

FOR 2nd CYCLE OF ACCREDITATION

FEDERAL INSTITUTE OF SCIENCE AND TECHNOLOGY

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www.fisat.ac.in

Submitted To

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL BANGALORE

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

Federal Institute of Science And Technology (FISAT) is a private self-financing engineering college established and run by the **Federal Bank Officers**` **Association Educational Society (FBOAES**). The FBOAES is an initiative of the Federal Bank Officers` Association (FBOA), the sole representative body of the entire officers of the Federal Bank.

FISAT has a unique position in the professional education sector in South India. With the motto "Focus on Excellence", FISAT has been designed and developed to become a "Centre of Excellence" in professional education. Established in 2002, the institution has carved a niche for itself in the education world, eloquently demonstrated by the flying colours attained by its students in academics, placements, and extracurricular and co-curricular activities. FISAT has embarked on an ambitious plan to enhance the quality and value of education and develop high-quality individuals. The institution is accredited by NAAC with an 'A' Grade. Five B. Tech branches are accredited by NBA. The institution also received the coveted ISO 9001:2015 certification.

FISAT is set up at Mookkannoor, near Angamaly in Ernakulam District, Kerala, the birthplace of the founder of The Federal Bank Ltd, Late K P Hormis. To honour the revered memory of this great visionary, the campus of FISAT is christened 'Hormis Nagar.'

FISAT is **affiliated to APJ Abdul Kalam Technological University (KTU) Kerala** and approved by the All-India Council for Technical Education (AICTE), New Delhi. FISAT offers B. Tech, M. Tech, MBA (with specialization in Finance, Marketing, Human Resource Management, Information systems and Production & Operations Management), MCA and Ph.D. programs

FISAT focuses on the quality of the teaching-learning process, thereby staying ahead in the spectrum of technical education. FISAT provides countless opportunities for students to stay informed of current developments, nourish their talents, enrich their technological learning and become involved with the community and professional organisations. The institution aims to 'INSPIRE' a generation of young professionals with integrity, which recognizes the importance of technology for social inclusion and preserving nature through eco-friendly and green solutions.

Vision

To become a world-class professional institute with a focus on excellence, moulding committed global professionals and technocrats who can meet the demands of business, industry, and research.

Mission

• To transform into an advanced centre of technical education, which will, in turn, bring out professionals with superior skills and social commitment.

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• To provide state-of-the-art facilities to mould brilliant young talents, enabling them to take up challenging assignments in the highly competitive global scenario.

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

- Highly committed team of Management (a unique model of self-financing institution managed by a trade union) with a strong social commitment.
- Strong brand value in Kerala among engineering colleges leading to quality students, placements and faculty.
- Focused investment in providing the best infrastructure.
- Recognized for contribution to society through technological support and solutions.
- Highly committed, dedicated and qualified staff.
- High Employee retention ratio.
- Availability of modern pedagogical tools for students and faculty members.
- Innovative pedagogical methods encourage participative and experiential learning.
- Conducive environment to foster innovation and creativity with Incubation facility 'Federal Labz'
- Specialised Research Centres with advanced equipment for encouraging experiential learning and innovation.
- IIC, IEDC and Mini Fabrication Lab (FABLAB) which won several awards to promote entrepreneurship and product development.
- Recognised as Centre for Doctoral Research by APJ Abdul Kalam Technological University (KTU)
- Employee Welfare Measures and Support Mechanisms are creditable.
- Encouragement for Faculty to take up Research and Consultancy projects for industry and external bodies and provision of policy guidelines for consultancy work
- Well-placed alumni forming a strong network
- Rigorous outcome-based student feedback system and stakeholder feedback system.
- Successful implementation of Outcome Based Education (OBE) in UG and PG programmes.
- An active NPTEL Chapter to promote e-learning.
- Actively functioning student chapters of professional associations like IEEE, ASME, ISTE, etc. which support industry linkages and networking.
- Numerous cells, clubs and associations promote the technical, literary, artistic and social skills of students.
- Eco-friendly campus and environment-friendly policies.
- Robust E-Governance platform (FISAT Campus Automation System).
- Social awareness and social responsibility are instilled in the students through extension activities.
- Scope for all-round development with room for sports and cultural activities.
- Cordial relationship between staff and management establishing a good work culture

Institutional Weakness

- The affiliated system limits the academic freedom of the institution.
- Few senior professors are part of the Board of Studies and contribute to the design of curriculum in affiliating university.

- Less number of sponsored research projects and patents.
- Lack of visibility outside Kerala limits the success of efforts to attract diverse talent from other states.
- Dependence on student fees for funding both working capital and capital expenditure requirements.
- The remoteness of the institution makes causes connectivity and accessibility issues.
- Less number of admissions for M.Tech Programs.

Institutional Opportunity

- Collaborations with the industry to provide hands-on training to students and live projects.
- Capacity building for undergraduate students to provide technological solutions for social problems.
- Availing of more prospective funding opportunities (from various governmental and non-governmental agencies) for research and projects.
- Possibility to explore the emerging skill development training schemes of the Government.
- Possibility to promote entrepreneurship and innovation by scaling up existing incubation facility.
- Potential to explore the tie-ups with foreign universities to facilitate student exchange and internships.
- Scope for improving faculty research, publication and consultancy through academia and industry collaborations.
- Scope for improving patents and technology transfers.
- The institution has the potential to become an Autonomous Institute

Institutional Challenge

- The highly competitive environment and declining trend in demand for engineering education in Kerala.
- Attract and retain expert faculty and technical staff maintaining diversity.
- Governmental regulation on academic and administrative matters of the institution.
- Filling the gap between the Industry requirements and the curriculum.
- Excess migration of students to metropolitan cities for education.
- **Documentation** of all the academic and non-academic activities on campus.
- **Pricing pressure** from competitors.

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

Being an **affiliated institution** under APJ Abdul Kalam Technological University (KTU), FISAT has a **strong focus on OBE** and courses have **well-defined objectives** and learning outcomes aligned with the mission of the Institution. The institution offers B.Tech, M.Tech, MCA, MBA and Ph.D. programmes. The UG and PG programmes offered by the institution cater to the industrial needs of the engineering and management fraternity. The Institution takes utmost care in developing the **academic calendar** for the effective implementation of the curriculum. The undergraduate programmes follow the **Choice Based Credit Semester** (**CBCS**) System while postgraduate programmes have an **Elective system**. **Fieldwork**, international, national and local **internships and projects** are an integral part of all programmes in FISAT. The **133 Add-On** courses offered outside the curricula include courses that cater to the development of domain-specific, technical and

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language skills as well as the career and personal development of the students. The presence of experienced faculty at various bodies as **members of the Board of Studies and Academic Council** helps the institution to contribute to the syllabus and curricula of different programmes in the affiliated system. FISAT also consciously **integrates cross-cutting issues** of gender, environment, human values and professional ethics in learning not only through the courses included in the approved curricula of affiliating university but also through various student activities. **Timely feedback from the different stakeholders** provides valuable inputs for designing Add-On courses and reviewing the syllabus. The feedback system is formulated and practiced for the effective implementation of the prescribed syllabus. The institution is guided by its strategic plan concentrating on teaching-learning and research activities to ensure employability of our graduates, catering to the needs of the Society, providing the capacity to impact, transform society, and inculcate values and ethics.

Teaching-learning and Evaluation

The **enrolment of students** in the Institution is based on regulations and guidelines of AICTE,

Government of Kerala and APJ Abdul Kalam Technological University (KTU), Kerala. Teaching, learning and evaluation are student-centered dynamic activities of the institution with time-bound technology infusion. The teaching schedule is meticulously planned in accordance with the University's Calendar of Events. The student-teacher ratio is 14:1 and a strong mentoring system with a mentor: mentee ratio of 1: 18 exists. Fulltime teachers against sanctioned posts are 100% with an average experience of 8.62 years. 16.03% of faculty are doctorate holders and all teachers use technology-based teaching-learning solutions for academic activities. Flexibility is included in the preparation to develop and implement custom-made learning methodologies (Collaborative, individual, experiential, problem solving, etc.,) to improve learning occurring among different students. The institution provides various knowledge enhancing & self-learning programs, such as elearning, digital library, incubation centre, value-added courses, technical quizzes, cultural and technical fests, and national and international conferences enabling them to succeed in the competitive world. The students are encouraged to think critically and be innovative and creative in tackling assignments, projects and other tasks assigned to them. The institution creates Mentee- Mentor strategies for stress-related problems and seeks to create successful solutions for slow and advanced learners. Advanced learners get exposure through participation in various national and international technical and leadership events whereas slow learners have remedial classes, tutoring systems and peer-learning circles. Moreover, the students are encouraged to participate in contests like ideathons, hackathons, business plan, etc. to cultivate innovativeness among them. Other than mentors, **a counselor** is also made available on campus for referral.

The **continuous internal evaluation** is in practice, the academic calendar is notified well in advance, which includes the conduction of Internal Assessment examinations. The Internal Assessment tests are conducted in a **fair and transparent manner** by the Examination Cell, invigilators, and squad along with seating arrangement and hall ticket. The students are informed about the portion of the syllabus well in advance and the Internal Assessment question paper is prepared by indicating CO's and Bloom's taxonomy.

Research, Innovations and Extension

The Institution encourages the active involvement of teachers in research. The institution has **sixteen research guides** and 26 research scholars are pursuing research activities. **37.5% of departments** have received grants for research from various funding agencies. In association with APJ Abdul Kalam Technological University (KTU), the institution has set up a **Mini Fabrication Laboratory** (**FABLAB**) at a cost of more than 1 crore.

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Many workshops have been conducted on research methodology, IPR, and entrepreneurship. IIC, IEDC and start-up incubation centre (Federal Labz) are established for the career enhancement of students and have received several awards from Kerala Start-Up Mission for being a top-performer among educational institutions. Apart from these, Specialised Research Laboratories and facilities are provided for the students to carry out interdisciplinary research and product development. To bridge the gap between industries and academia, MOUs are signed with various industries and e-Yantra IIT-Bombay robotics lab, etc. Experts from the industry are invited regularly to deliver lectures on various topics to enhance the knowledge of students. To sensitize the students to social issues, the institution has conducted various extension activities. The Institution has **registered the NSS unit** which organizes various events such as awareness programs on Environmental issues, Electoral Literacy Program, etc. Blood donation camps and organ donation awareness campaigns are conducted every year. Our students have developed academic projects to address societal problems and received special appreciation from Honourable Prime Minister Shri. Narendra Modi. Eco-Friendly low-cost sanitary pads and disposal system is one such project. The NSS Unit of FISAT was proactive in providing technological solutions to the local self-government and municipality during the Kerala floods and pandemic and received appreciation for the technological support provided to complete the Covid vaccination drive in Mookkannoor. FAB@School is a Technology Popularisation Programme conducted by FABLAB and Mobile FABLAB of FISAT to reach out to the school students of rural India.

Infrastructure and Learning Resources

The Institution is spread on a **25.15 acres** campus. The infrastructure and learning resources facilities are planned with a vision to meet the requirements for technical education and the integral development of students. The infrastructure comprises of Academic Buildings, Administrative office, Principal's office, Incubation Centre, FABLAB, Specialised Laboratories, Library, Computer Labs, Auditorium, Seminar Halls, Placement Cell, Housekeeping, Store, Exam Control Office, Security, Board Room, power supply systems, own wells and RO Water supply, etc. The area of amenities consists of Boys & Girls common room, Cafeteria, Medical room, Stationery Store, etc. Separate hostels for boys and girls with all necessary facilities including well-equipped gymnasiums are located within the campus.

The institution has a **total built-up area of 55838.1 sq. m** which includes major facilities like

- 66 Classrooms (ICT enabled), 9 tutorial rooms and 5 drawing halls
- 8 spacious seminar halls enabled with ICT facilities
- Nine computer labs and a total of 930 PC with i3 and i5 Windows, 4 GB RAM and 500GB hard disk and 300 laptops
- 1 auditorium, 2 conference rooms, 1 boardroom and 2 recreational rooms.
- 5 interactive panel boards, 81 LCD projectors, 13 LED TVs, 1 Multimedia Lab
- 137 Wi-Fi access points and a 700Mbps internet lease line facility
- The total area of sports facilities is around 33214 sq. m. and a usage rate of 1750 students per day.
- Dedicated venue for daily yoga sessions for the students.

The institution has a fully automated well – stacked Central Library which has a **total area of 1751.5 sq. m.** There are nine department libraries which have a **total area of 526.09 sq. m**

In addition to the large volume of physical resources, the library provides access to online databases of IEEE, ASME, ASCE, Elsevier Science Direct, EBSCO Host, SWAYAM Engineering, DSPACE, DELNET, NDLI and EBSCO e-books. An **e-Library platform** (**Knimbus**) is available to access digital library facilities. The

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maintenance section is in charge of civil and electrical works. Adequate firefighting facilities and extensive parking space are some of the other facilities provided. Adequate budgetary provision has ensured the proper maintenance of infrastructure and academic support facilities.

Student Support and Progression

The institution disseminates the support systems available to the students through the college calendar, prospectus, and student handbook. Students are supported with many Government supported schemes like merit-cum-means scholarships, post-metric scholarships for minorities, and SC/ST support scholarships. The management of FISAT supports needy students through student welfare fund scholarships. 28.84% of students benefitted from the scholarships provided by the management of FISAT and the total amount of scholarships offered by the FISAT management over the last five years is 8.07 crores. Endowments and merit scholarships constituted by the institution, staff, alumni, and well-wishers honour the academic and nonacademic achievements of the students. FISAT has a democratically elected forum 'Student Council' constituted every year as per the norms of the university, which coordinates all the student activities for the year. The institution has active student associations in each department to organise and conduct various cocurricular and extra-curricular activities. Numerous clubs, cells and student chapters of professional bodies like IEEE, ASME, ISTE etc. organises a variety of events for the integral development of students. This includes technical fests, hackathons, ideathons, management fests, environment drives, literary activities, etc. Soft skills, Language and communication skills, Life skills and ICT/computing skills are provided for the overall development of the students. 66.98% of students are benefited by competitive examinations and career counseling by the institution. The institution has a transparent mechanism for timely Redressal of student grievances including sexual harassment and ragging. The menace of ragging is viewed very seriously and Anti-Ragging Cell takes all necessary measures to curb the ragging within the campus. The Placement Cell is proactive and has organized several skill developments, career guidance and campus drives to facilitate the placement of the students. The average placement for the last five years is 33.31%. The Grievance Redressal Cell resolves the academic and administrative grievances. FISAT has a registered alumni association FISTAA which organizes annual alumni meetings and coordinates chapter meetings and executive committee meetings. Alumni have contributed financially and non-financially such as interacting with present students, arranging guest lectures, campus placements and industrial visits.

