- V-BIC
- Anti-Ragging, Discipline
- Women's Cell

Case Study: New Program - Artificial Intelligence and Data Science

An example for decentralization and participative management in VJCET is the commencement of a new B.Tech program, **Artificial Intelligence and Data Science(AD)**.

Faculty put forward a suggestion to commence a new course considering the current trends in technology,

with Artificial Intelligence being one of the top technology trends which has increased job opportunities and expanded the area for research.

Proposal after discussions in HoD meeting was recommended by Principal to Executive Committee and Board of Trustees for their views and suggestions. As per the suggestion from the Board, a committee was formulated for conducting a feasibility study of the new course. The committee prepared feasibility study report and was forwarded through Principal to the management. Executive Committee studied the report and sanctioned the proposal. Management took actions to apply for the approval of new course, to APJ Abdul Kalam University, Kerala and AICTE. VJCET got sanction from university and admitted 45 students in the year 2020, the first batch of AD.

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:

Viswajyothi college of Engineering and Technology have a strategic plan for all the academic activities like,

- Improving the teaching-learning process
- Enhancing the industry institute interaction
- Rendering successful entrepreneurs
- Providing personality development programs for students
- Achieving placement in reputed establishments
- Implementing e-governance in all areas
- Encouraging R & D by faculty and students
- Developing the campus to a clean and green one
- Implementing welfare measures for faculty members
- Other initiatives of the institution

The strategy for “**Rendering Successful Entrepreneurs**”, is one of the plan we have successfully implemented in our college. Plan is initiated by IQAC of the institution and its goal is to make students industry oriented, and ready to face real world problems. To achieve the above goal, IQAC developed various cells such as Innovation and Entrepreneurship Development Centre (IEDC) and Industry Institute Interaction Cell (IIC) under IQAC.

- IIC aims at effective interaction between Industry, Research organizations and reputed institutes so as to improve the quality of the technical education and enhance the employability of graduates.
- MoUs are signed with various industries by realizing the need for formalizing the interaction and

continuing in a systematic manner.

- IIIC organizes various programs at College and Departments such as discussion meet with farmers and BARC scientists (2017), BARC outreach program at VJCET campus on the theme “**Atomic Energy for Brighter Future**” (2018).
- The activities of IIIC include industrial visits, Talks with Industry Experts/Alumni and Workshops. This process will improve their Idea generation and industry exposure capacity in future.
- To foster the growth of innovation and entrepreneurship amongst faculty and students IEDC was constituted on 20/10/2016 in VJCET and activities are organized with the support of Kerala Start-Up Mission (KSUM).
- The IEDC organizes **Idea Fest** every year. This helps students to participate in state level Idea Fest competitions held by KSUM.
- In KSUM Idea fest 2019 the project AGR-E (CNC based farming machine) was one of the 18 projects selected out of 1600 projects from all over Kerala which got financial support.
- Viswajyothi Business Incubation Centre (**V-BIC**) was launched in 2019 by realizing the need of developing entrepreneurship among students. In V-BIC various Start-up companies are functioning.
- VJCET has participated in **CYBATHLON 2020** and ranked 9th out of 49 participants (from 20 countries) for the development of **Powered Prosthesis Arm** (fabricated in **FABLAB** of VJCET).

To extend the interaction further, “**International Industry Institute Collaboration**” was constituted. A team visited reputed universities and research centers in Europe and the largest international industrial trade fair in the world. During the visit to Rottenburg Diocese, VJCET got financial aid of 25000 €, to establish a Solar Power Plant in Campus having a capacity of 30 kWp. Collaboration was established with SES Germany and experts visited VJCET and delivered lectures and gave hands-on training on specialized areas. This creates opportunities for students and faculty members to do research, projects, higher studies and internships in Germany and other European countries.

File Description	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 and service rules, procedures, etc.

Response:

Viswajyothi College of Engineering and Technology (VJCET), founded on principles of integrity and commitment, was established in 2001. We draw inspiration and strength from Jesus Christ, Light of the World, Viswajyothi. VJCET is a self-financing engineering college affiliated to APJ Abdul Kalam Technological University, Kerala, approved by AICTE.

VJCET has well defined policy guidelines that are perceptible in administrative setup, appointment and service rules, procedures etc.

- **Administrative Setup**

Board of Trustees- Vicar General, Procurator and Higher Education Secretary of Kothamangalam Diocese are ex-officio members and twelve members each from institutional and hereditary bodies make the 27 members, and is responsible for overall administration. **Executive committee** with 9 elected members from Board administers overall development of Institute. **Governing Body** with 13 members **headed** by **Manager** and **Principal** as **Secretary** assesses performance of institution and guides in academics and R&D. **Advisory Board** with 15 members **headed** by **Manager** and **Secretary of Trust** as **Secretary** encourage progress in governance framework that enables sustainable development.

Manager intimates and implements policies and programs of management and monitors administrative and academic activities. **Director** supervises annual evaluation of staff along with academic review committee, assess budget proposals from departments and initiates developmental activities in institution. **Principal** heads administrative setup and is the key decision maker in academic and administrative matters. **College Council** with 12 members and **Academic Council** with 15 members are headed with **Principal** and **Vice Principal** as its **Secretary**. **Vice Principal, College Council, Academic Council and IQAC** together support Principal to define and delegate various responsibilities in college. **Deans and HoDs** execute continuous review and assessment of academic and non academic programs. All departments have their own department offices headed by respective **HoDs**.

Administrative officer co-ordinates administrative and accounting activities. Academic activities of the institute is well supported by various **Cells and Committees** like **IQAC, R&D, Library committee, PTC, IEDC, IIC, Grievance Redressal Cell, Counseling Cell** etc.

- **Recruitment:**

Vacancies arising from time to time are consolidated and notified in leading news papers and institutional website as decided by Management. Minimum qualifications for the post(s) is as per norms prescribed by AICTE and other competent authority. Interviews are conducted by Appointment sub-committee constituted by Board of Trustees including Principal, HoD of concerned department and external subject expert. Rank list is prepared based on assessment by board and selection of candidates shall be on merit.

- **Promotion:**

Every regular staff appointed is considered for promotion as per AICTE regulations and subject to fulfillment of conditions laid down in promotion policy of Institution and amended by authority from time to time.

- **Service Rules:**

All the staff working in the institution are bound to follow HR Policy of Management along with rules and regulations of AICTE and Government.

Institution has its policies, applicable and binding on all members of teaching, technical and non teaching staff that are in line with rules and regulations of AICTE and Government which are conveyed through Staff Manual. Rules and regulations of university and details regarding discipline of Institute are conveyed to students and staff, through Academic Schema.