Governance, Leadership and Management

The institution's **Vision and Mission statements and Objectives** give its constituents a long-term perspective and are pursued with a zeal of excellence. The IQAC of FISAT has evolved and integrated the framework for quality assurance, review and continuous improvement of various functions. FISAT functions with **decentralized administration** with complete transparency in the decision-making process and a flat organizational structure. There are **around 40 campus bodies/committees with stakeholders' participation.** Management takes the important decision based on the input from the Principal, Vice Principal, Deans, HOD's and committees' coordinators. All the academic and administrative issues like, Budget, Recruitment, Purchases, Admissions, Promotions, Conferences, Training & Placement, and variation in intake are **discussed transparently** and appropriate decisions are taken for implementation. The Principal, Vice Principal, Deans and HODs **meet periodically** to discuss the academic issues for proper decision-making. In addition, members of management, Principal, Vice Principal, Deans and HODs **interact with staff and students regularly** to take stock of the progress, deliberate on challenges and give proper direction to the institution in line with the Vision & Mission. **Operational autonomy** in academic and administrative affairs is provided by delegating authority

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to the Heads of each Department. Planning, scheduling and budgeting of activities are done at the department level following a participatory decision-making process. To promote a culture of research, innovation and entrepreneurship, the institution established a centre called Science and Technology Park and Research Centre (SPARC). 'Aspiration 2030' the Strategic Plan is a shared focused dream which defines the institution's strategic steps to become a transformational leader in higher education. The institution has implemented e-governance through an internally developed ERP software 'FISAT Campus Automation System'. FISAT Staff Welfare Forum looks into the welfare activities such as medical, educational and financial needs of the staff. Well-laid-down HR policy looks into the recruitment, selection and career progression of the teaching and non-teaching staff. The main quality initiatives institutionalized by the IQAC are Initiatives to promote research and Development and the up-gradation of the FISAT Campus Automation System. The major reforms initiated are Periodic meetings for effective governance and Stakeholder feedback and analysis mechanism.

Institutional Values and Best Practices

FISAT aims at the holistic development of professionals with integrity and social commitment. The institution has adopted many measures to **protect nature and develop social values**. The environmental policy of the institution underpins its commitment to environmental protection. FISAT nurtures a **sense of social inclusiveness**. Gender sensitivitization and Gender equity promotion programmes are organised by the **Gender Equity Cell** of FISAT based on an annual action plan to provide equal opportunities for all and create awareness of social inclusion. The IQAC has initiated a **Gender Audit** in the institution to understand the underlying concerns and appropriate actions to address the issues based on the Audit report. **Solar panels, rainwater harvesting facilities, water conservation practices, and wastewater recycling** are implemented on the campus as a part of sustainable living. **Green audits, Energy audits, and Environment audits** are conducted by a Government recognized external agency to ensure the effectiveness of sustainable practices adopted on the campus.

Green campus initiatives and awareness campaigns undertaken on the campus include Various Energy conservation initiatives, maximum use of renewable energy, water harvesting, check dam construction, efforts for carbon neutrality, tree plantation cum gardening, waste management, minimum use of paper, plastic and litter-free campus, etc. FISAT has Divyangjan-friendly resources, providing a disabled–friendly barrier-free environment. The institution conducts multiple extension activities like tree plantation, Swach Bharath Abhiyaan, etc., in the campus and nearby villages. Various cells and clubs of FISAT and the NSS units make ample efforts to organize programmes for an inclusive environment, conduct national/international days, and sensitize to constitutional obligations. The institution's best practices include Innovative practices for participatory Learning and Social Outreach and Extension Activities. The vision and mission of FISAT aim at moulding globally competent professionals and technocrats with social commitment. This is achieved by "Education through Experience for Integral Development." FISAT seeks to ensure the integral development of all its students through an enriching learning experience that will help them to realise their true potential and excel in all walks of life.

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the College			
Name	FEDERAL INSTITUTE OF SCIENCE AND TECHNOLOGY		
Address	Hormis Nagar, Mookkannoor, Angamaly		
City	ERNAKULAM		
State	Kerala		
Pin	683577		
Website	www.fisat.ac.in		

Contacts for C	Contacts for Communication				
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal	Manoj George	0484-2725207	9895169510	-	mail@fisat.ac.in
IQAC / CIQA coordinator	Mini P R	0484-2725205	9495949355	-	mini@fisat.ac.in

Status of the Institution	
Institution Status	Self Financing

Type of Institution	
By Gender	Co-education
By Shift	Regular

Recognized Minority institution	
If it is a recognized minroity institution	No

Establishment Details	
Date of establishment of the college	27-05-2002

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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

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

	nition/approval by sta MCI,DCI,PCI,RCI etc		bodies like	
Statutory Regulatory Authority	Recognition/App roval details Inst itution/Departme nt programme	Day,Month and year(dd-mm- yyyy)	Validity in months	Remarks
AICTE	View Document	30-04-2021	12	

Details of autonomy	
Does the affiliating university Act provide for conferment of autonomy (as recognized by the UGC), on its affiliated colleges?	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?	No

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Location and Arc	ea of Campus			
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.
Main campus area	Hormis Nagar, Mookkannoor, Angamaly	Rural	25.15	55838

2.2 ACADEMIC INFORMATION

Programme Level	Name of Pr ogramme/C ourse	Duration in Months	Entry Qualificatio n	Medium of Instruction	Sanctioned Strength	No.of Students Admitted
UG	BTech,Civil Engineering	48	XII Std	English	126	60
UG	BTech,Comp uter Science And Engineering	48	XII Std	English	1	0
UG	BTech,Comp uter Science And Engineering	48	XII Std	English	126	125
UG	BTech,Electr ical And Electronics Engineering	48	XII Std	English	63	35
UG	BTech,Electr onics And C ommunicatio n Engineering	48	XII Std	English	126	114
UG	BTech,Electr onics And In strumentatio n Engineering	48	XII Std	English	63	17
UG	BTech,Mech anical Engineering	48	XII Std	English	126	88

PG	Mtech,Civil Engineering	24	B Tech	English	24	24
PG	Mtech,Comp uter Science And Engineering	24	B Tech	English	24	5
PG	Mtech,Comp uter Science And Engineering	24	B Tech	English	1	0
PG	Mtech,Electr ical And Electronics Engineering	24	B Tech	English	24	2
PG	Mtech,Electr onics And C ommunicatio n Engineering	24	B Tech	English	1	0
PG	Mtech,Electr onics And C ommunicatio n Engineering	24	B Tech	English	24	3
PG	Mtech,Mech anical Engineering	24	B Tech	English	1	0
PG	Mtech,Mech anical Engineering	24	B Tech	English	9	0
PG	MCA,Comp uter Applications	24	UG	English	120	117
PG	MBA,Busine ss Administr ation	24	UG	English	120	119
Doctoral (Ph.D)	PhD or DPhil,Civil Engineering	60	PG	English	1	0
Doctoral (Ph.D)	PhD or DPhi 1,Computer	60	PG	English	1	0

	Science And Engineering					
Doctoral (Ph.D)	PhD or DPhi 1,Electrical And Electronics Engineering	60	PG	English	1	0
Doctoral (Ph.D)	PhD or DPhi 1,Electronics And Commu nication Engineering	60	PG	English	1	1
Doctoral (Ph.D)	PhD or DPhi l,Electronics And Instrum entation Engineering	60	PG	English	0	0
Doctoral (Ph.D)	PhD or DPhi l,Mechanical Engineering	60	PG	English	1	0
Doctoral (Ph.D)	PhD or DPhil,Basic Sciences	60	PG	English	0	0

Position Details of Faculty & Staff in the College

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	Teaching Faculty											
	Profe	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/Soci ety or Other Authorized Bodies				17				8				166
Recruited	11	6	0	17	4	4	0	8	54	112	0	166
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				62
Recruited	36	26	0	62
Yet to Recruit				0

		Technical St	aff	
	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				65
Recruited	48	17	0	65
Yet to Recruit				0

Qualification Details of the Teaching Staff

]	Perman	ent Teach	ers				
Highest Qualificatio n				Associate Professor			Assistant Professor			
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/ LLD/DM/M CH	0	0	0	0	0	0	0	0	0	0
Ph.D.	9	6	0	4	4	0	5	7	0	35
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	49	102	0	151
UG	0	0	0	0	0	0	0	0	0	0

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Temporary Teachers											
Highest Qualificatio n	Professor			Associate Professor			Assistant Professor				
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total	
D.sc/D.Litt/ LLD/DM/M CH	0	0	0	0	0	0	0	0	0	0	
Ph.D.	2	0	0	0	0	0	0	0	0	2	
M.Phil.	0	0	0	0	0	0	0	0	0	0	
PG	0	0	0	0	0	0	0	3	0	3	
UG	0	0	0	0	0	0	0	0	0	0	

	Part Time Teachers										
Highest Qualificatio n	Professor			Associate Professor			Assistant Professor				
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total	
D.sc/D.Litt/ LLD/DM/M CH	0	0	0	0	0	0	0	0	0	0	
Ph.D.	0	0	0	0	0	0	0	0	0	0	
M.Phil.	0	0	0	0	0	0	0	0	0	0	
PG	0	0	0	0	0	0	0	0	0	0	
UG	0	0	0	0	0	0	0	0	0	0	

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

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

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Programme		From the State Where College is Located	From Other States of India	NRI Students	Foreign Students	Total
UG	Male	1235	1	181	0	1417
	Female	535	0	125	0	660
	Others	0	0	0	0	0
PG	Male	187	0	0	0	187
	Female	358	0	0	0	358
	Others	0	0	0	0	0
Doctoral (Ph.D)	Male	0	0	0	0	0
	Female	4	0	0	0	4
	Others	0	0	0	0	0

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

Category		Year 1	Year 2	Year 3	Year 4
SC	Male	5	4	9	8
	Female	1	8	4	9
	Others	0	0	0	0
ST	Male	0	1	0	0
	Female	1	0	0	0
	Others	0	0	0	0
OBC	Male	26	39	26	27
	Female	23	20	30	23
	Others	0	0	0	0
General	Male	163	137	124	128
	Female	106	100	149	124
	Others	0	0	0	0
Others	Male	283	311	290	307
	Female	220	186	242	253
	Others	0	0	0	0
Total	·	828	806	874	879

Institutional preparedness for NEP

1. Multidisciplinary/interdisciplinary:

The institution embraces the vision of the National Education Policy, which is to deliver high-quality education in order to develop our country's human resources as global citizens. As an affiliated institution of APJ Abdul Kalam Technological University, minor programs are offered to equip students in multidisciplinary areas. The institution's research centers adopt a multidisciplinary/interdisciplinary approach as well. Academic programmes provide Multidisciplinary/Interdisciplinary courses as electives, and students can choose electives from different departments. Orientation programs have been conducted to familiarize the faculty members

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	with the salient features of NEP. Students are encouraged to take up projects in multidisciplinary/interdisciplinary areas.
2. Academic bank of credits (ABC):	As per the curriculum of the affiliating university, students are now able to earn credits in minor and honor programs on successful completion of the MOOC courses through SWAYAM, NPTEL etc. Also all UG students are able to earn activity points for the MOOC courses successfully completed. Being an affiliated institution, FISAT shall abide by the recommendations of the affiliating university in further activities towards successful implementation of the Academic Bank of Credits.
3. Skill development:	The Institution is already conducting the skill courses as designed by the affiliating university from the first semester itself. Courses like life skills include practical classes which are conducted in the language lab. Students are given soft skills training that focuses on developing skills such as communication, teamwork, problem-solving, developing a positive attitude, etc. The institution is also working towards a collaboration with the Additional Skill Acquisition Program (ASAP) of the Government of Kerala to offer skill development courses to students. Chapters of professional societies functioning in the institution are actively promoting activities for the skill development of the students. Add-on courses integrate the curriculum industry requirements, thus preparing students for employment by the time they graduate.
4. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course):	The university places a high emphasis on Indian knowledge systems and culture. All classes and events at the college begin with a prayer in the regional language. To promote Indian culture, festivals such as Onam and Ethnic Day are celebrated with all fervor. Indian art forms are performed at arts festivals organized in the college. Students are introduced to Universal Human Values, Professional Ethics, and other such concepts either part of their curricula or otherwise.
5. Focus on Outcome based education (OBE):	The university practises Outcome-Based Education, and five of its programmes are accredited by the National Board of Accreditation in 2020. The curriculum of the affiliating university is followed by the college. Faculty members define COs for courses

	not already specified by the University, using the Revised Blooms Taxonomy. All assessments are associated with relevant COs. Course Outomes are mapped to Programme Outcomes (PO) and Programme Specific Outcomes (PSO), and their attainments are computed. Teachers convey COs, POs, and PSOs to students at the time of admission and at the start of each semester. Course Exit Surveys and Program Exit Surveys are conducted and used to evaluate the attainment of COs, POs, and PSOs.
6. Distance education/online education:	Currently, the college does not offer any distance learning programmes. All teachers use ICT for online instruction and have embraced innovative teaching-learning techniques. MOODLE, LMS (Open edX), video lectures, Google Classroom, and other ICT technologies are used by students and staff members. Faculty members attend workshops on blended learning techniques. The institution encourages students and faculty members to enroll in online courses offered by the NPTEL and SWAYAM platforms, and gives credit equivalence/activity points to students, as well as appropriate recognition for faculty members, in their performance appraisal system.

Extended Profile

1 Program

1.1

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

2020-21	2019-20	2018-19	2017-18	2016-17
508	504	529	552	514

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

1.2

Number of programs offered year-wise for last five years

2020-21	2019-20	2018-19	2017-18	2016-17
15	15	14	14	14

2 Students

2.1

Number of students year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
2626	2774	2872	2967	3042

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

2020-21	2019-20	2018-19	2017-18	2016-17
171	178	178	178	178

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

2.3

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

File Description		Dogun	nont				
	760	855	872		870	913	
	2020-21	2019-20	2018-19		2017-18	2016-17	

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

2020-21	2019-20	2018-19	2017-18	2016-17
191	203	203	211	215

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

3.2

Number of sanctioned posts year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
191	203	203	211	215

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

4 Institution

4.1

Total number of classrooms and seminar halls

Response: 81

4.2

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

2020-21	2019-20	2018-19	2017-18	2016-17
814.06	1745.80	1687.68	2600.32	2732.05

4.3

Number of Computers

Response: 930

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:

Federal Institute of Science and Technology (FISAT), **affiliated to APJ Abdul Kalam Technological University (KTU)**, adheres to regulations framed by the University and expands its possibilities through

- Well-structured OBE guidelines for effective implementation and delivery of curricula.
- Implementing Choice Based Credit System (CBCS).
- Options for additional credentials like **B.Tech Honours Degree and B.Tech Degree with Minor**.
- Introducing **one hundred and thirty-three add-on programmes** from 2016 to 2021 to enrich the students' learning outcomes and professional attributes.