File Description	Document
Upload any 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

6.3 Faculty Empowerment Strategies

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

Response:

Various welfare measures are initiated to faculty members and non-teaching staff.

Faculty Development Measures

- **Academic enrichment programs** are conducted for the faculty. Faculty are encouraged to participate in **Faculty Development Programs** by providing grants as financial assistance and special duty leave.
- **Budgetary allocations** are made annually for organizing faculty development programs, guest lectures, seminars and workshops on recent technologies.
- **Quality Improvement Program (QIP)** and sponsorship for **Doctoral Research (Ph.D.)** with a stipend of Rs.10,000/month for 3 years and with a bond of 5 years thereafter is granted for the eligible aspirants.
- Provision for faculty to pursue **part-time Ph.D.** with **15 days special casual leave** is also sanctioned.

General Welfare Measures

- Staff are eligible for availing **casual leave** of 15 days/year and **annual vacation** of one month for a service of one full year; otherwise proportionate vacation.
- **Maternity leave** with allowances for three months and **medical leave** without service break is also granted.
- **Duty leave** of a maximum of 15 days/year is granted with full pay to the faculty for the following: attending conferences/ seminars/ workshops, delivering invited talks, to interact with industry, accompanying students for industrial visits, to attend meetings of the university, to any other task assigned or approved by the Principal.
- **Festival allowances** are given to staff on special occasions.
- The gratuity given for staff is calculated as (Basic pay + DA of last month) x Number of years completed x 15/26.
- Staff welfare programs like **EPF, ESI & Medical Insurance** are available. At present, staff drawing up to Rs.15,000/ per month enjoy EPF assistance. Staff drawing salary up to Rs.21,000/- per month are beneficiaries of ESI Plan. **A group medical insurance** under the Star Health Insurance has been implemented bringing benefits to staff and their dependents.
- **Medical consultation** facility is provided in the campus.
- **Gymnasium** for physical fitness is available in the campus.
- **College bus** facilities are available for the staff also.
- **Separate dining facility** in the canteen **and separate parking area** are provided for staff.
- **Foreign language course** (German) is available in the campus.
- **ATM** facility of SIB is also available in the campus.
- Institute being **centralized valuation camp** for Kerala Technological University, facilitates faculty to do the valuation process in the campus itself.
- For **ICT enabled** teaching, **projectors** are provided in classrooms and **desktop PCs** are allotted to each faculty. **Microsoft Teams** software is provided from the institution for conducting online classes in the current COVID-19 pandemic situation.
- **Free Wi-Fi** and **domain E-mail addresses** are provided to all staff.
- Faculty rooms are equipped with **separate cubicles** for each faculty.
- **Conference Rooms** are available for important meetings.
- **Hostel facilities** are offered to staff at a subsidized rate.
- **Library** is fully equipped with all facilities to serve the information requirements of the staff.
- **Kiosk** is available for light refreshments and **rest rooms** are available for staff also.

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: 16.54

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
48	21	22	31	14

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: 10.4

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
8	12	11	11	10

File Description	Document
Upload any additional information	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: 59.18

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
97	92	112	84	110

File Description	Document
Upload any additional information	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:

In Higher Educational Institutions, faculty are often requested to perform various tasks pertaining to diverse roles. Besides the instructions, all have to be more innovative and research oriented for their self-renewal. They should be updated with all changes for effective implementation of curriculum, which can only be achieved by technological expertise. The role relates to the togetherness of all kinds of administrative responsibilities in co-operation with other Faculty, Heads of the Department and the Head of the Institute.

An effectively designed **Performance Based Appraisal System (PBAS)** is provided to every **faculty**. Optimization can only be achieved by individual contributions of faculty; thus it accelerates Institutional performance. A template is provided in the faculty diary for self-evaluation. The performance appraisal is conducted at the end of every academic year and **Academic Performance Index (API)** score is calculated by Appraisal Committee. The faculty are evaluated based on their teaching, co-curricular, professional development, research and academic contributions. Feedback of faculty from students is also given weightage in this appraisal form. It has the following parts:

Part I– Teaching-Learning and Evaluation which includes score for the number of days worked in each semester, result analysis, examination duties, additional creative teachings like remedial classes and tests, workshops, mentoring, documentation etc.

Part II – Co-curricular activities including institutional and departmental levels.

Part III–Publications and Research during the academic year.

Part IV– Faculty Development/Seminars, workshops including online, organized or attended.

Part V– Initiatives and innovative contributions in academics, institutional/departmental development, Research and consultancy.

Separate appraisal forms are available for **non-teaching staff** in their diary. It includes percentage of attendance, details of records maintained, maintenance activities done, job performance and attitude towards students and others etc. Student feedback for non-teaching staff is also there and taken into

account for API score.

Feedback analysis

The college has a well-organized and fully automated feedback mechanism which keeps tracks on students feedbacks. A unique ID is created for each student in a class to log-in into the **feedback marking software**, which keeps their names anonymous. After log-in into the software, the list of faculty taking each course in the class will be shown onscreen. Through a questionnaire students can mark their feedbacks. The collected feedback will be analysed by the software and later it is handed over to the Head of Department with marks secured. In a semester, feedback is collected twice for all courses. In this due process, it is ensured that everyone is actively participating and the level of feedbacks received are taken into account while evaluating the staff for promotion.

Corrective measures based on feedback analysis

A detailed discussion session will be held for each faculty who have not obtained good appraisal system with the HOD on how to improve the overall performance. Academic enrichment programs are conducted for the faculty for improving their performance. Twice in a semester, students are given chances to raise any kind of issues related to teaching learning process, facilities provided or any other relevant matter, through Class /Course committee meetings.

File Description	Document
Upload any additional information	View Document

6.4 Financial Management and Resource Mobilization

6.4.1 Institution conducts internal and external financial audits regularly

Response:

Regular internal and external audit is conducted to ensure that

- Proper books of records as required by law have been kept so far, as appears from the examination of those books
- The balance sheet and income and expenditure account dealt with are in agreement with books of accounts
- The said accounts give a true and a fair view of the state of affairs

Viswajyothi College of Engineering and Technology is a self financing Engineering College run by Diocesan Technical Education Trust, Kothamangalam and is the only institution of the Trust. The Trust has an elected body of Board of Trustees which is the supreme decision maker of the Trust and an Executive committee is selected from the Board of Trustees to execute the decisions taken in the Board. Finance Committee looks after the financial matters of the Trust and Purchase Committee takes the decisions on the purchases of the Trust.

A very good internal check system is followed in the Trust/College. Each voucher generated by the section clerk is verified by Finance Officer and Administrative Officer and approved by the Principal. There after the payment is approved by the Management Representative viz President of the Trust/Treasurer. The strong room keys are kept jointly in the hands of Cashier and Finance Officer. Cash balance with the Cashier is physically verified by Finance officer on a daily basis and the books are verified by Treasurer.

The internal check system is again audited by an internal audit team and books of accounts are audited by a Chartered Accountant. The Internal Audit team comprises of Joint secretary of the Trust and a member of the Finance Committee. They check whether the finance related activities are in order and safeguard the interest of the Trust and its stake holders. They verify the cash and Bank balances on a half yearly basis and confirm that the transactions are in order. They also verify that the purchases are approved by the purchase committee. The items purchased are properly entered in the stock register.

There are external financial audits of all the financial activities of the college. The income and expenditure of the institution is audited regularly by registered chartered accountants on an annual basis.

The objective of external audit is to obtain an assurance that the financial statements are correct and to issue a report that includes auditor's opinion. Auditing also includes assessment of principles used for accounting and estimates made by the management. The overall financial statement is also evaluated.

It is a statutory audit and serves to provide a fair and accurate representation of financial position of institution. The audit reports are uploaded in college website.

Whenever an irregularity is identified by the auditor in course of auditing the same is noted and reported to the concerned department for corrections and compliance. If the expenditure has incurred according to rules and regulations then it is explained to the auditor with substantiating evidences. Thus audit objections are settled.

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: 118.71

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
17.33	17.98	19.19	22.91	41.3

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

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

Response:

VJCET is a self-financing institute, where **primary source of fund is tuition fees** paid. The institution has extreme and excessive care to ensure the optimum utilization of the financial resources. The institution has an efficient and effective procedure for mobilization of funds and the optimal utilization of resources.

The Resource Mobilization Policy serves to identify different means of financial resources available for various programs, for the efficient utilization and management of funds generated. An effective policy facilitates the achievement of vision and mission adhering to our strategic plan.

Every department will prepare the budget before the commencement of academic year. Department budget is prepared in terms of conducting activities of the department, obtaining lab equipment, maintaining laboratory facilities and upgrading computational facilities. The Department Academic Calendar serves as an information source and planning document for preparing department budget. This calendar lists the plan of the activities of the department, association activities, professional body activities, seminars, expert talks, Faculty Development programs and training programs.

The budget plans received from various departments are reviewed in a meeting comprising of Director/Manager, Principal, Vice Principal, Deans and HODs. It is ensured that each department allocates enough funds for various Quality improvement programmes and training on recent technologies.

Academic plan and budget proposals are presented by the Principal in the Executive Committee meeting of Diocesan Technical Education Trust (DTET). The Executive Committee approves the proposed academic plan and budget after a thorough review in the meeting. The Executive Committee also mobilizes resources for the development of the institution, allocates funds for execution of academic plan and monitors the budget utilization.

Principal is empowered to sanction the requisite amount of money on submission, subject to the approval of Manager and Director. In case of emergencies or shortage additional funds are made available through bank loans.

All departments are encouraged to obtain grants through consultancies and grants from Directorate of Technical Education, **All India Council for Technical Education**, *Kerala State Council for Science, Technology and Environment*, **Kerala Start up Mission** etc . VJCET has got financial support from **Nuclear Power Corporation of India Limited and Board of Research in Nuclear Sciences** to conduct various programs to spread awareness on nuclear energy.

VJCET has a **Solar power generation** of 280kW worth 1.6 crores which annually produces 365000. This

plant is on grid solar power generator.

Companies functioning from Viswajyothi Business Incubation Centre (V-BIC) use the office space and facilities at a concessional rate, thus generating an income from Start Ups. The fee collected as a part of foreign language training programs is also a source of income

The institution provides financial support to deserving students. Scholarships are awarded to meritorious students. Parent Teacher Association has contributed financial support to build infrastructure facilities of the institution. The Alumni Association of the college also offers financial support for modern infrastructure development.

Regular audits conducted ensure transparency in financial matters of the institution and oversees the accounting activities.

File Description	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 IQAC of our institution is aimed to enhance the quality of education. It was established on 15/7/2015.

Practice I

Placement Promotion Activities

- VJCET always focuses on overall improvement of students thereby providing them a platform to showcase their capability and helps them to earn the desired career which opens up a new world.
- The students are categorized based on their skill sets and ability to grasp the concepts and they are incorporated with training which helps them to groom themselves into professionals.
- The first year students are given **life skill training** which improves personal self-management and social **skills**.
- **Aptitude Training** is given from the first year which helps them to improve their Quantitative, Reasoning & logical skills which in turn results in clearing the recruitment oriented test and common entrance tests.
- **Soft skill** training helps to groom interpersonal skills.
- **Company specific mock tests** and **interviews** are availed by students before they attend the recruitment.

Alumni are invited to campus to motivate the students and to make them aware about the industry trends, which helps to upgrade their technical knowledge with the needs of industry.

These types of training programmes helped the students to acquire placements in different companies. The college keeps updated about each student even after they join their career that creates a special bond between alma mater and the alumni.

Practice II

IIIC & IEDC

IIIC

Realizing the relevance and importance of interaction between Technical Institutions and Industry, Industry Institute Interaction Cell (IIIC) was formed in VJCET in 2016.

- IIIC is looking for effective interaction between industry, research organizations and reputed institutes to improve quality of the technical education and enhance employability of graduates.
- It helps to meet the needs of industry.
- It provides an input to better teaching-learning processes and better **industrial exposure** to students thereby enhancing practical knowledge and self-confidence.
- **MoUs** were signed with many industries from different disciplines of Engineering and Management to ensure effective collaboration between industry and institute in a formal and systematic manner.
- Many activities are being organized regularly at department level.

IEDC

- Innovation and Entrepreneurship Development (IEDC) is being promoted in educational institutions to **develop** institutional mechanisms to create **entrepreneurial culture** and to foster techno-entrepreneurship for the generation of wealth and employment.
- The coordination committee of IEDC of VJCET was constituted on 20.10.2016 with representations from students and faculty members from all departments and activities are being organized with the support of **Kerala Start-up Mission (KSUM)**.
- Every year the IEDC of VJCET organizes various activities. IEDC organizes '**Idea Fest**' every year. This event focuses exclusively on innovative ideas from students and enables them to participate in state level Idea Fest competitions conducted by KSUM. One idea from each department is selected and provided with financial support of Rs.5000/- for prototype development.
- KSUM initially granted Rs 2 lakhs and after ensuring the effective utilization of funds they sanctioned an additional Rs 2 lakh and allotted Rs. 20000/- for conducting "Technical Workshops in Future Technologies".