1. Curriculum Delivery Planning - enabled by the given organisational hierarchies and measures:

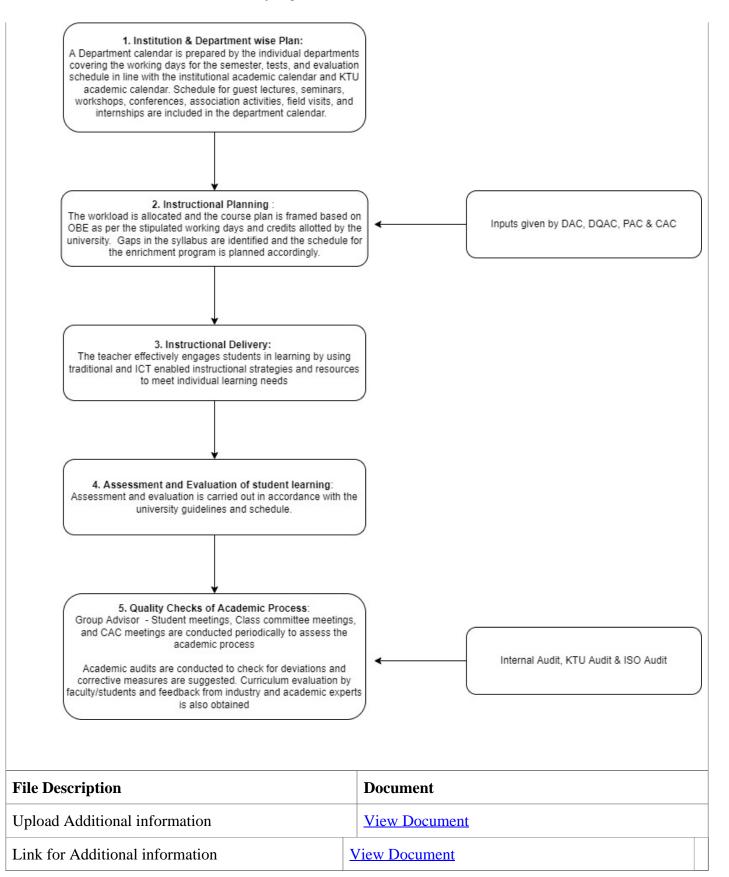
- Academic committees such as Internal Quality Assurance Cell (IQAC), Department Advisory Committee (DAC), Department Quality Assurance Cell (DQAC), Program Assessment Committee (PAC), Course Assessment Committee (CAC), and the Academic Council plan curriculum delivery, identify and suggest strategies for enrichment, and monitor the course delivery.
- The Academic Council entrusts the IQAC to prepare the **Institutional calendar** based on the university calendar.
- The **institutional academic calendar** is meticulously planned, balancing academics with cocurricular and extra-curricular activities with a day-wise plan. It is **disseminated through a yearly handbook.**
- The **Department calendar** is prepared, highlighting academic and co-curricular activities, and is displayed on department noticeboards.
- The Head of the Department finalises **workload division and subject allocation** based on the relative preference of faculty members considering their technical skills, teaching experience, and stakeholder feedback.
- A centralised timetable committee formulates a **common institutional timetable based on university guidelines and departmental inputs.**
- **Individual course plans** are prepared and maintained by the respective faculty members. It is verified by the Course Assessment Committee and approved by the Head of the Department. The **'Course Diary'** disseminates individual course details.
- 'FISAT Campus Automation System' is a repository of course-specific inputs and outcome measurements. Through this system, faculty members can access and update all academic information, including course diary and attendance.

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2. Curriculum Delivery Process- individual course management practices of faculty

- Course diaries contain the syllabus, CO-PO mapping, lesson plan, teaching methods, assessment plan, expected attainment levels, details of student attendance, and attainment calculation. From the year 2021, this record is digital.
- Course delivery is carried out as per the lesson plan, and details are recorded in the course diary and "FISAT Campus Automation System".
- The use of ICT for effective course communication, delivery, and dissemination is through a content delivery platform called FISATX, virtual meeting tools like WEBEX & Google Meet, and learning management systems (LMS) like MOODLE & Google Classroom.
- Additional pedagogical initiatives like flipped classrooms, blended learning, gamification, handson training in different labs, industry projects, internships, bridge courses and foundation courses are implemented.
- Class committee meetings are held twice a semester, to assess the progress of the curriculum delivery.
- Feedback is collected and analysed on each semester's curriculum, teaching, and course outcomes.
- Measurement of curricular delivery, through internal and external audits, at the level of IQAC, University (KTU Audit), and Certifying Agency (ISO Audit), carry out resolutions and documentation.

0



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

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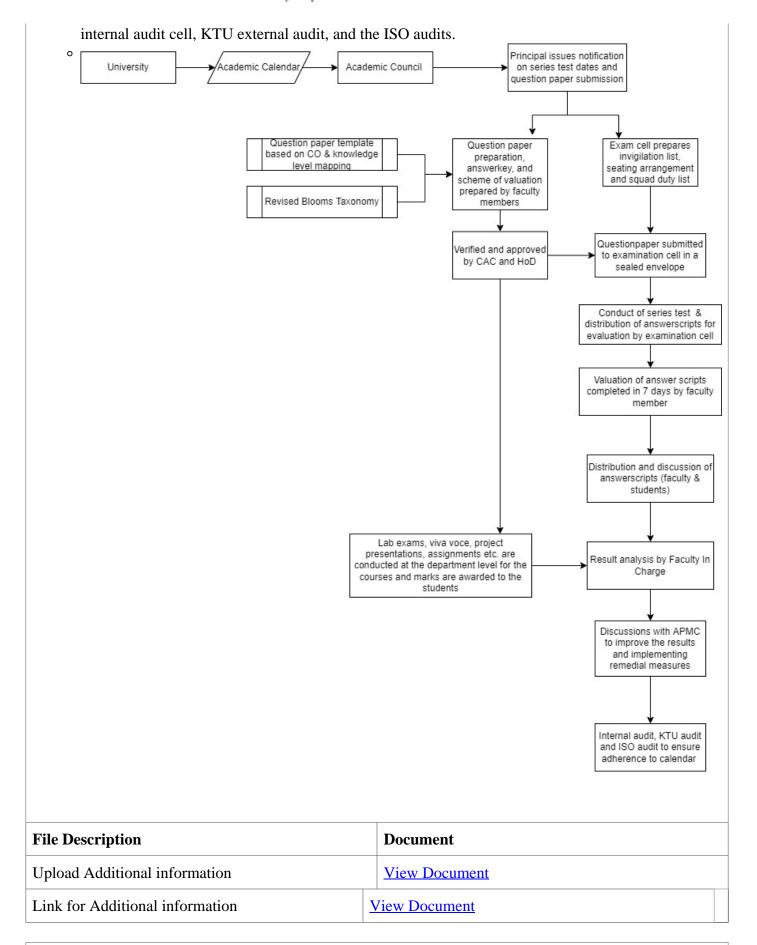
At the beginning of the semester, KTU publishes an Academic Calendar to be followed by the affiliated technical educational institutions. The Institutional Calendar, which is prepared based on this, reflects the schedule given by the university and details of the academic, co-curricular and continuous internal evaluation to be followed. Internal evaluation components are consistent, unbiased, and transparent, and include series tests, laboratory tests, project evaluations, seminars, assignments and module-specific tests.

Planning Phase of Internal Assessment Examination:

- The **Continuous Internal Evaluation (CIE) examination schedule** is prepared according to the university (KTU) calendar.
- The **expected dates are disseminated** well in advance through the **institutional calendar given in** the academic handbooks.
- The **Academic Council decides the actual dates of evaluative exams** and the Principal issues notification to faculty members and students.
- The Principal issues circulars stating question paper submission deadlines.
- The question papers use Bloom's Taxonomy to test various cognitive levels of the student. The question paper, answer key, and scheme of valuation are prepared by individual faculty and verified by the Course Assessment Committee Head and approved by the Head of the Department.
- The **Examination Cell** coordinates the internal examination with the support of faculty members.
- The Examination Cell prepares and publishes timetables for internal assessment series tests, seating arrangements, invigilators' duty lists, and squad teams.
- The question papers are handed over by the faculty member to the Examination Cell maintaining confidentiality.

Execution of Internal Assessment Examinations

- The students are permitted in the examination hall only with **their identity cards having unique identification numbers.**
- Examination halls are equipped with mandatory surveillance systems as per KTU guidelines.
- Invigilators ensure secure conduct of examination within the stipulated duration. **Signed and verified records of attendance are maintained**
- After the series test, the answer sheets are distributed to the faculty members for evaluation
- The evaluation of answer scripts is completed in seven days.
- **Complete transparency is ensured** as the answer key with the valuation scheme is informed to the students while returning the answer books.
- Examination marks are entered in the 'FISAT Campus Automation System' which students can access.
- For lab exams and project viva voce, the Head of the Department and the faculty in charge prepare the examination schedule.
- Assignments, seminars, and projects are distributed evenly over the semester, and their evaluation is completed on time.
- A computer-integrated report generation through the 'FISAT Campus Automation System' disseminates the internal assessment marks and attendance reports to the parents, if necessary.
- Detailed analysis of results is done at the end of every series test, and the **Academic Performance**Monitoring Committee (APMC) suggests measures to enhance academic performance.
- **Student grievances regarding CIE** are addressed at different levels which include Group Advisor (Mentor), Head of the Department, and Academic Council.
- The adherence to the academic calendar, including the conduct of CIE, is monitored by the



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

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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: A. All of the above

File Description	Document
Institutional data in prescribed format	<u>View Document</u>
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: 93.33

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

Response: 14

File Description	Document
Minutes of relevant Academic Council/ BOS meetings	View Document
Institutional data in prescribed format	<u>View Document</u>
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: 131

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

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2020-21	2019-20	2018-19	2017-18	2016-17
26	21	32	29	23

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	<u>View Document</u>
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: 62.26

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

2020-21	2019-20	2018-19	2017-18	2016-17
1649	1338	2114	2050	1751

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:

Being an affiliated institution, all the programs offered by FISAT follow the curricula given by the University (KTU). Syllabi, across courses at UG and PG levels integrates cross-cutting issues of professional Ethics, Gender, Human Values, Environment and Sustainability as part of modules or as standalone courses. The practical dissemination of these principles is done through policy inclusion, co-

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curricular activities and value-added programmes.

Professional Ethics

- The evolution of student entrants into socially responsible and ethical experts is instilled into the Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)
- Seventy-six university curricula courses (Fifty courses in UG and Twenty-six courses in PG) specifically deal with professional ethics and ethical issues in the respective domain areas.
- To supplement the curricula, the institution has **organised workshops and awareness programmes on Information Security & Ethical hacking, Intellectual Property Rights and Cyber security.**

Gender

- Sixteen courses (Twelve courses in UG and Four courses in PG) address gender-related issues.
- Gender Equity Cell and Women Cell actively function in the institution based on KTU, AICTE, and UGC norms.
- Self-defence training and wellness enhancement workshops are held for female students and staff.
- Panel discussions by women Entrepreneurs and gender-specific dissemination of medical and non-medical discourses is done
- Girls are given **equal opportunities in sports and physical training** to improve their confidence and inner strength.
- More than 40% female representation exists in the student population and 60% in the key administrative roles of the institution

Human Values

- Twenty-two courses (Sixteen courses in UG and Six courses in PG) in the curriculum specifically deal with human values.
- First-year B.Tech students are enlightened on universal human values during the induction program through sessions on Basic Human Aspiration, Happiness and Respect, Excellence vs Competence and Gratitude and Love.
- Students participate in **extension and social outreach activities** throughout the year through cells like NSS and SWAN to aid national development.
- Active volunteering of students was carried out in the flood relief and rehabilitation activities in Ernakulam district.
- **Technical support to the community health centre** was offered by students during the pandemic in **2020 21 to facilitate vaccination drives.**
- Regular drives are conducted in the institution on blood and organ donation and 'Hair for Hope' for cancer patients.
- Many faculty members have completed the course on 'Universal Human Values' offered by AICTE, which equip them to facilitate value education classes.

Environment and Sustainability

• Forty courses (Thirty-two courses in UG and Eight Courses in PG) in the university curricula deal with environmental and sustainability issues.

- The **Nature Club of FISAT** gives awareness to the students regarding habitat preservation, planting, and maintenance of gardens and cultivated plots.
- Students actively **participate in the agricultural activities** of the campus for which the institution has won several awards.
- The institution **promotes the 5R themes** of Refuse, Reduce, Reuse, Repurpose and Recycle through zero waste and no plastic drives, rainwater harvesting, scientific management of both organic and non-biodegradable waste, wastewater treatment (STP), biogas plant, etc.

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: 45.75

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

2020-21	2019-20	2018-19	2017-18	2016-17
208	289	330	146	214

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
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: 56.89

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

Response: 1494

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	<u>View Document</u>
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: 81.46

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

2020-21	2019-20	2018-19	2017-18	2016-17
712	828	806	874	879

2.1.1.2 Number of sanctioned seats year wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
999	1008	1008	1008	1008

File Description	Document
Institutional data in prescribed format	<u>View Document</u>
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: 34.34

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

2020-21	2019-20	2018-19	2017-18	2016-17
40	56	72	69	67

File Description	Document
Average percentage of seats filled against seats reserved	View Document
Any additional information	View Document

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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 admissions to B.Tech, MBA, M.Tech, and MCA programmes are as per the rules of AICTE, government norms, and KTU directives. However, the varied learning capacities of the admitted students necessitate specific mechanisms to implement teaching-learning strategies effectively. Every year, the institution organises an Induction Program for different courses to help the new students adjust to the new environment and inculcate the institution's core values and ethos. In addition, the students are put through a Bridge Course which reinforces the fundamental subjects of each course with structured pedagogy.