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:

The IQAC continuously monitors and takes necessary actions to improve the quality of the teaching-learning process. IQAC has put efforts to promote academic excellence and overall performance for the continuous improvement of the institution. The Principal and HOD's conduct meetings regularly, to monitor the teaching learning process of the departments. HOD's in turn circulate the information to the teaching and non-teaching faculty of the department, through departmental meetings.

Outcome Based Education (OBE)

- OBE focuses on the knowledge, skills and attitude of the graduates as the most important aspect of education.
- Instead of output based education, OBE relies on outcomes which are assessed and enables students to achieve their goal.
- The quality assurance and accreditation practices of the institution are based on this practice.

The design of OBE starts by defining the vision and mission of the Institute and departments, POs defined by NBA, PEOs, PSOs and COs. Internal and external stakeholders, course coordinators, Program coordinators, Stream Coordinators, PAC, DAC and IQAC are involved in this design phase.

- The semester plan and course plan are prepared in advance with reference to University Academic Calendar.
- The Course Information Sheet (CIS), comprehensive information about the course is prepared by Course coordinator. CIS is then approved by Stream coordinator and Program Coordinator.
- Course objectives and outcomes are discussed at the beginning of each module.
- Internal Tests and Assignments questions are mapped to COs and Bloom's Taxonomy.
- Rubrics are defined to evaluate direct and indirect attainment levels for COs, POs, & PSOs. The direct assessment tools considered are internal tests, assignments and University examinations. The indirect tools considered are Exit survey, Employer survey and Alumni survey.
- The COs, POs, PSOs attainment calculations are in practice throughout the year.
- As the OBE system is in practice, all the quality improvement strategies proposed by the different academic bodies in the institute are well implemented.
- An in-house software developed is used for the implementation of OBE. Resource persons from our institute serve as mentors for the implementation of OBE at various institutes.
- The OBE system works towards continuous improvement of the students and proposes remedial actions; it also gives active participation and a better insight to all stakeholders to realise vision of an institute.

Internal Assessment

- IQAC has introduced a new method of preparing question papers for every internal assessment in which course coordinator sets question papers, verified by stream coordinator and finally approved by HoD.
- Question paper setting is based on **Bloom's Taxonomy** and indicates course outcomes and Bloom's level.
- Internal assessment tests are conducted in the prescribed format similar to the University examination.
- Invigilation for the same is done by faculty members. The test question paper is discussed in detail after every internal assessment. Marks obtained are uploaded in college portal and displayed on the notice board.
- Weaker students are identified after each internal assessment and remedial classes and tests are given accordingly. Assignments are also given for students as per university regulations. Attainment is calculated based on internal test, University results, direct and indirect assessments.

File Description	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: B. 3 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

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:

VJCET has initiated many measures for the promotion of gender equity and to clinch impartiality across genders in the campus during the last few years. Few such measures are

- The College Academic council is constituted with Heads of Departments and staff representatives of which a lady staff is mandatory.
- Further, women faculty members assume offices at top - level administrative posts such as Heads of Departments/Deans.
- In the Student Council Elections, the posts of vice chairperson and two student representatives are reserved for women; whereas all other posts are open to all.
- Two class representatives are selected for each class; of which one is a girl to ensure adequate representation in the Student Council.
- Women faculty members are ensured inclusion in committees constituted for curricular as well as non-curricular activities.
- Women faculty members and students take lead roles in all Social outreach programmes.

Egalitarianism is practiced at all activities organized by the college promoting the spirit of equity. Students Council organised various programmes in the last five years:

- Bodhi, the National Technical fest, creates a platform to exhibit innovative ideas and compete with their peers.
- Drishya, the Arts festival, helps students to showcase their talent and encourages them to place their best foot forward and instil confidence in them.
- Drona, the annual sports meet has competitions exclusively for girl students.

All the above programmes tender equal opportunities to boys and girls in organising and participation; thereby promoting gender equity.

The College Magazine is an avenue for students to vent their thoughts and creative expressions, boys and girls avidly contribute to the same.

Several programs are conducted under the National Service Scheme, which ensures inclusion of both genders.

Women's cell organises programs that help to build self confidence in young women and create an awareness about feminine potential.

Women's Grievance Redressal committees provide a podium for taking note of complaints and redressal of grievance. An Internal Compliance Committee has been constituted to create awareness and redress grievances with regard to sexual harassment.

a. Safety and security

- College campus has two security points where permanent experienced security personnel are deployed round the clock for safekeeping the people, campus and college amenities. Safety of students is ensured using 146 IP cameras in the campus and 5 IP cameras in the Ladies' hostel and are linked to the surveillance system, which the authorities can monitor at all times.
- The ladies hostel in the campus is run by Reverend Sisters of the Diocese of Kothamangalam and lady teaching staff are appointed as Resident Tutors to ensure safety of students.

b. Counselling

There is a counselling center where students referred by faculty mentors, are free to walk in and share their challenges and difficulties, to become resilient individuals, by managing emotion with positive mental health.

c. Common Rooms

Common rooms for girl students are provided in college buildings. A lady non-teaching staff maintains these common rooms and looks after the needs of the users.

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: A. 4 or All 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:

VJCET follows a healthy waste management system in the campus right from its generation to keep the campus clean and green.

1. Solid waste management

- To practice “segregation at source” separately, designated containers are kept for Biodegradable and Non-Degradable waste in each block and other key sources of waste generation like Hostels, Canteen, Office, Library etc.
- The solid waste generated is approximately 300 kg/day. Out of this, 200 kg is biodegradable, 60 kg is combustible, 30 kg is recyclable and the remaining is mostly dust and silt. The biodegradable waste is used to charge two biogas plants each having 15 m³ holding capacity. The bio gas generated is used in the hostel kitchen. The slurry after digestion from the biogas plant is used for the vegetable garden. A portion of the kitchen waste generated is disposed of by vermicomposting and is used for organic farming.
- Combustible items are collected in separate steel grill bin. The major portion, paper, is separated and sold to external agencies.
- The other rubbish is incinerated in a very efficient incinerator of 3 m³ holding capacity. The exhaust gas is driven out with a chimney of 12 m height. A ventilation space of 1 m³ provided below the waste holding chamber separated by a SS grill provides good air entry to the combustion chamber and effects complete burning. The ash generated is stored in an ash pit and is used as manure.