Assessment of Learning Levels

The assessment of learning levels or identification of advanced and slow learners is done through any of these means:

- Analysis of student data that contains the academic history of the student.
- Performance in the final test of the Bridge Course
- First Series Test
- Feedback of mentors
- Online quizzes
- Performance in module tests, assignments, class activities, practical and lab experiments

Special Programmes for Slow Learners

To support the slow learners, the following measures are adopted.

- Remedial classes are arranged for subjects that students find difficult
- **Self-learning materials** like recorded videos, question bank with solutions etc. are shared by faculty
- Training on communication skills is given to improve their confidence and interpersonal skills.
- The group advisor and HOD **regularly interact with the parents** to assess the needs and aspirations of slow learners.
- **Revision classes** are arranged before the university exams.
- A **senior faculty member is assigned** to schedule and monitor the learning habits of slow learners staying at the hostel.
- **Peer group systems and collaborative learning** in which the advanced learners act as mentors for the slow learners.
- Merit cum means scholarships and financial aid are given to the economically weak students to better focus on their learning.
- Strong mentor-mentee relationship to ensure the emotional well-being of slow learners.

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Special Programmes for Advanced Learners

Advanced Learners are given incentives and special opportunities to progress further through the following measures.

- FISAT FABLAB provides infrastructure and machine support to create smart devices through a mini **fabrication laboratory** (FISAT FabLab).
- Membership of professional bodies (CSI, ASME, IEEE, ASCE, ICI) and are given training for software, languages, latest trends and competitive exams like GATE.
- Financial support from various bodies for doing research projects
 - Registration and mentorship for various online courses in MOOC, NPTEL and Coursera platforms.
- Gives the **training to use E-resources** in INFLIBNET, N-List, DELNET and other E-platforms.
- Participation with teaching fraternity in **national seminars and workshops** and publishing **papers** in IEEE journals and Springer.
- Merit-based scholarships, free ships, cash awards and certificates to the advanced learners.
- Support for participation in National and state-level intercollegiate competitions.
- Peer teaching opportunities through study circles.
- Participation in student competitions, technical quizzes, project contests and hackathons through cells and clubs of the institution with faculty support

Programmes for All Types of Learners

- Career Guidance and Counselling To develop the personality and confidence of the students.
- Language Lab for Communication Skills Training To improve the communication skills 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: 13.75 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

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Response:

The institution has created a student-centered learning environment that focuses on providing the best learning experience to students. Since the adoption of Outcome-Based Education (OBE), more student-centric learning methods are being used by the faculty members in addition to the conventional lecture method. Students engage in complex, challenging problems and collaboratively work towards a solution by connecting theoretical knowledge to real-world problems. Through ICT-enabled campus, IP-enabled library facilities, sophisticated tools, and Learning Management Systems, teaching-learning is more enjoyable with active student involvement.

Innovative teaching-learning methodologies and pedagogy tools adopted by faculty members to enhance the learning experiences are as follows:

Experiential Learning

Experiential learning comprises learning activities, both inside and outside the classroom, designed to engage students to learn actively, reflect on the process and experience, and develop their understanding. The following are the activities done to facilitate experiential learning.

- State-of-the-art laboratories and mini fabrication labs (FabLab) to impart experiential learning.
- To improve students' creative thinking in technical and research fields, the institution has **e-learning facilities** that include NDLI club membership, a digital library, e-books, e-journals, e-databases, NPTEL chapter, etc.
- **Industry-powered centres** like the Centre for Robotics eYantra train students on emerging technologies.
- Field visits and International industrial visits as an extension of theory beyond classroom teaching.
- Students apply for **funded projects** under different schemes and publish technical papers in reputed journals.
- Additional **mini projects** and **design-based experiments** beyond the syllabus.
- Virtual games and board games simulate real market scenarios.
- Apps and software developed by students and faculty to support the e-Governance of the institution.
- Computer assembling and system maintenance is done with student support and involvement.
- Community service and extension activities

Participative Learning

The following are participative learning methods, strategies, and techniques used to involve students in more practical activities, connect academic achievement with real-life issues, and understand the impact of individual actions on the community.

- Flipped classrooms
- Mini projects and major projects
- Class presentations and Participation in national and international conferences and seminars
- Field visits & industry visits
- Interactions with specialists
- Interactive quizzes

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- Think-pair-share
- One minute paper
- Study circles
- Group discussions
- Debates and seminars
- Computer hardware assembling and maintenance are done with the support of the student team
- Active involvement of students in agricultural initiatives.
- Project expos

Problem-solving methodologies

- Students explore solutions for real-time problems via workshops and laboratory experiments, case studies, hackathons and field/industrial projects.
- Students take up **internships and industry-based mini and major projects** to get acquainted with industry standards and work ethics.
- Tutorial classes are being conducted for analytical courses in which modern pedagogical tools like **peer learning, group tutorial, collaborative learning,** etc. are used.
- Research outcomes of students published in Springer and IEEE.
- Other problem-solving activities used include Brainstorming, Survivor Scenarios, Moral Dilemmas Contexts, etc.

File Description	Document
Upload any additional information	<u>View Document</u>
Link for additional information	View Document

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

Response:

- The entire campus is augmented with a **700 Mbps internet leased line** (1:1) and wi-fi. The Internet can be accessed anywhere on campus. A dedicated firewall is implemented, enabling all the labs to be ready with an internet facility, thus allowing the students to utilize the possibilities of web-based learning. The wi-fi facility is also available through Aruba HP Access Points.
- The faculty members espouse various innovative Teaching & Learning pedagogical methodologies to create the best learning experience for the students with the help of ICT tools such as **projectors**, **smart boards**, **smart televisions**, **and other online devices** to prepare presentations and demonstrations. These methodologies include traditional blackboard teaching, PowerPoint presentations, video lectures, and collaborative learning methods using **Open edX**, **MOODLE**, **Google Classrooms**, **flipped classrooms**, etc. The relevant concepts are demonstrated with illustrations, which enable students to grasp the concepts more quickly. There are class-wise WhatsApp groups under the surveillance of group advisors through which the academic and psychological well-being of the students are ensured.

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- The institution has all the resources required for online training and certification, such as NPTEL and other MOOC courses. In addition to that, FISAT is **NPTEL Local Chapter** which enables faculty members to be the mentors for students to get certified in online courses.
- FISAT is a member of the National Digital Library of India Club (NDLI Club), which supports all the e-resources such as e-Shiksha, ebooks, e-journals, etc. In addition to that, the library also has online videos, CDs & DVDs, project and thesis reports to cater to the needs of the students. The institution has set up an IP-enabled digital library to access e-journals and transaction papers from IEEE, ASME, ASCE, EBSCO, J-GATE, SWAYAM, DSPACE, DELNET, and SPRINGER. The institution has an e-Library platform (Knimbus) which provides access to digital library facilities (E-Journals and eBooks) of FISAT from anywhere in the world. Knimbus has made it possible to do a one-point search across resources and access the library anytime, from anywhere, and on any device. The 'mLibrarymobile' app offers a multi-format content delivery app for Android and iOS users to consume eBook collections, e-Course materials, latest journal issues, and multimedia learning content.
- The institution has a **Language Lab** in which audio-visual installation is used to aid in English language teaching with a special focus on communication competence and soft skills development. It is a teacher-controlled system connected to several student consoles, each having a headset with a microphone. The fully air-conditioned lab uses state-of-the-art facilities like a projector and audio system to train students in public speaking by emphasising accent training.
- Students are also encouraged to register for **Coursera courses**.

File Description	Document
Upload any additional information	<u>View Document</u>
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: 18.24

2.3.3.1 Number of mentors

Response: 144

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

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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

D'I. D	D
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: 16.03

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

2020-21	2019-20	2018-19	2017-18	2016-17
37	36	34	28	28

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

2.4.3 Average teaching experience of full time teachers in the same institution (Data for the latest completed academic year in number of years)

Response: 8.62

2.4.3.1 Total experience of full-time teachers

Response: 1646

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 institution follows the guidelines given by the affiliated university (KTU) for the conduct and evaluation of internal assessment tests. The institution prepares its own academic calendar well before the start of the semester, based on the university academic calendar. It includes the schedules for internal assessment, co-curricular & extracurricular activities.

Components of Internal Assessment

- According to the calendar, **two series tests** are conducted for each subject centrally by the Examination cell.
- The other components of internal assessment include assignment and attendance.
- As per the regulations of the university, the **total marks allotted to internal assessment is 50** out of the total marks of 150.

Scheduling of CIE

- The **first series exams** are conducted **after 4-5 weeks** and the **second series exams** are conducted **after 8-9 weeks of commencement** of classes.
- Examination cell **issues the circulars regarding the dates** of internal examination and the date for submission of question papers.
- The **Examination cell also prepares and publishes a course-wise timetable** for series tests along with seating arrangement, invigilators list and squad teams.
- The cell also ensures the availability of assessment booklets.

Conduct of CIE

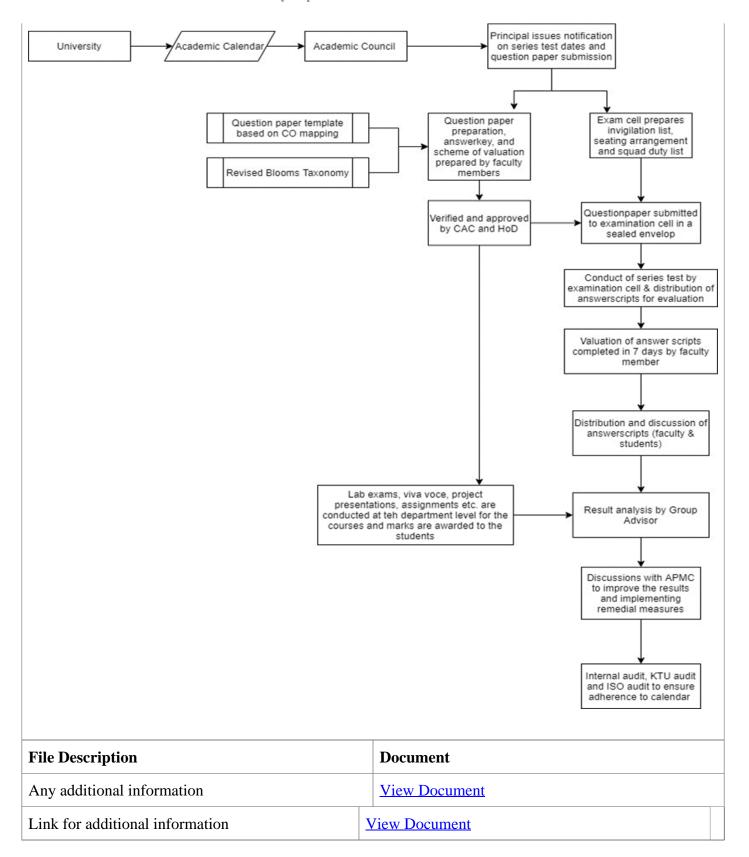
- Preparation of question paper, answer key and evaluation scheme based on the percentage of syllabus coverage, COs and Bloom's Taxonomy levels is done by the faculty member in association with the Course Assessment Committee.
- Initial quality checking of the question paper is done by the Course Assessment Committee.
- The question papers are **approved by the Head of the Department.** The printed question papers are handed over in a **sealed envelope to the Examination cell** by the faculty member.
- **CCTV cameras** monitor the examination process so that cases of malpractices are remote.
- Absentees with genuine reasons are given a retest

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Post CIE

- The **evaluation of internal assessment** books is completed in seven days.
- After the evaluation, the **faculty members discuss** the expected answers and the evaluation scheme with the students.
- The Internal Assessment books are given to the students for **verification of marks and answers as per the scheme of evaluation.**
- After finalising the marks, the faculty enters the marks in FISAT Campus Automation System
- A computer-integrated **report generation system through the LMS** is adopted to disseminate the internal assessment marks and attendance records to parents.
- Parents Teachers Association (PTA) meetings are organized each semester.
- During PTA meetings, parents are informed about their ward's performance in internal assessment, including attendance, extra-curricular activities and achievements.
- Open House and Class committee meetings are conducted at frequent intervals.
- The **Academic Performance Monitoring Committee** analyses the results and conducts one-to-one meetings with the slow learners, faculty members handling the courses and mentors to discuss measures to improve the student performance.
- The internal Examination Coordinator ensures that internal exam mark sheets are duly signed by the group advisors, HoD and the Principal before uploading to the University portal.

The transparency	and robustness of	of the internal	assessment	system	is ensured	through	regular	audits	by
the internal audi	it cell, KTU exter	nal audit and	d ISO audit	•					



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

Response:

The institution has a well-defined policy and efficient mechanisms to deal with examination-related grievances. The process followed is transparent, and the rectification of grievances is time-bound.

HoD/Faculty member/Group Advisor regularly addresses the students about the mechanism followed by the institution, such as the conduct of examination as per academic calendar, time duration, mark allocation, the conduct of re-test in CIE for special cases, evaluation process, discussion on answer scripts with the scheme of evaluation, publication of result, grading system, securing university rank/distinction/class etc.

The institution has a multi-tier mechanism to address all examination and evaluation-related grievances during CIE and university exams, respectively, as per the Examination Grievance Policy.

Institution Level

- The **evaluation of internal assessment books** is completed in seven days.
- After the evaluation of Internal Assessment books, the faculty in charge of the course **distributes the valued answer scripts during the class hours** and the students can scrutinize their answer scripts in the presence of their teachers. It **ensures transparency and reliability** of the internal evaluation process.
- The students can also raise their grievances concerning CIE marks at the department level.
- It is processed through the examiner, Group Advisor and Head of the department.
- The answer sheet is revalued by the faculty member in the presence of the complainant. If there is any discrepancy in the marks, corrections are made by the faculty member instantaneously.
- In addition to this, a **progress report of internal examination marks** is given to the parents in the open house and through an online portal.
- The grievances which are not resolved at this level are redressed by an institution-level committee with the Principal as Chairman, HOD and Academic Performance Monitoring Committee (APMC) members.
- The institution **implemented corrective measures** raised by the students in class committee meetings and mentorship meetings as listed below:
- Prepare a special timetable for reviewing the course content delivered
- Arranging revision classes before the exam day
- Rescheduling of the exam on a need basis

University Level

- The **Students' Grievances Portal** deals with a variety of students' complaints and grievances coming up for redressal.
- In the portal, an **online students' grievance redressal forum** with tracking and follow-up of the complaints is provided in compliance with the AICTE's mandatory requirements.