2. Liquid waste management

- For treating the liquid wastes generated, a Sewage Treatment Plant (STP) of 3 lakh litre capacity with physicochemical, biological and multi stage filtration units are installed in the campus.
- A well-equipped water testing laboratory has been set up by the Civil Engineering Department along with the Sewage Treatment Plant. The performance of STP is assessed regularly by testing parameters like COD, BOD, Suspended Solids, pH etc. are tested in the environmental engineering laboratory of the Civil Engineering department. The entire treated water is used for watering the gardens, lawns and agricultural purposes.
- The sludge from the STP is dried and used as manure for the gardens. Therefore, the entire waste water generated in the campus is treated and reused effectively.

3. Biomedical waste management

Biomedical waste, the sanitary napkins and waste from the first aid room are disposed of by the incinerator

installed in the campus.

4. E-waste management

Sellable, recyclable, non-recyclable electronic waste are separated at the source itself and sent to respective recycling units directly or through authorized agencies. As a part of it all the scrap materials from different engineering laboratories have been collected frequently

5. Waste recycling system

The items like plastics, metals, glasses etc are collected in separate bins kept in each block are taken by authorized agencies and recycled.

6. Hazardous chemicals and radioactive waste management

Hazardous wastes such as dangerous chemicals are packed appropriately, transported and are handed over to authorized agencies for safe disposal. No radioactive waste is generated in the campus.

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: A. Any 4 or all 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 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: A. Any 4 or all 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
Certificates of the awards received	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. Disabled-friendly washrooms
3. Signage including tactile path, lights, display boards and signposts
4. Assistive technology and facilities for persons with disabilities (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: A. Any 4 or all of the above

File Description	Document
Policy documents and information brochures on the support to be provided	View Document
Geotagged photographs / videos of the facilities	View Document
Details of the Software procured for providing the assistance	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:

Viswajyothi college of Engineering and Technology is very keen to balance the importance of tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and other diversities along with academics.

- **Onam Celebrations:** Onam is being conducted to brings out the regional and cultural harmony.
- **Study tours:** International and national level study tours conducted twice for B.Tech and MBA students, help them to gain various culture and regional knowledge around the world.
- **SES:** Collaboration with Senior Experten Service Germany, helps the students and staff to interact with technologists around the globe.
- **International Language Program:** International language study programs are conducted in the campus itself. German language training programs help towards the linguistic harmony. Short story writing completions are held in the college in order to enhance the linguistic capabilities.
- **National Service Scheme:** Every year different programs are arranged by the NSS unit of Viswajyothi, which enable the students and staff to be a part of the community for helping others. Cleaning activities at different places such as KSRTC and private bus depot, Panchayath office premises, Homeo clinic, road sign boards etc are conducted in connection with 'Swachh Bharat Abhiyan' towards the community-oriented services. Blood donation camps at the college are conducted several times a year to make students aware about the importance of blood donation and ultimately it benefits to the community. Also dress and food distribution in tribal areas are conducted in order to enhance communal harmony. NSS cell conducts orphanage visits along with food distribution every year. Different recreational activities are conducted so that the mental satisfaction of the residents are ensured. Notebook collection and distribution is conducted in the last year to the students who were affected by flood. Annual NSS camp of seven-day duration is an excellent opportunity for the students to serve the community in a better way. Stem Cell Donor

registration camp was held at the college campus and two students became successful stem cell donors. Also, different activities such as honesty shop, making of disposable waste bins, removal of plastic bottles etc. are also conducted.

- **Udyoga and Gyanoday:** These are some of the programs conducted which benefit to the community. Introduction to computer and internet were given to the local community through the program named Udyoga. Technology enrichment for school students was given through the program Gyanoday.
- **Tree planting:** A major activity conducted every year is tree planting, which again brings out the social commitment of the college.
- **Socioeconomic Activities:** Different socioeconomic activities such as food and dress distribution in the flood affected areas, distribution of study materials, maintenance of equipment and furniture in hospitals and schools reveal the commitment of the college towards the society.
- **Scholarship Programs:** Various scholarship programs for financially weaker students are arranged, so that economic inequality is compensated.
- **UNAI:** United Nations Academic Impact unit of the college organizes Medical camp, flood relief, orphanage visit, etc along with various sustainability programs

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

The objective of Viswajyothi College of Engineering and Technology is to improve its students and employees and to make both students and employees responsible citizens of the country and the world. To this end, the institution implements different programs.

Promoting the spirit of patriotism, upholding constitutional values, the national flag and national anthem, cherishing ideals admired in our fight for independence, promoting peace and the spirit of popular brotherhood, preserving the rich heritage of our composite community, cultivating scientific temperament, the spirit of inquiry and change, protecting public property, anti-narcotic measures etc. are some of the fundamental duties laid down in our constitution. In order to foster the spirit of patriotism, respect for the national flag and republican values, VJCET has always celebrated remembrance days such as Independence Day, Republic Day, etc.

VJCET follows a standardized dress code for all students to discourage discrimination between students and to foster the spirit of equality.

The right to education is one of the fundamental rights that the government/university has defined as an

admission policy for engineering colleges while enrolling students for the courses based on the constitution. VJCET has strictly complied with government directives on reserving seats for deprived groups of individuals such as SC/ST, OBC/OEC, economically backward classes, differently abled etc. Fee concessions have also been extended to qualified students in compliance with the policy directives of the government.

The college follows strict protocols for the election of student representatives, department associations, class, course and college committees in order to sensitize the students about the democratic way of life and leadership qualities.

The college does not allow for any kind of discrimination among students and also among teachers and staff based on faith, cast, creed, gender, financial and social status etc. Hygiene conservation, preservation of ecological balance and natural resources and environmental protection, etc., are highlighted as some of the citizens' obligations.

The Institution also initiates steps to inculcate the sense of social responsibility among students and staff over and above this. Some of these measures are:

- Environment, Climate Change and Sustainability awareness campaign.
- On campus, blood donation camps include students and faculty members at regular intervals.
- Visits to orphanages and homes of elderly people.
- Teachers' day celebration at college offers students the chance to honour their faculties who share their expertise with them.
- The celebration of Constitution Day on November 26th allows students to uphold fundamental principles and ethics.
- During the disaster that struck during the month of August 2018, students actively participated in the flood relief programs launched by the Government of Kerala.
- Singing National Anthem every day and after every events conducted in the college with strict protocols, helps elicit feelings of patriotism among the students and staff.
- Subjects named Constitution of India and Introduction to Sustainable Engineering are taught in the first year and second year for all branches.