In case of **evidence of malpractices in university examinations**, the matter is referred directly to the university on the same day itself by intimating the External Examiner through proper channels.

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

2.6 Student Performance and Learning Outcomes

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

Response:

The institution has a well-structured outcome-based education (OBE) system by actively involving all the stakeholders (students, faculty members, parents, employers and alumni). There are five Under Graduate Programs that are accredited by NBA for three years. All the courses (except M.Tech) are migrated to OBE from the 2020-21 academic year onwards. The institution uses different mechanisms and practices to communicate program outcomes, programme-specific outcomes and course outcomes to all stakeholders. The programme outcome (PO), programme specific outcome (PSO), and course outcome (CO) of all programmes and courses are made available through

- **Print media** (Student Handbook and Calendar, College and Department Newsletters, Course Diary and Lab Manuals)
- **Digital media** (Institution's website and Academic Portal).

Communication to the Faculty Members

- The institution has decided to introduce **Outcome-Based Education** (**OBE**) in **2018.** IQAC spearheaded the process of convergence to Outcome-Based Education in the institution. The Department Advisory Committee (DAC) of each department has prepared Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) on the basis of learning objectives mentioned in the university syllabus and the core values and mission of the institution. DAC, along with PAC and CAC prepares the Course Outcomes (COs).
- The IQAC has made POs, PSOs, and COs part of the course file.
- In the case of PG programmes, the **university has organised OBE workshops** during the curriculum revision and it helped the teachers to know different learning outcomes such as knowledge, skills, generic competency and attitude.
- IQAC of the college also has organised workshops to familiarise teachers with Bloom's Taxonomy.

Communication to the Students

- POs, PSOs and COs are well displayed on the website.
- POs and PSOs are displayed on the **Department Notice Boards**.
- They are also displayed in the **laboratories of the college**.
- The Head of the Department and the class mentors explain various programme outcomes to the

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- students right from the induction meeting.
- **Teachers who handle various courses explain course outcomes** and relate course outcomes to POs and PSOs.
- Teachers also explain the pattern of questions in the internal question papers and their connection with the course outcomes.
- For PG courses (except M.Tech), the POs, PSOs and COs are included in the University Syllabus itself.
- Apart from these, POs, PSOs and COs are displayed on the department pages in the website.
- The **COs** are given on the study materials prepared by the faculty.

Communication to Other Stakeholders

- POs/PSOs and COs are published through digital media on the college website, department website and academic portal.
- Posters are prominently displayed on the **Department notice boards**, **Laboratory notice boards**, **Cabin of all faculty members**, **HoD cabin**, **Department library and Classrooms**.

Student Handbook and Calendar, College and Department Newsletters having POs/PSOs and COs are disseminated to all the stakeholders of the institution during Workshops, conferences, and FDPs.

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

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

Response:

- The attainment of course outcomes (COs), programme outcomes (POs) and program specific outcomes (PSOs) are evaluated by the institution periodically.
- The course outcomes are evaluated at the end of each semester and the POs and PSOs are evaluated every year.
- Individual departments will compute the attainment of individual POs& PSOs for that particular programme, taking into account all the COs across the curriculum that is aligned with each of the POs & PSOs along with the individual strengths of the alignment.
- Targets are also set for the achievement of POs to determine whether they have been achieved or not.

The above outcomes are measured by direct and indirect assessment tools given below:

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For Course Outcomes,

(1). Direct Assessment Tools:

- For Theory courses:
- 1. Internal Evaluation Test,
- 2. Assignments and Tutorials.
- For Practical courses
- 1. Observation and Record work of experiments for continuous evaluation
- 2. Regular Viva Voce
- 3. Semester End Examination
- Course projects
- 1. Project review and presentation.

2) Indirect Assessment Tools

Course end survey

3) University Examinations

• Attainment of Course Outcome of all courses with respect to set attainment levels

Steps for the calculation of course outcome attainment

A. Target calculation

The target to be achieved for each course includes two parameters:

1. Expected Proficiency/Knowledge (EP)

Expected Proficiency (EP) is defined as the average grade secured by at least 50% of the total number of students in the previous three years.

2. Expected Attainment (EA)

Expected Attainment (EA) for the current year is calculated by multiplying the average attainment of the previous three years by a value of 1.05 (assuming 5% raise every year).

B. Course outcome assessment criteria

Final course outcome attainment is calculated with the following weightage

Direct assessment - 40%

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University examination - 50% and

Indirect assessment - 10%

C. Course outcome attainment calculation

Final course outcome attainment is calculated as: -

Attainment Level 1: 50% of students scoring more than expected proficiency in the total assessment.

Attainment Level 2: 60% of students scoring more than expected proficiency in the total assessment.

Attainment Level 3: 70% of students scoring more than expected proficiency in the total assessment.

Assessment tools and processes used for measuring the attainment of each of the Program Outcomes and Program Specific Outcomes

PO and PSO Assessment Processes

There are two tools for PO and PSO assessment

1. Direct methods: 80% weightage

The course outcomes are prepared as the course articulation matrix. The aggregate of all the course outcomes is taken as per the formula.

2. Indirect methods: 20% weightage

Program Exit Feedback and Activity assessment are the two steps.

If all COs, POs and PSOs are well achieved, the graduate attributes would be achieved. If targets are not achieved, the program assessment committee will review the action plan.

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

2.6.3 Average pass percentage of Students during last five years

Response: 95.26

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

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2020-21	2019-20	2018-19	2017-18	2016-17
737	845	818	822	844

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

2020-21	2019-20	2018-19	2017-18	2016-17
762	855	872	870	913

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	<u>View Document</u>
Paste link for the annual report	View Document

2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process

Response: 3.89

File Description	Document
Upload database of all currently enrolled students (Data Template)	View Document

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Criterion 3 - Research, Innovations and Extension

3.1 Resource Mobilization for Research

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

Response: 7.92

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)

2020-21	2019-20	2018-19	2017-18	2016-17
5.56	1.078	1.05	0	0.235

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: 5.24

3.1.2.1 Number of teachers recognized as research guides

Response: 10

 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: 37.5

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

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2020-21	2019-20	2018-19	2017-18	2016-17
6	5	2	0	2

3.1.3.2 Number of departments offering academic programes

2020-21	2019-20	2018-19	2017-18	2016-17
8	8	8	8	8

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:

The institution fosters a culture of innovation through various clubs/cells/centres.

Awards and Recognitions:

- 2020 & 2021 **ARIIA Ranking** for FISAT.
- 2019-2020 **FAB Challenge 2019-20 Top Performer Award** for FISAT by Kerala Start-Up Mission and FABLAB, Kerala.
- 2018 Entrepreneurship Enabler Award by Kerala Start-Up Mission.
- 2016-17 IEDC, FISAT Recognised by Kerala Start-Up Mission for exemplary performance.

Specialised Centres:

• Innovation Entrepreneurship Development Cell (IEDC)

IEDC, FISAT a flagship initiative of the Kerala Startup Mission, promotes innovation and entrepreneurial culture and develop institutional mechanisms to foster techno-entrepreneurship.

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• Institution Innovation Council (IIC)

Institution Innovation Council (IIC) under the MHRD innovation cell nurtures innovative and entrepreneurial activities among youth.

• Federal Labz (Incubation Centre)

To provide the necessary guidance, tech support, infrastructure, networking, and facilitating a host of other resources to promote start-ups.

Sl.No.	Innovation / Start-Up Name	Founded by		Period of Incubation Received	Current Status
1	MindHack	Student	Adam Shamsudeen	2017-18	Graduated
2	Adburst	Student	joseph Jaison, Albin Paul	2017-18	Graduated
3	Ambrozz e commerce	Student	Anil babu, Alwin Paul	2017-18	Graduated
4	Wis Assets management System	Alumnus	Jeff Mampilly	2017-18	Graduated
5	Gxtron	Student	Rithin Nambiar, Rahul Suresh	2018-19	Incubating
6	JMJ Tewe Ltd	Team from outside	Tojo Paul	2018-19	Incubating
7	Space Forge	Team from outside	Jithin Sajeev	2018-19	Graduated
8	Fab@ School	Staff + Students	Neeraj P M, Gismon Alias	2017-19	Dormant
9	Creative U	Students	Jogan Gigu	2019	Dormant
10	S card	Students	Jiril Jose	2021	Incubating

• FISAT FabLab

The mini fabrication laboratory established with the support of A P J Abdul Kalam Technological University (KTU) and Kerala Start-up Mission (KSUM) in 2017, is a state-of-the-art workshop offering digital fabrication facilities which empower the students to create smart devices which can be tailored to local or personal needs.

• Centre for High-Performance Computing (CHPC)

CHPC aims to build a supercomputing lab working at several gigaflops of speed. With a focus on high-load applications involving 3D rendering and heavy calculations, this state-of-the-art lab facilitates research-oriented activities by students and faculty members

• FFSC - FISAT Free Software Cell

The FISAT Free Software Cell (FFSC) is dedicated to promoting computer users` rights to use, study, copy, modify and redistribute computer programs. Furthermore, the FFSC encourages the development and use of free software, particularly the GNU operating system, used widely in its GNU/Linux variant.

• Centre for Research and Innovations in Signal Processing (CRISP)

CRISP was set up with a vision to support DSP hands-on projects and DSP Research & Development. The lab is equipped with Matlab, Simulators for various DSP processors, the latest TMS DSP Starter Kits, Beagle boards, FPGA kits, Ansoft HFSS, Q3D extractor, SIwave, and Designer, Cadence, etc

• Centre of Excellence on Robotics and IoT

The Centre of Excellence in Robotics and IoT (CER) established in 2014, was identified as the nodal Centre for Project eYantra by IIT Mumbai and upgraded as an eLSI lab in 2016. The centre's primary research areas are Robotics, IoT, AI, ML, and Sensor Fusion.

• Instrumentation Research and Consultancy Centre (IRACC)

IRACC is a research and consultancy centre that conducts various research activities in applied sciences and Instrumentation.

• Centre for Advanced Research in Power Converters (CARPC)

CARPC aims to develop efficient and high-performance power converters and controllers that can optimally extract and transform power from various renewable energy sources.

• Centre for Automotive and Allied Research (CAAR):

CAAR is established to set up state-of-the-art research and testing facilities in the automobile field and create engineers with global competencies.

• Centre for Advanced Computational Research (CACR):

CACR supports enhanced learning in Structural analysis and Computational Fluid Dynamics.

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File Description	Document
Upload any additional information	<u>View Document</u>
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: 78

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

2020-21	2019-20	2018-19	2017-18	2016-17
20	20	20	11	7

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: 1.69

3.3.1.1 How many Ph.Ds registered per eligible teacher within last five years

Response: 27

3.3.1.2 Number of teachers recognized as guides during the last five years

Response: 16

1	
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

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

Response: 0.42

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

2020-21	2019-20	2018-19	2017-18	2016-17
17	24	18	16	10

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: 1.44

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

2020-21	2019-20	2018-19	2017-18	2016-17
53	53	58	58	73

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

3.4 Extension Activities

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

Response:

The institution has various extension and outreach activities for the neighbourhood community and motivates the student's social participation to understand the social issues. The mission of inculcating ethical standards is realized through the outreach programmes. The institution has cells like NSS, Sanguine Workers and Admirers of Nature (SWAN), etc. through which various extension and outreach activities are conducted.

The major extension activities carried out by the Institute are:

- 1. Adopted five villages under **Unnat Bharat Abhiyan (UBA)**, **aiming** at transformational change in rural development processes to help build the architecture of an Inclusive India. Under UBA, the institution has organised several skill development programmes.
- 2. FISAT Hostels converted into **Covid Domiciliary Care Centre during 2020 21** to support the Government to provide Covid care to the community.
- 3. 'Community Mobile Medical Clinic', a medical clinic on wheels for Geriatric Care in association with Angamaly municipality and Taluk Hospital to help elderly people get medical care and support at their homes during the pandemic in 2020 and 2021.
- 4. Developed and installed a disinfecting system "UV 20" for Taluk Hospital Angamaly.
- 5. Developed 'Covid 19 dashboard'- a platform to provide global analytics to support the local bodies to assess the spread of pandemic
- 6. During 2018 and 2019, the institution has played a crucial role in **Kerala flood rehabilitation activities.** The institution through a project named **'Punarjani'** reconstructed and built several houses.
- 7. The facility of mobile FabLab in the institution was extended for **free servicing of electrical and electronic equipment damaged by the flood.**
- 8. In association with the Federal Bank, the institution organised **awareness programmes on digital cashless transactions** for the public in different parts of Ernakulam District.
- 9. "Pollution Abatement of Puzhakkal River" in association with the Water Resources Department, Government of Kerala which addressed the sources of pollution and methods devised to manage it.
- 10. In association with Kerala Remote Sensing and Environment Centre, 'Digital Mookkannoor' an Earth mapping survey of Mookkannoor panchayat.
- 11. Social visits to charitable organisations like Vimala Bhavan and Smiling village.
- 12.A **Blood Donor Cell** with student and staff members willing to donate blood on a routine or emergency basis.
- 13. During cyclone Tauktae in 2021, the institution **provided groceries and vegetables to Chellanam Community Kitchen**.
- 14. Around 200 students took part in a **tree-planting drive** initiated as a part of Environment Day by the institution.
- 15. The National Service Scheme Cell of FISAT has initiated several outreach activities which include
- Flood relief, rescue and rehabilitation works
- Renovation and cleaning work in the neighbourhood.
- Blood donation camp
- MAPATHON- an initiative of IT mission for marking flood levels in a locality
- Providing technical support in Covid vaccination centre.
- 16. **'Hour of Code'' programme** for nearby schools to impart computer skills.

17. **'Technology Popularisation Programme'** under the scheme Fab@School where the mobile FABLAB is taken to schools in rural areas all over Kerala and opportunities are given to experiment with technology.

File Description	Document
Upload any additional information	<u>View Document</u>
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: 0

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.

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	0

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

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

Response: 49

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

2020-21	2019-20	2018-19	2017-18	2016-17
17	7	8	9	8

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

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

Response: 45.88

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

2020-21	2019-20	2018-19	2017-18	2016-17
1825	1048	1800	910	876

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

3.5 Collaboration

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

Response: 76

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

2020-21	2019-20	2018-19	2017-18	2016-17
25	17	14	14	6

File Description	Document
e-copies of related Document	<u>View Document</u>
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: 50

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

2020-21	2019-20	2018-19	2017-18	2016-17
10	17	13	7	3

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

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Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

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

Response:

The Institution has a campus that is well-maintained with a lush green layout with an area of 25.15 acres and a total built-up area for teaching and learning facility of 55838.1 sq. mts, which is above the prescribed norms by different statutory bodies.

Classrooms

- 66 Class rooms, 9 tutorial rooms and 5 drawing halls which are well-planned and spacious.
- 8 spacious seminar halls enabled with ICT facilities
- A total of 930 computing systems are available for eLearning, online registration, faculty feedback and other academic facilities.
- 1 auditorium, 2 conference room, 1 boardroom and 2 recreational rooms to facilitate teamwork, group activity, training and workshop sessions conducted for students and faculty members.
- 5 interactive panel boards, 81 LCD projectors, 13 LED TVs, 1 Media Lab with e -content development facilities.
- 137 Wi-Fi access points and 700Mbps internet lease line facility to enable high speed network connectivity.

Laboratories

There are	53	laboratories	(includ	ding worl	kehone)	for 9	departments a	nd th	e list is	nrovided h	elow
There are	טט	iauuraiuries	(IIICIU)	anne won	กอนบบอา	101 7	ucbaruncins a	ոս ա	с изс к	o broviaca b	CIUW.

Library

- 1 central Library with a total seating capacity of 290 and area of 1751.5 sq. m
- 9 department libraries of total area 526.09 sq.m
- A collection of 80575 books, 173 national print journals, 85 international print journals and 31 periodicals, National Digital Library of India, 5 e- Journal databases, 1 e-Book database, DELNET online databases, and a digital library.
- Fully computerized with remote accessibility through Knimbus and m-Library mobile app.

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• The reprographic facility centre is well equipped with photocopy machines, printers and binding equipment

Central Computing Facility

- Nine labs with a total of 930 Computers all with Intel Core i5 / Core i3 Processors / 4GB RAM/ 8
 GB RAM/ 18.5" TFT Monitor and Debian GNU Linux and Ubuntu as Operating Systems.
- High-tech lab complex has a total area of 15,000 square feet and is fully air-conditioned with an uninterrupted power supply.
- More than 1000 computers on the campus (office and faculty cabins) and servers are connected in a single LAN. Staff and students can access their data through the intranet at any time.
- The servers are running 24 x 7 basis.
- The interiors and layout are planned in the most modern way for maximum utility for space and aesthetics.

Hostels

- Affordable and quality residential accommodation to 1200 students on campus.
- Four hostel blocks, two for boys and two for girls.
- 24x7 electricity & water, Wi-Fi, laundry facility, regular upkeep and cleaning, healthy food, ambulance, and medical clinic.

Canteen, Transportation and Bank

- The canteen provides meals by assuring safety, quality, and quantity.
- The transport fleet consists of 30 buses with extensive coverage in all directions within a radius of 50 Kms.
- The institution has a branch of Federal Bank very close to its vicinity and an ATM within the campus.

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 institution provides adequate facilities for the holistic development of students in fields of academic, cultural, yoga and sports activities

Cultural Activities

- Two multipurpose open-air stages in two courtyards at the north and south block are available for conducting cultural activities. These are the venues for various activities like programs teasers, flash mobs, street plays, dramas, mimes, etc.
- Four spacious halls are used for various cultural events where audio-visual aids, lighting and other facilities are provided for conducting different programs. Various intra-collegiate and intercollegiate technical and cultural fests are organised by the student union and different clubs which bring laurels to the institution.

Sports and Games

To facilitate the overall development of students in both academic and extracurricular activities, the college offers ample facilities like

- Separate Fitness Centres for boys and girls with an area of 5000 sq. Mt.
- Football ground with an area of 90 Mts X 45 Mts
- Handball court with 40Mts X 20 Mts
- Kho kho Court are of 30mts X 20 mts
- Kabaddi court area of 15mts X 15 Mts
- o Cricket Field (Oval) comprises 130 Mts X 120 Mts
- 2 cricket net practice facilities with an area of 4 Mts X 24 Mts.
- Table Tennis Room comprises 2 Table tennis Tables with an area of 1500 sq. mt.
- o 2 volleyball courts (1 Acrylic & I Natural turf) cover an area of 1065 sq. Mt.
- 1 Acrylic basketball courts encompass an area of 704 sq. mt.
- o 4 badminton courts with an area of 4400 sq. mt.
- Jogging tracks are available for all students

The total area of sports facilities is around 33214 Sq. Mt. and a usage rate of 1750 students per day.

Full-time Fitness trainers for both boys and girls students in their daily practice sessions in Fitness Centre.

Services of Part-time Coaches in Football, Cricket, Basketball and Volleyball are also available for students.

A full-time Faculty for Physical Education to supervise training sessions for the students to participate in university, state and national level competitions.

Yoga

- Dedicated venue for daily yoga sessions for the students.
- Trained and experienced yoga trainers impart sessions to the students on various yoga postures, pranayama etc.

File Description	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: 81

File Description	Document
Upload Number of classrooms and seminar halls with ICT enabled facilities (Data Template)	View Document
Upload any additional information	<u>View Document</u>
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: 29.55

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

2020-21	2019-20	2018-19	2017-18	2016-17
74.9	213.44	304.30	1353.87	1535.74

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 institution has a fully automated Main Library which has a total area of 1751.5 Sqm with modern software and an OPAC system. It provides excellent learning resources, catering to the ever-growing

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intellectual requirements of the students, faculty, and researchers. It is also equipped with a repository of learning materials for NPTEL. The association with DELNET enables access to various journals from 5002 libraries in South Asia. Besides the Main Library, there are nine department libraries with total area of 526.09 sq m.

Name of ILMS Software: KOHA (2019 onwards) Library Dimensions (2002-2018)

Nature of Automation: Fully Automated

The version of ILMS: 18.11

Year of Automation: 2002

Facilities and services available in the library:

The institution has **RFID-enabled library circulation to register the entry and exit of users.** The library has **Web OPAC** (Online Searching facility for students and teachers) and is fully automated. Barcode is given to all books. Students are given a smart card with a chip to do all library transactions. **Online Public Access Catalogue (OPAC) is part of the FISAT intranet**. Using this library users can reserve books, can check the attendance, university exam marks, internal exam marks, syllabus etc. Previous question papers of University Examinations are available through the **digital library**. The library procures and ensures effective use of the latest hard/soft copies of books, journals, documents, reports, and other learning resources regularly. The library has **National Digital Library Club (NDLI Club) membership**

The library provides access to online databases of IEEE, ASME, ASCE, Elsevier Science Direct, EBSCOHost, SWAYAM, DSPACE, DELNET, NDLI and EBSCO e-books.

In-house/remote access to e-resources: An **e-Library platform (Knimbus)** is available to access digital library facilities (E-Journals and E-books) by sitting anywhere in the world. Through Knimbus, the members can access the digital resources and e-journals of FISAT library at any time, from anywhere and on any device.

The **Mobile eLibrary App 'mLibrary'** offers a multi-format, content delivery App for users to consume eBook collections, latest journal issues and multimedia learning content. Patrons can access the entire library on their smartphones from anywhere, at any time. Currently, there are 2405 members on this platform.

File Description	Document
Paste link for Additional Information	<u>View Document</u>

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	<u>View Document</u>
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: 41.33

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)

2020-21	2019-20	2018-19	2017-18	2016-17
25.6	34.44	43.09	60.19	43.35

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 latest completed academic year

Response: 5.93

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

Response: 167

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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:

FISAT provides state-of-the-art IT infrastructure which comprises computing equipment, server, software and internet facilities.

IT Policy

The institution's IT policy sets standards and procedures for different aspects like usage of IT facilities, Copyright and its infringements, up-gradation of IT infrastructure and cyber-security. It ensures the legal and appropriate use of Information technology infrastructure established by the institution on the campus.

Bandwidth of internet connection in the Institution

- High-speed internet facility through 700Mbps ensure fast browsing.
- The Internet can be accessed anywhere on the campus including OPAC with the implementation of a dedicated firewall which enables all the labs ready with an internet facility enabling the students to utilize the possibilities of web-based learning. Wi-Fi facility is also available through Aruba HP Access Points.

Campus Automation software

• The institution has developed & implemented a new web-based Campus Automation Software, "FISAT Campus Automation System", which satisfies all the demands of Campus in the areas of Academic, Accounts, Fee Module, HRM and Intranet.

• Software

The institution uses a number of licensed and open source software for meeting the different academic requirements of the students.

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	List of Open-Source
List of Licensed Software	Software
STAAD Pro	Keil
ETABS	LT spice
Ansys	Scilab
AutoCAD 2015	Autodesk Eagle
Primavera Contractor	GCC
Cadence	MPLAB-X
MATLAB 2012	Arduino IDE
Xilinx	Open foam
MATLAB 2019b	
Microsoft Campus	
Agreement	
PSCAD	
ETAP	
MATLAB/Simulink	
AutoCAD 2014	
Lab view 2012	
PLC software	
SPSS	

• Cyber security firewall, Antivirus system:

The institution has Fortinet-200e Enterprise Firewall Solution which delivers end-to-end network security with one platform, one network security operating system and unified policy management. It offers the best protection against the most advanced security threats and targeted attacks. It also provides anti-virus, web filtering and bandwidth management.

Other IT Facilities

- IT infrastructure comprises more than 1000 computers connected with Wi- Fi/LAN
- 8 dedicated servers for the smooth functioning of libraries and labs.
- The library is automated with KOHA software with a cloud server facility.
- A Digital library with 51 computers enhances e-learning.
- mLibrary app and Knimbus for remote access to digital resources of the library.
- Multimedia center with state-of-the-art facilities.
- Bulk SMS service to communicate with parents and stakeholders.
- Availability of Learning Management Systems like Open edX, Moodle, G suite, Webex, AWS
- Biometric devices & security systems with CCTV camera surveillance.

• Centre for high-performance computing (CHPC)

• Autonomous research centre in cluster computing using free and open-source technologies. Through the **indigenously built high-performance computer - Dhakshina**, the Centre provides a much sought-after computing resource to the student community.

• Complaint Tracking System

The institution has an online complaint tracking system for registering hardware/ software complaints from all parts of the institution.

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: 2.82

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. ?50 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: 29.93

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)

2020-21	2019-20	2018-19	2017-18	2016-17
191.24	686.36	657.46	651.76	623.94

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File Description	Document
Upload any additional information	<u>View Document</u>
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:

Maintenance of Physical facilities

The institution has established systems, procedures, and manpower for the maintenance of physical, academic and support facilities. The physical facilities including Classrooms, Auditorium, Seminar Halls, Smart classrooms, and Laboratories are maintained and monitored by a main committee of teaching and non-teaching staff under the Administrative Officer of the institution. A standardized protocol is in place to tackle problems. The institution keeps a stock register and a maintenance register and has a maintenance team consisting of housekeeping staff, electricians, technocrats, and carpenters. Apart from the main committee, there are subcommittees that monitor and maintain uninterrupted power supply and maintenance of equipment like generators in each block, general lighting, power distribution system, solar panels, STP, workshops etc. The optimum working condition of all properties/ equipment on the campus is ensured through annual maintenance contracts (AMC). The AMC's purview includes maintenance of Generators and Water purifiers. Apart from contract workers, the college has trained in-house electricians and plumbers. The maintenance and the cleaning of the classrooms and the laboratories are done by housekeeping staff. The institution engages a housekeeping services agency on a yearly contract basis and their services are made available during the daytime on all days. The classrooms, staff rooms, seminar halls and laboratories, etc are cleaned and maintained regularly by the housekeeping staff assigned to each floor. Washrooms and restrooms are well maintained. Dustbins with different colour codes are placed in different locations. The garden is maintained by the gardener appointed by the institution. The parking facility is well organized. It is efficiently maintained by security under the control of security officers. The campus maintenance is monitored through surveillance cameras. Proper inspection is done, and verification of stock takes place at the end of each year. The purchase committee of the institution, consisting of teaching and non-teaching staff, manages the procurement and distribution of required items through a transparent and robust procurement process.

Maintenance of Classrooms and Laboratories

All classrooms are laid out with adequate infrastructure as per the AICTE requirements befitting teaching and learning. Periodic reporting on requirements of repairs and maintenance of furniture and other items in classrooms are submitted by the HODs to the administrative office. The requirements are collectively processed during every semester break to keep things ready for the new semester. Laboratories are fully functional with all necessary equipment and apparatuses. The institution has ensured that all the labs are with all necessary shielding from hazardous materials and situations. Improved safety is ensured through

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instant evacuation plots, exhaust ducts, goggles, masks, first aid kits, and fire extinguishers. Concentrated acids and hazardous chemicals are safely kept in lockers. The computer labs have an adequate number of computers with the required component configuration and are set in spacious climate-controlled rooms. Malicious cyber infiltrations are checked with constantly updating antivirus software and Cyberoam firewall. All displays are tuned to emit very low blue light which makes them eye-friendly. Regular maintenance and calibration of the machines and computers are done by the support team in the presence of lab instructors before the commencement of the academic year. Preventive maintenance and breakdown maintenance procedure is followed to ensure maximum availability of the systems in the lab. Lab requirement is evaluated for new equipment, replacement of the old equipment, modernization of machines and software is prepared in consultation with the HODs and Principal and forwarded to the management for necessary procurement and maintenance.

Maintenance of ICT facilities

The annual maintenance includes the required software installation and up-gradation. The ICT Smart Classrooms and the related systems are maintained with AMC. To minimise e-waste, electronic gadgets like projectors, computers, printers, and photocopiers are serviced and reused. Campus Wi-Fi should be used only for academic purposes. Campus Wi-Fi is maintained by service providers like BSNL and Airtel. The college website is maintained by the website committee which is constituted of internal staff.

Maintenance of Library

The library is fully automated using KOHA. All books are marked, classified and

advantageously placed on the racks. The positions of the books are updated with the KOHA for easy retrieval. As a proactive intervention, all books are periodically inspected to find possible damages and binding is carried out if necessary. The annual stock verification is done as a part of a regular procedure. Books are issued using a barcode system. Lost books are replaced by the borrower. The library is overall monitored by the Chief Librarian & Library Committee.

Maintenance of Sports facilities

The sports equipment, gymnasium, playground, and various courts are supervised and maintained by the Department of Physical Education. The institution occasionally hires professional trainers for special sports training and field maintenance. Ground levelling and other repairs are done annually during the midsummer vacation. All sports equipment and play areas (including indoor and outdoor stadia) are well maintained. Ample first aid supply always stands ready for meeting potential injuries and physical traumas.