File Description	Document
Link for details of activities that inculcate values necessary to render students in to responsible citizens	View Document
Link for any other relevant information	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: A. All 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:

International Days include

- **Environment Day:** Tree sapling plantation is the primary activity conducted by the college to promote awareness about sustaining a healthy environment on World Environment Day.
- **Literacy Day:** To promote literature in every student's life, World Literacy Day on September 8th is celebrated by conducting Book Exhibitions on fiction as well as non-fiction works. The exhibition is open to every staff and student in the campus.
- **Blood Donor Day:** Viswajyothi takes great care to conduct blood donation camps in association with IMA Thodupuzha every year. The camps are conducted on June 14th of every year.
- **Women's Day:** Eminent female personalities are invited to the college every year on Women's Day on March 8 to address the students on the importance of women's rights as well as responsibilities to society. These include talks by internationally certified female career coaches, doctors, engineers and entrepreneurs.
- **Valentine's Day and World AIDS Day:** Realizing the need to spread awareness on communicable diseases among teenagers, VJCET takes great care to organize events in the campus in connection to World AIDS Day. Talks by social service workers actively working for the welfare of AIDS patients are invited to talk in the college campus. The National Service Scheme cell of the college is responsible for this activity. For Saint Valentine's Day on February 14, the college campus is decorated in a combination of red and white by the students of the college union and holds literary competitions.

National Days and Festivals include

- **National Youth Day:** To invigorate the youth of VJCET, personality development classes and as well as attending online programs are arranged to celebrate the National Youth Day on January 12th.
- **Onam and Christmas:** The harvest festival of Onam is celebrated with great spirit in August or September with activities like Pookalam Competition, Tug of War and many more. Christmas is

celebrated in the college on the 23rd of December. Crib-Making and cultural activities are some of the activities participated by the students.

- **Independence Day and Republic Day:** Apart from organizing the flag hoisting ceremony on both these days at VJCET, activities that are of relevance to society are conducted. These include repainting orphanages, visiting children's homes and old-age homes, clean-up of Primary Health Centres in the panchayath, and many more.
- **Abdul Kalam Day and Gandhi Jayanthi:** October 8 Viswajyothi celebrates Abdul Kalam Day which is the birth anniversary of Dr. A. P. J. Abdul Kalam by planting various tree saplings and other programs in the college campus. On October 2nd as part of Gandhi Jayanti, the college students conduct rallies to spread the message of communal harmony and also take part in clean ups.
- **NSS Day:** As part of National Service Scheme Day on September 24, the selfless service to the society by the student NSS volunteers of the college is honoured by the college Principal. Service visits to destitute homes, primary health centre clean-ups, street plays with socially relevant themes and other activities are conducted on this day.

File Description	Document
Link for Geotagged photographs of some of the events	View Document
Link for any other relevant information	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:

7.2.1 Best Practices

Practice 1

1. Title of the Practice

Philanthropic Stance & Student Driven Socially Responsible Activities

2. Objectives of the Practice

1. To develop an integrated sustainable system for improving education, health and standard of living of the rural community.
2. To inculcate innovative thinking which, leads to projects benefiting the society.
3. To develop a group of socially committed citizens who possess the spirit of sharing.

3. The Context

VJCET by its vision exists for the social development of the economically backward people in areas of its vicinity. The institute is committed to developing citizens who manifest values of societal responsibility and obligation. The college encourages staff and students to initiate new measures for the enhancement of human values and civic sense. They engage themselves in social activities through various fora operating in the campus. Moreover, the college plays an active role in the social spheres of the region and supports various social projects and initiatives mostly in rural areas.

4. The Practices

a) R&D Centre

R&D centre and an advanced FAB lab are established in the campus for designing and developing innovative solutions to socially relevant projects.

b) NSS Cell Activities

Every year the NSS cell conducts

- Blood donation camps
- Cleaning campaigns

Conducted repair and maintenance of computers in various government schools.

Various awareness programmes on Anti-corruption, Clean India, Disaster Management etc. are also conducted.

NSS cell organized a Stem Cell Donation Awareness talk and Donor Registration Drive in association with Datri Stem Cell Registry and Lions Club, Vazhakulam on 2nd February 2017.

Swachh Bharat Abhiyan:

In 2019-20 a two-day cleanliness awareness campaign was undertaken in various locations of Avoly Gramapanchayat and the surroundings of Kavana L. P. School, Besides that students

- Collected plastic waste
- Made disposable waste bins
- Constructed manure pits
- Planted tree saplings
- Cleaned the local streams and water bodies

Flood Relief Activity :

During the Kerala floods of 2018, rehabilitation activities were conducted from 14th August to 2nd September 2018.

- Students from all departments participated with the government machinery in data collection,

through surveys for damage assessment exercise and for effective allocation of relief materials.

- The NSS volunteers collected essential items like food and clothing from the Viswajyothi Family to distribute in relief camps.

c) Swapnaveedu Project

The Civil Engineering Department built a house for a family with children having muscular dystrophy. The faculty members and students prepared the plan, designed the house, estimated and supervised the construction which was completed on 29th May 2017.

d) Gift of Joy

IEEE Student Branch visited a tribal settlement Colony in Kunjippara, Kuttampuzha, on 21st May 2019 and distributed school kit for all the students of the SSA MGLC School.

e) Let's Unchain It

Students of VJCET visited Government Taluk Hospital, Muvattupuzha and Taluk Hospital Adimali to set up Automatic hand sanitizer and taps.

f) Smart Class Among the Woods

Students of VJCET setup a rooftop solar plant to provide electricity and donate laptop and projector in a tribal settlement Colony in Kunjippara, Kuttampuzha .

g) Social Service Club Activities

The key activities are

- **"SANTHVANAM"**- Students visited Kummittamkudy Tribal Colony Marayoor in 2017 and supplied essentials.
- Distributed Medicines and Bedsheets at General hospital Ernakulam in 2017.
- **Rooparekha Project**- Prepared plan and estimate for houses based on Pradhan Mantri Awas Yojana and Life mission of Kerala Government.
- Constructed community hall at Urulantanni Tribal Colony on 13th February 2016.

5. Evidence of Success

- Anuroop P.A. of Mechanical Engineering is the **fifth Bone Marrow Stem cell donor** in Kerala, who donated his Stem cell to a little boy Vihaan.
- Swapnaveedu key was handed over on 29th May 2017 in the auspicious presence of Sri. Eldho Abraham, Muvattupuzha MLA.
- The students of all departments were engaged in the rehabilitation works in the flood affected areas.
- Prepared plan and estimate for 65 houses under Pradhan Mantri Awas Yojana and Life mission scheme of Kerala Government.
- VJCET was selected as the **"Best Blood Donation Camp"** by IMA Blood Bank Thodupuzha on 2016-17 and 2017-18.
- Through Blood Donation Camps, many students and staff donated their blood.