Maintenance of UPS:

The maintenance of U.P.S. is allotted to an electrician, who carries out preventive as well as breakdown maintenance and maintains necessary records for it. The preventive maintenance is carried out as per the formulated schedule.

Maintenance of Generators

The maintenance of Generators is to a Technician, who carries out the routine as well as breakdown maintenance and maintains appropriate records for it. The Preventive maintenance is carried out as per the

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formulated schedule.

Maintenance of Air Conditioners

The maintenance of Air conditioners is allotted to an Electrician, who carries out preventive as well as Breakdown maintenance and maintains appropriate records for it. The Preventive maintenance is carried out as per the formulated schedule.

File Description	Document
Upload any additional information	<u>View Document</u>
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: 12.44

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

2020-21	2019-20	2018-19	2017-18	2016-17
327	329	360	347	416

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: 28.84

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

2020-21	2019-20	2018-19	2017-18	2016-17
471	1286	367	1087	928

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File Description	Document
Upload any additional information	<u>View Document</u>
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	<u>View Document</u>
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: 36.23

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

2020-21	2019-20	2018-19	2017-18	2016-17
1450	1085	820	716	1039

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

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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: 33.58

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

2020-21	2019-20	2018-19	2017-18	2016-17
332	292	340	252	202

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: 57.63

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

Response: 438

File Description	Document
Details of student progression to higher education (Data Template)	View Document
Any additional information	View Document

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

Response: 100

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

2020-21	2019-20	2018-19	2017-18	2016-17
109	60	53	45	25

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

2020-21	2019-20	2018-19	2017-18	2016-17
109	60	53	45	25

File Description	Document
Upload supporting data for the same	<u>View Document</u>
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

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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: 34

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) yearwise during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
0	16	4	7	7

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

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

Response:

Student representations and engagement at FISAT involve the active contribution of students in decision-making by representations in the various organisations, committees and cells in the college.

Student Council – Constitution and Roles

The institution has an apex student body called Student Council. It is a democratically elected forum constituted every year as per the norms of the university, which coordinates all the student activities for the year. There is a staff advisor for the student council responsible for carrying out the election procedure peacefully and advises the council on planning the various activities that shall lead to the overall development of both students and the institution. The following are the roles of the student members of the council.

- Chairman
- Vice Chairperson (reserved for girl students).
- General Secretary

- Magazine Editor In charge of Annual College Magazine.
- Arts Club secretary coordinates various cultural fests and events.
- Sports Secretary
- Lady Representatives
- Representatives from the first, second, third and fourth year of B.Tech and one representative from MTech, MBA and MCA

Student Representations in Academic /Administrative bodies and Committees

The students contribute to the decision-making process and participate in the institution-building as stakeholders through the following bodies:

IQAC, Sports Council, Anti Ragging Cell, Internal Complaints Committee, Department Advisory Committee, Internal Complaints Committee, Library Advisory Committee, Hostel Committee, Class Committee, Placement and Training Cell, Student Welfare Committee and Women Cell.

Student Representations in Cells

To develop the organizing, team-building and leadership skills of the students, the institution has various cells and clubs for technical, cultural and social outreach activities. FISAT extensively supports student involvement and ensures active stakeholder participation through the following professional societies and cells.

Professional Societies include IEEE, ASME, SAE, ISTE, ACM, CSI, ASCE, ICI, ISA, KBAIC and ASAP.

Department Cells include ELECTRA, FIESTA, IDEA, THYRA, SAME, ACE, ECHO, FCS, FFSC and FMS.

Technical Cells include SPARC, IEDC, IIC, IIIC, Energy Audit Cell, Hobby Club, Maths club and NDLI Club.

Arts, Literary and Social Outreach Cells include Arts club, Sports club, Rolling Stone Literary Club, NSS and SWAN Nature Club.

Alumni Association - FISTAA

There are **research cells viz.**, **CRC**, **CCRC**, **CARD and CRISP** for research and publication that have student representatives.

The institution also supports student contributions and representations of students through publications like IMPETUS- FISAT newsletter and various departmental newsletter publications like ECE, ICON, STROM, Metron, FORUM, Pragyaan and Pathway. The committees for these publications constitute student members and invite their contributions to content generation, template building and publication along with the respective faculty in charge.

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File Description	Document
Upload any additional information	<u>View Document</u>
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: 31.6

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

2020-21	2019-20	2018-19	2017-18	2016-17
20	32	48	27	31

File Description	Document
Upload any additional information	<u>View Document</u>
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 Alumni Association of FISAT (FISTAA) has been functioning for many years as a supportive organ of the college. The Alumni Association has received official registration under the Travancore- Cochin Cultural, Literary, Scientific and Charitable Societies Act 1955 (REG.NO).

The meeting of FISTAA is conducted every year to reconnect with the Alumni and celebrate their success and various achievements. Alumni members are always willing to share their experiences and knowledge with our students. Alumni members are invited to various events such as conferences (ICEFOSS- a national level conference on Free and Open-Source Software), workshops & annual day events every year.

The institution invites the Alumni members to deliver technical talks / experience-sharing sessions for the

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ongoing batches. Alumni working with different companies guide the pre-final & final year students to prepare for campus placements.

Contribution

The esteemed alumni are part of the institution as members of various boards. The alumni of FISAT serve as members of IQAC, Department Advisory Board (DAB), contributing to the curriculum design process and mentors to the student's projects at the start-up & incubation centre. Alumni members share their experience with students during technical talks and being judges for technical and management fests organized by the institution. Alumni members are invited to various conferences, workshops & annual day events every year. Alumni working with different companies also guide the pre-final & final year students to prepare for campus placements & also conduct mock technical interviews using Skype or WhatsApp. The Alumni provide feedback on the curriculum.

File Description	Document
Upload any additional information	<u>View Document</u>
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	<u>View Document</u>	
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:

Yes, The governance of the institution is reflective of effective leadership in tune with the Vision and Mission of the Institution.

FISAT was established in 2002, as a professional institution, focussed on excellence and committed to imparting quality technical education ensuring equity and social justice. The Federal Bank Officer's Association, a trade union by nature, ventured into dreaming of a technical institution of national repute. Managed by a trade union on a 'not-for-profit basis', the resources and profits generated in the institution are ploughed back for the betterment of FISAT.

Vision

• To become a world-class professional institute with a focus on excellence, moulding committed global professionals and technocrats who can meet the demands of business, industry, and research.

Mission

- To transform into an advanced centre of technical education, which will, in turn, bring out professionals with superior skills and social commitment.
- To provide state-of-the-art facilities to mould brilliant young talents, enabling them to take up challenging assignments in the highly competitive global scenario.

Governance in FISAT

FISAT's strong leadership executed through well-defined systems and organizational structure

FBOAES Managing Committee

- FISAT is owned by the Federal Bank Officers' Educational Society (FBOAES).
- The management of the institution is bestowed on a Managing Committee elected from the FBOAES for a period of 2 years. The Chairman of the FBOAES Managing Committee is the elected Secretary of FBOA. The Vice-Chairman and Treasurer of the FBOAES Managing Committee are respectively the elected President and Treasurer of FBOA.

Governing Body

• A Governing Body constituted in accordance with AICTE norms and nominated by the Managing Committee, manages the affairs of the institutions It is an apex statutory body headed by the

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Chairman to look after the overall development.

• Conducts periodic meetings to review the academic activities and progress.

Internal Governing Council

- Headed by the Chairman, the Internal Governing Council comprises Treasurer (FBOAES), Principal, Vice Principal and Deans.
- Ensure periodic monitoring and evaluation of various processes.

Academic Council

- Governs the academic functioning.
- Meets periodically, develops and implements plans for improved teaching-learning process, curriculum enhancement, student discipline and co-curricular activities.

IQAC

• The significant administrative body initiates, plans and supervises various activities that are necessary to increase the quality of the education.

Finance Committee looks into the financial matters.

Participation of the Teachers

- Faculty members are part of the decision-making bodies and are involved in developing and implementing various policies and procedures. These include:
- Anti-ragging Cell
- Purchase Committee
- Internal Complaints Committee
- Disciplinary Committee
- Admission, Examination and Placement Committee
- Staff Council and Department meetings are held at regular intervals for discussing academic matters and issues which are further discussed with the management for necessary action.

Perspective Plans

The institution's goals include short and broad goals at par with its Vision and Mission. The short-term goals are classified into goals: To improve the quality of Admissions & Selection, the Teaching–Learning System, Faculty Excellence, Student outcome and Infrastructure & e-Governance.

The strategic long-term plan of the institution 2014-2030 strives for achieving the aspiration of becoming a Centre for Excellence by 2030.

File Description	Document
Upload any additional information	<u>View Document</u>
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:

Yes, Since the institution's inception, the administration has been carried out effectively through a decentralized mechanism. This inclusive and participatory approach promotes an environment of solidarity and mutual respect, which ensures the growth of the institution.

- The Management Committee of FISAT formulates the overall policies for the institution.
- The Academic Council oversees the implementation of policies and day-to-day activities.
- Functional autonomy is given to the Heads of the Departments and they independently conduct the day-to-day functioning of their department in consultation with the faculty members.
- The staff members participate in the decision-making by expressing their opinions and concerns in the general staff council meetings and through various committees.
- Participation of students is ensured in the governance through the student council, various clubs and associations.
- Suggestions are invited from the stakeholders before the policy formulations. Stakeholders' meetings are conducted to pool opinions.

Case Study: Establishment of Science and Technology Park and Research Centre (SPARC)

Goal

To promote a culture of research, innovation and entrepreneurship, the institution established a centre called Science and Technology Park and Research Centre.

Implementation Process

- February 2012 Discussion in the academic council of FISAT on establishing a centre for promoting research and innovation.
- The decision was taken to establish a centre called SPARC under which research, innovation and extension activities are to be carried out with the participation of staff and students.

Participative Management

- Formation of a committee by SPARC to set up IEDC and IIC to promote innovation and entrepreneurship in June 2016.
- Formation of a committee by SPARC (consisting of management representatives, teaching, technical and administrative staff) to explore the possibility of setting up a state-of-the-art fabrication laboratory in July 2016.
- Collection of inputs by the committees from various stakeholders, industry experts and government

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bodies.

- Feasibility report submitted by SPARC before the Management Committee suggesting the establishment of FABLAB, mobile FABLAB, IEDC and IIC in FISAT.
- Approval of suggestions by the management followed by strengthening of the SPARC team (with teaching and technical staff) to manage the setting up of FABLAB, mobile FABLAB, IEDC and IIC.
- Established FABLAB, mobile FABLAB, IEDC and IIC in May 2017.
- SPARC entrusts separate teams of staff members to manage the operations of FABLAB, IEDC and IIC with functional autonomy.

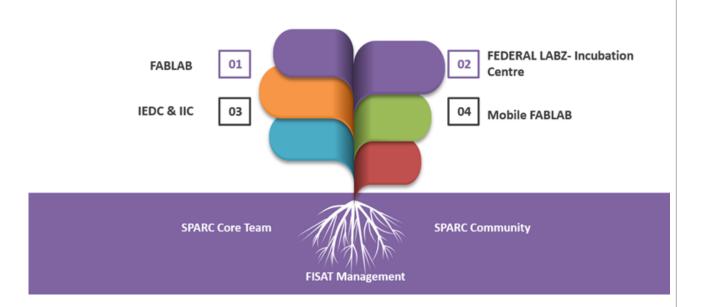
Decentralization

- The Managing Committee and SPARC under the guidance of the Chairman and Principal supervised the development of the infrastructure facilities and recruitment/allocation of staff.
- The Technical committee consisting of staff members of FISAT in consultation with external experts, KTU and government agencies looked into the process of setting up FABLAB, mobile FABLAB, IEDC and IIC.
- The finance committee (comprised of management representatives, teaching and administrative staff) managed to raise finance for the infrastructure facilities.

Outcomes

- Established state-of-the-art facilities (Federal Labz, FABLAB, Mobile FABLAB) which provided facilities for incubation and product development.
- Organised several events to promote entrepreneurship in collaboration with industry, Kerala Start-Up Mission and MHRD (IEDC, IIC).
- Received awards for IEDC and FABLAB from Kerala Start-up Mission for outstanding contributions.

SPARC ECOSYSTEM – VARIOUS CENTRES/INFRASTRUCTURE



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File Description	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:

Yes, The institution strives to provide quality and inclusive education with the help of its stakeholders through effectively deployed strategic / perspective plans.

The IQAC in consultation with the academic council formulated a strategic plan for the period.

The short-term goals are classified into goals regarding Admissions & Selection, Teaching – Learning System, Faculty Excellence, Student outcome and Infrastructure & e-Governance.

The strategic long-term plan of the institution from 2016 to 2030 strives for achieving the aspiration of becoming a Centre for Excellence by 2030.

Activity successfully implemented: Infrastructure Development

The institution is constantly evolving effective strategies to meet the challenges of academic delivery. To accommodate the new programmes and create a conducive environment for technical education, which facilitates innovative thinking, research, and an efficient knowledge delivery system, FISAT decided to construct a new block in 2012. The successful completion of the state-of-the-art infrastructure facility (Decennial block), inaugurated on 27th September 2017, was the combined efforts of different committees and stakeholders.

Deployment Process of Infrastructure

The Core Committee – The Administrative council acted as the core committee for infrastructure development. The committee members first undertook a pilot visit to different institutions of excellence. Based on the pilot study report and in conjunction with the other committees developed a master plan for the institution. The Committee was also in charge of the selection and approval of the architects and the construction contracts.

Finance Committee-based on the budget, the finance committee was responsible for identifying the different sources of financing for the project. After scrutiny of the various proposals, the Committee selected the best funding source for the project.

IT Committee – identify the number of Computer systems required as per the student strength, the software to be used, develop policy and procedures, invite quotations, and finalize the hardware and software components.

Mark of Success

The combined effort of the stakeholders and the clear vision and plan of the management led to the completion of the new block named the "P V Mathew Memorial Decennial Block" in a span of five years from initiation and started functioning in the year 2017. In addition, another building block with a built-up area of 67,360 sq.ft. is completed, and interior works are going on. On completion, the new building will provide the 'Integrated Technical Village Hub' space as envisaged by the institution.

Decennial block has Basement+Ground+3 Floors with a built-up area of 95,086 sq. ft floor area of 94130 sq. ft.