- George Jolly, Binu Alias, Sree Lakshmi J, Dixon Job of ME Department participated in Techknow 2017, All India Project Presentation Competition by Anna University in collaboration with Manufacturer Organization and secured Second Prize.
- Amal Shajan, Jiss Maria John, Eldho P Joy, Jobin Mathew of CSE Department participated in MITS Hackathon 2018 and secured First Prize.
- Faculty members have published their work in 63 Scopus Indexed Journals and 33 International Conferences.

6. Problems Encountered and Resources Required

SI No	Problem Encountered	Resources Needed
1	Social service activities have got inhibited several times because of the hectic schedule of academic activities and university examinations	Suggested to introduce credit-based system for such activities
2	Monetary issues.	More funding agencies have to be identified.

7. Notes (Outcomes)

- Staff members and students regularly participate in many social welfare activities. They have developed a sense of social obligation and strong social commitment.
- The social projects successfully executed had developed social sensitivity and dutifulness among the students.
- These activities also cultivated a spirit of teamwork, especially the ability to work in large teams with social commitments.

Practice II

1. Title of the Practice

Industry Aligned Technical Education

2. Objectives of the Practice

1. To accommodate the input from the practicing professionals in the strategic planning of VJCET
2. To enable faculty members and students to become aware of industry standards and to train the students to meet industry expectations.
3. To prepare professional students for jobs in multinational companies, by exposing them to newer Engineering technologies and Managerial skills.
4. To establish convergence with Industrial and Research Organizations from various fields through MOUs.
5. To promote various research and consultancy activities by the faculty members and students.
6. To involve industry experts in the assessment process of students for genuine feedback.

3. The Context

In VJCET Industry-academia interactions are incorporated at various levels. This linkage is found effective in the development of the institution, faculty members and students. It provides necessary inputs to the academic institute to build the competencies required for faculty members and students. It enhances the employability of the engineering and management graduates who join industries immediately after their course. The academic institution needs to cater to the demands of industry requirements by equipping students with necessary skill set by designing special activities with the support of reputed industry professionals. With the advent of globalization and opening up of Indian economy to outside world, competition among industries have become stiff. These companies look up on professional education institutions for the solutions. So, bridging the gap between industry and the academic institutions is the need of the hour.

4. The Practice

Input Level

College Governing Council and Department Advisory Boards: College Governing council and Department Advisory Boards set the strategic direction of the college and various departments.

Curriculum Enrichment Programme: Industry experts are involved in identifying the gaps in the curriculum in terms of content and in terms of methodology.

Process Level

a) Industry-Institute Interaction Cell (IIIC)

- IIIC has been interacting with many prominent industries in the country and arranges industrial visits, internships and training programs for the students
- Formalize MOU's.
- As a part of international IIIC activities in VJCET a multidisciplinary team of five members had visited Hannover Messe 2018, the international technical trade fair in Germany.

b) Alumni Interaction and Technical talks

Students are encouraged to interact with alumni who are working in various domains and are having sufficient knowledge and experience.

c) Innovation and Entrepreneurship Development Cell (IEDC)

At IEDC, technology based innovative business ideas are transformed to products or services which are of societal importance and commercially viable business models. IEDC conducts technical talks, workshops, idea fests, FDPs etc.

d) Viswajyothi - Business Incubation Centre (V-BIC)

V-BIC provides state of the art facility for transforming a technically viable product into commercially attractive business for students, faculty members and young talented entrepreneurs.

e) Idea Fest

IEDC in association with V-BIC organizes an Idea Fest, which focuses exclusively on innovative technology-based ideas of students for developing a prototype or product. Selected ideas get an initial fund from IEDC for the state level Idea Fest organized by KSUM.

f) Involvement in Professional bodies

CSI, IEEE, ISTE, KMA, NIPM etc. are some of the professional bodies VJCET has membership. These professional bodies encourage active professional networking and involvement of students in their regular interactive sessions.

g) Foreign collaboration

The Senior Experten Service is Germany's leading volunteering organisation for experts and executives who are either retired or taking some time off work. VJCET is organizing Workshops with the involvement of SES experts.

h) Participation in the Event Cybathlon

VJCET participated in CYBATHLON, organised by ETH, Zurich, Switzerland in the Powered Arm Prosthesis Race and the team VJCET secured 9th place.

i) United Nations Academic Impact (UNAI) & Action by Students to Promote Innovation and Reform through Education (ASPIRE)

This forum organizes programs which will imbibe among students about the relevance of 17 sustainable development goals put forward by UN.

5. Evidence of Success

- In order to formalize the interactions with industrial experts, memorandums of understanding (MOUs) are signed with 29 companies.
- **Assessments: Expert Panels with industry experts**-For Soft skill assessments, Project evaluation and Viva Voce exams VJCET invites industry experts as the panel members regularly.
- **Placement Process**-Placement offers are coming from top companies like Infosys, TCS, IBS, VVDN, Digicore, Gadgeon, etc.
- **IEDC summit 2019**-Sixteen students, one faculty member, Nodal officer IEDC and the Management coordinator of VJCET, V-BIC attended the Asia's largest summit for aspiring entrepreneurs.
- **KSUM Idea fest 2019**- AGR-E is a CNC based Farming Machine, selected for funding Support of Two Lakhs, which was one of the 18 projects selected out of 1600 projects from all over Kerala.
- Students of S7 ME got the **HERO OF THE BOOT CAMP** award at Kerala Start up mission boot camp and received a cash prize of Rs.50,000/-
- Training and Development Programmes organised by Senior Experten Service, Germany
- **CSI student branch** of VJCET secured **best accredited student branch award** during 2015-16, 16-17, 17-18 and 18-19. **Distinguished college award** and **Longest continuous SBC award** during 2016-17.

- **ISTE Student chapter** of VJCET is identified as the chapter having maximum number of new members during the year 2015-16.

6. Problems Encountered and Resources Required

For continued success with increasing number of institutions and students it is important to have:

Sl.No	Problems Encountered	Resources Required
1	Linkage with adequate number of organizations	VJCET has strategic partnerships that focus on one or more areas through focused efforts on sustained industry engagement over the years.
2	Reluctance from a small percentage of students	Quiz competitions, technical fests, hackathons, workshops etc. are conducted to boost up their interests.
3	Monetary Resources	Additional funding is attempted at from govt. agencies
4	Technical talks, training programs, workshops are to be conducted without affecting the regular academic schedule.	Academic calendars are prepared annually to include various curricular and co-curricular activities
5	Awareness of faculty members to address the latest trends	Faculty members are encouraged to attend different Faculty Development Programs and training.

7. Notes (Outcome)

- It ensures continuous professional growth of the academic community.
- Students become aware of the gap if any in their skills and gain an opportunity to upgrade them.
- Produce employable professional ready for the industry.

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:**SOLAR POWERED, GREEN AND CLEAN CAMPUS**

Climate change, energy security and environmental pollution have evolved as major challenges globally. The increase in Green House Gas (GHG) emissions aggravates it further. Around 64% of man-made global warming is attributed by CO₂, a GHG produced by human activities; while deforestation contributes only 11%. The major source for man-made CO₂ emission is the burning of fossil fuel, predominantly by thermal power plants. Thermal power plants generate 70% of electricity utilized in India, and the generation as on 31.08.2020 is 78.882 Billion kWh/year, which emit around 75 million tons of CO₂/year. The pronounced need to check global warming calls for energy efficiency enhancement; and adoption of emission free, eco-friendly energy generation technologies.

VJCET being a centre of higher learning, has realised the need for sustainable growth with minimal impairment to the environment through adoption of green building principles by promoting the concepts of solar energy, rainwater harvesting, waste water treatment and water reuse. 'Net Zero Energy' building is our first step towards 'Achieving Net Zero' in the built environment in terms of Carbon, Water and Waste.

- **Wheeling to the Grid:** Solar energy is a clean source of energy with zero CO₂ emission. As a commitment to save environment, VJCET meets the requirements of electricity using grid connected solar power plants. Our average electrical energy consumption is 1900kWh/day. The average electric generation of the solar plants is around 1215kWh/day. Thus, VJCET prevents the emission of around 420 tons of CO₂ per year. This power plant is connected to KSEB grid.

VJCET has installed three grid-connected solar power plants with an overall capacity of 280kWp as listed below:

- 50kWp power plant with 200 solar modules of 250Wp rating, producing around 225kWh/day.
- 200kWp power plant comprising of two 100kWp plants with 576 poly crystalline modules of 350Wp rating, producing around 800kWh/day. It also has provision to operate with DG during power failure.
- 30kWp power plant with DC power capacity of 40.3kWp and 124 modules of 325Wp rating, producing around 190kWh/day. Two inverters of 15kW rating generate a maximum power of 30kW. Faculty and Students were actively involved in the installation and commissioning of this plant. Of the total cost of Rs. 23.15 lakhs, a funding of Rs. 19.5 lakhs was availed from the Diocese of Rotenberg, Germany.

Operation and maintenance of the plants are carried out by the EEE department with the direct involvement of faculty and students. With 280kW solar power plant installed, commissioned and operated, VJCET continues to play its role in clean energy production.

- **Rain Water Harvesting:** The college has installed a Rain Water Harvesting (RWH) system, with

- (i) a recharge dug well, and
- (ii) terraced construction techniques.

Water harvested from a roof area of 1700 sq.m (yielding about 15 cu.m of water per cm of rainfall) is charged to a dug well of volume 21.2 cu.m after filtration in a vertical sand filter; which subsequently recharges the ground water. Further, water collected from a total roof area of 4800 sq.m is permitted to

flood in leveled courtyards of each building to augment percolation through soil and recharge of ground water.

- **Preserving Water Bodies:** The total water requirement of 220 cu.m/day is met with the help of two water sources developed and maintained with utmost care a natural pond of 3m diameter and 9m depth and a storage tank of 3 lakh liter capacity, from which water is pumped to an overhead tank of 2.5 lakh litre capacity. The water from both sources is of excellent quality in conformation with standards specified by BIS and WHO.
- **Sewage Treatment and Recycling Waste:** VJCET takes great care to recycle and reuse the water from the whole campus, including two hostels. The 25-acre campus and garden are watered using recycled water. The campus is provided with a full-fledged Sewage Treatment Plant (STP) with an installed capacity of 200 cu.m /day, with a high-pressure sand filter and activated carbon filter handling up to 200m³/day thus maintaining a 'Zero Liquid Discharging' system. The college also has testing laboratories attached to the STP and a Water Testing laboratory under the Civil Department. Sludge from the plant serves as fertilizer for organic farming on the campus.
- **Each Waste to its Place:** To segregate all types of waste from the campus, the college has provided specialized waste bins for paper, plastic, organic and metallic wastes. Biomedical waste and solid waste are disposed in an incinerator. E-waste management from the campus is through an authorized agency. Hazardous wastes such as incinerator ash and toxic chemicals are packed, transported and handled by an authorized recycler- Kerala Environ Infrastructure Limited.
- **Promoting Zero-Emission Vehicles:** To promote electric vehicles, VJCET has provided a battery charging station for two-wheeler vehicles within the campus. This encourages a greener and cleaner form of transportation.
- **Energy Saving Measures:** The institution also practices energy saving methods like using LED bulbs, auto on/off switch, load pattern shifting during peak loads and eco-friendly design methods to reduce the usage of air conditioners.
- **Biogas Plant:** All of the organic waste generated from the college campus, canteen and hostels are transferred to the bio gas plant of capacity 15 cu.m which disposes off about 300kg of organic solid waste regularly. The manure and the methane gas generated are used as fertilizers and for cooking respectively.
- **Green Protocol:** VJCET practices a green protocol with a paper-less office automation system. Attendance entry of students, sessional mark entry and leave availed by the faculty are some of the features the Total Campus Solution software, that minimises the use of paper in the campus.
- **Green Cover:** In conjunction with good study habits and valuable resources, clean air is essential for students. The ambient temperature is considerably reduced in the beautifully landscaped, tree-lined campus. With every room in the college having access to fresh air via windows, in-room temperatures can be maintained without the use of air-conditioners. A variety of shrubs and plants in the campus makes us feel one with nature in the lush greenery.

File Description	Document
Link for appropriate web in the Institutional website	View Document
Link for any other relevant information	View Document

NAAC

5. CONCLUSION

Additional Information :

Viswajyothi College of Engineering and Technology stands on a beautiful hillock by the side of the State Highway overlooking several mountain ranges. It has a village setting with urban facility, hardly a kilometer west of the GI tagged Pineapple City, Vazhakulam. Periodically organised reach out programmes streamline Viswajyothi students into service learning, a unique hands on experience.

Concluding Remarks :

Education is the development of the whole man in relation to the “whole”. To every scholar, nothing is as fresh as learning. As a professional educational institution, Viswajyothi College of Engineering and Technology undergoes the continuous process of updating in the ever-changing scenario of Global Technology. Through qualitative improvement, we shall strive to cater to the holistic development of every student here enabling them to be industry ready and further, empowering them preferably to be job creators than job seekers. We hope to rise above the ordinary and reign in the realm of Institutional Autonomy thereby serving mankind worthy of our name and good repute.