Twenty Eight state of the art classrooms

Three tutorial rooms

Three drawing rooms

Four laboratories

Five seminar halls

Five administrative offices

Four research centres

Four specialised research laboratories

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, service rules and procedures, etc.

Response:

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

Institutional Governance

The Managing Committee: The institution has a well-functioning organisational structure managed and administered by the FBOAES. The highest authority in the organogram of the institution is the Management Committee, headed by Chairman.

Governing Body

As per the guidelines of AICTE, the Governing Body was formed by including Members

from the Managing Committee, Officials of the College, Experts in Technology/Education,

Representatives of University, State Government, and AICTE. The Governing Body reviews the academic activities and programs of the institution.

Internal Governing Council

The IGC is the apex body concerning matters in policymaking. It also sets a framework for the implementation of the proposed plans. It recommends strategic plans that can be adopted in matters like infrastructural development, enhancement of academic quality, promotion of research, welfare measures for staff and students, and healthy practices.

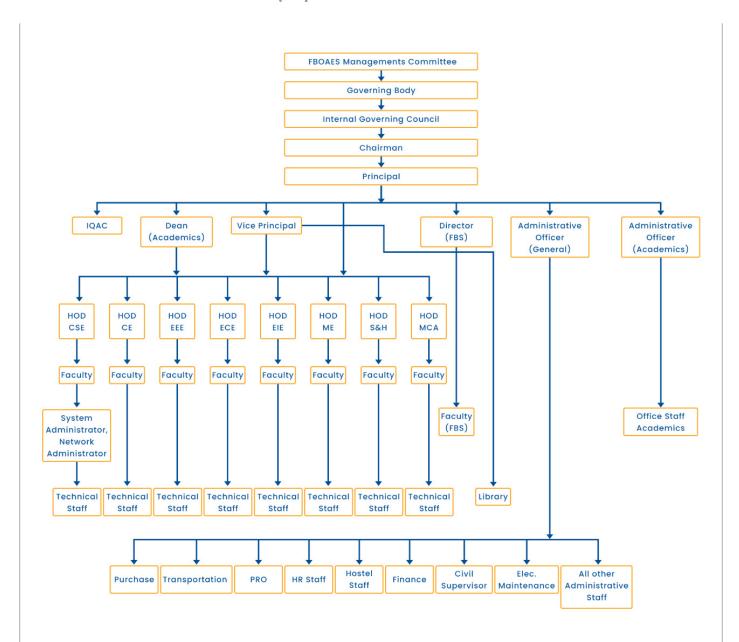
Principal: The principal, who is the executive head of the institution, is entrusted with managing the day-to-day affairs of the institution. He implements the directives of the managing body by the norms and guidelines stipulated by the government and other regulatory agencies.

IQAC prepares the annual academic plan in consultation with the Academic Council. In addition, IQAC initiates quality enhancement and sustenance measures to improve the institution's teaching, learning, and assessment practices.

Academic Council comprises the Principal, Vice Principal, Dean & IQAC Coordinator, and Heads of Departments. The council takes appropriate measures for the implementation of the strategic plan. It also brings significant decisions regarding the institution's day-to-day administrative and academic affairs.

Committees and Cells: The administration of the institution is supported by several committees and cells like the Department Advisory Committee, Programmes Assessment Committee (PAC), Course Assessment Committee (CAC), Purchase Committee, Infrastructure Committee, IT Committee, Maintenance Committee, Library Advisory Committee, Anti- Ragging Committee, Grievance Redressal Cell, Internal Complaints Committee, Discipline Committee, Women Cell, etc.

The functionality of the various bodies can be seen as below:



Appointment and service rules:

The institution has well-defined procedures and policies for recruitment and promotion. The qualifications for recruitment, the promotion policies, and the appraisal methods for teaching and non-teaching staff are well-drafted and laid down in the HR policy document. Manpower planning is carried out every year by considering the sanctioned posts. The three levels in academic recruitment are Assistant Professor, Associate Professor, and Professor. The appointment and service rules for teaching and non-teaching staff are well laid down in the HR policy document.

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

6.2.3 Implementation of e-governance in areas of operation

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

Response: A. All of the above

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

6.3 Faculty Empowerment Strategies

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

Response:

Yes, The institution has effective welfare measures for teaching and non-teaching staff and avenues for career development.

The welfare measures are listed below:

Pension Scheme

The Management has introduced a contributory pension for the entire staff in 2019 January.

Medical Insurance for FISAT employees and family

Medical Insurance coverage is provided for the staff and family members with a coverage of 3 lakhs rupees.

Life Insurance Scheme for Employees

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The Management has provided a contributory life insurance scheme for the entire staff with an assured amount of 25 to 40 Lakh rupees.

Staff Recreation Activities and Gifts

The Management sponsors events like yearly staff tours, family get-togethers, Institution Day, Sports Day, Cultural fests, etc. Gifts are given to the staff members on Onam, New Year and Institution Day. Management maintains a warm and cordial relationship with the staff members and gives gifts at staff weddings as a token of goodwill.

Vaccination drive with the financial support of Management

The Management takes care of the physical well-being of the staff members. Free COVID vaccination is provided to all the staff members in collaboration with Apollo Hospital.

Extraordinary Relief Measures during the time of flood and pandemic

The Management takes extraordinary relief measures during uncommon crises like the pandemic and the Kerala floods in 2018, 2019 and 2020. The Management rebuilt houses for staff members which were destroyed during the flood and provided grocery kits.

Sponsorship

Financial assistance is given to teaching staff for attending conferences and training. Skill development courses are organized for non-teaching staff.

Welfare Measures for Kith and Kin of the Staff Members

The Management provides free or subsidised education for the children of deserving staff members. Prizes are given to the children of staff who score full A1 in the 10th and 12th Board exams.

Leave for staff members

With a transparent and robust leave policy, the Management gives assurance to the staff members that they will be provided with the essential time off to take care of personal and career development needs. Different types of leaves include casual leave (15 days), special leave (22 days for teaching and 18 days for non-teaching staff), study leave, medical leave (7 days), maternity leave (3 months) and duty leave.

Other Employee Benefits

The Management ensures EPF, ESI, Gratuity, festival allowance, etc. to the staff members. An interest-free loan is provided to faculty members to purchase laptops. The Management has repaid the interest on these loans availed by the faculty. The Management also provides soft loans to the employees to meet their personal financial needs. Staff members are allowed to use the gym with state-of-the-art facilities free of cost. The institution provides a free in-house medical consultation facility for all the staff and students every Thursday.

A few other welfare measures include

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Salary Advance to Employees

FISAT Staff Welfare Forum

Soft Loans from Staff Welfare Forum

Annual Medical Check-up for employees at subsidised rates

Financial aid to the employees in case of a medical emergency

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: 12.77

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

2020-21	2019-20	2018-19	2017-18	2016-17
4	21	44	50	13

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: 10.8

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

2020-21	2019-20	2018-19	2017-18	2016-17
14	8	12	10	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: 38.65

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

2020-21	2019-20	2018-19	2017-18	2016-17
143	64	80	55	46

File Description	Document
Upload any additional information	<u>View Document</u>
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:

Section XII of HR Policy describes the structured performance appraisal system in the institution.

The format and methodology of Performance Appraisal for teaching and non-teaching staff shall be designed and appropriately modified on an annual basis by a team constituted by the Principal and approved by the Governing Body. Self- Appraisal by the Members of Staff, appraisal by the immediate reporting authority, and review by the next level authority shall be the order of performance appraisal.

For those who report to the Principal, the first level appraisal shall be by the Principal, and the second level

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review shall be by the Managing Committee. In the case of the Principal, the first level appraisal shall be by the Chairman, and the second level review shall be by the Managing Committee.

Teaching staff: For the performance appraisal of faculty, the institute follows a well-defined faculty appraisal and assessment system, which forms the basis for service confirmation, promotion, annual increment, etc. Students' feedback on the teaching performance and academic support by the faculty members shall be obtained and will be an important tool for assessing the performance of faculty members.

There are different phases of faculty appraisal systems:

- (i) Confirmation of service: On completing the probation period, each faculty is evaluated based on certain key factors like teaching skills, analytical/logical skills, communication skills, motivation, work planning, interpersonal relationships, adaptability, etc. The appraisal is performed by the HOD and submitted to the Principal. The faculty who perform satisfactorily are confirmed service.
- (ii) Annual self-appraisal: A self-appraisal will reflect the faculty member's performance and facilitate continuous improvement in one's career. Every year, all teaching staff fill out the self-appraisal form called the **Academic Performance Indicator (API)**. The Academic Performance (API) is a measure indicating the overall performance of a faculty member mainly in three categories.

Category I: Teaching, Learning, and Evaluation Related Activities

Category II: Co-Curricular, Extension, and Professional Development Related Activities.

Category-III: Research and Academic Contributions

The individual faculty member has to award his/her self-assessment score for each item based on objectively verifiable criteria wherever possible. The score awarded has to be verified by the HoD and finalized by the Principal/Chairman after assessing the faculty through the interaction with the management team, with all originals of the certificates. In addition, the best teacher award and best non-teaching staff award are presented every year to motivate and inspire all.

The proforma form needs to be filled out and submitted by the faculty members for increment. The HOD remarks on the faculty's performance, conduct, and character for the last year. The form is then submitted to the management for further processing after comments by the Principal.

Non-Teaching staff: Non-teaching staff fill up a proforma for increment and submit it to the concerned Section in Charge. After adding the Section Head's remarks on the performance, the Principal endorses the form and presents it to the management.

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

6.4 Financial Management and Resource Mobilization

6.4.1 Institution conducts internal and external financial audits regularly

Response:

Yes, The Institution regularly conducts internal and external financial audits with well-structured processes.

FISAT believes in creating and maintaining a sound financial and accounting system for safeguarding the interest of stakeholders by inculcating an efficient mechanism to administer the financial system. Accordingly, the finance committee convenes meetings on need-basis at periodic intervals to discuss and deliberate on the finance management. In addition, the accounts relating to the previous year are carefully scrutinized before preparing the financial budget for the next financial year. The institution uses the latest version of Tally ERP for the accounting purpose, and the accounts are subjected to a two-tier audit mechanism as mentioned below:

- (i) Internal Audit The Management Committee appoints internal auditors, and the term of service for the auditors is one year. Internal auditors perform audits every month. They check the documents and close the previous month's transactions after verification. A consolidated monthly statement of revenue and expenses is prepared and submitted to the management.
- (ii) External Audit (Statutory) The institution conducts a statutory external audit after the close of the financial year. The external financial audit is done by an experienced Chartered Accountant appointed for two years by the Management. The external auditor examines the Books of accounts to formulate a fair opinion of whether the institution keeps proper books of accounts. The Balance Sheet is reviewed to get an accurate and fair view of the state of affairs of the institution, and the income and expenditure account is checked to verify the excess of income over expenditure or vice versa, as the case may be. The audited financial statements are published on the institution's website. To date, there have not been any discrepancies or audit objections reported on the institution's accounts. The institution files income tax returns, and GST returns every year within the stipulated time.

File Description	Document
Upload any additional information	<u>View Document</u>
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: 43.74

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

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2020-21	2019-20	2018-19	2017-18	2016-17
6.81	5.35	13.61	9.26	8.714

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:

Yes, The institution has a well-functioning mechanism for mobilization of funds and optimum utilisation of resources.

The institution has a very solid mechanism to forecast the financial requirements through the annual budgets, the diversity of the funding base through the resource mobilization policy and ensure the effective and efficient use of the funds raised.

Budget Preparation and Fund Allocation Process

Before the beginning of every financial year, the faculty members who are in charge of various labs and activities in the department meet together and discuss about the requirements based on the inputs received from the stakeholders and estimate the funds needed under various heads (Laboratory, equipment, consumables, spares, maintenance, the conduct of workshops, FDPs, etc.,) This estimate will be sent to the head of the department for verification and approval. Once approved, it is sent to the Principal. The Principal asks the Accounts Department to consolidate the same and submit it to the Management Committee for approval and allocation of funds. The budget allocation is made for a specific financial year and it is utilized during the same financial year itself. In the case of infrastructure projects, fund utilization happens over a longer-term.

Sources of Funds

The institution funds its endeavours through a combination of:

Earned Income - The main source of the earned income of the institution is the fees collected. The hostel fee also becomes a major part of the funds earned.

Funds Raised - Funds are also mobilized by the institution for various activities such as funds received as sponsorship for various student activities, consultancy services, faculty development programmes, workshops and seminars conducted by departments. Alumni contribution is also a fund-raising strategy. On holidays the institution-building / computer lab is rented out to government and public sector agencies

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for the conduct of various programmes and examinations.

Grants Received from Government and Non-Government Agencies – The faculty members and different cells of the institution receive grants for research and innovation under various schemes of Government and Non-Government agencies like KSCSTE, CERD RSM, KTU, SERB, AICTE- ATAL, AICTE-GOC, Kerala Start-Up Mission, ASAP, etc.

Utilization – All the funds received are routed through the accounts of the institution so that the funds mobilised are employed for the purpose for which it was mobilized. The salary of the staff is disbursed through the Federal Bank. Transactions are only done through cheques and are supported by genuine vouchers or bills. For effective management of the accounts, internal and external audits are done.

File Description	Document
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6.5 Internal Quality Assurance System

6.5.1 Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes

Response:

Yes, Internal Quality Assurance Cell (IQAC) has contributed significantly to institutionalizing the quality assurance strategies and processes.

The two best practices institutionalized as a result of IQAC initiatives are as follows:

PRACTICE 1 - Initiatives to promote research and innovation in the institution

IQAC has taken initiatives to promote research and innovation activities in the institution by establishing a College Research Cell, IIC, IEDC and Federal Labz in 2016 and 2017. As a result of these quality initiatives taken by IQAC, the following achievements were made.

- Various training programmes and orientation programmes were offered to faculty members, which helped in **improving the percentage of Ph.D. holders.**
- **Five departments** (Department of Civil Engineering, Department of Computer Science, Department of Electronics and Communication Engineering, Department of Electrical and Electronics Engineering) have **become research centres under Kerala Technological University.**
- Twelve faculty members have become research guides at Kerala Technological University and Bharathiar University with twenty-two research scholars under them.
- Departments have brought out publications and conference proceedings in association with reputed publishers like Springer and Elsevier on a regular basis from 2019 onwards.
- The number of student publications has improved drastically.
- **Increase in the number of funded projects** obtained from government and non-government agencies.

• Infrastructural and technical support provided to ten start-ups in Federal Labz.

PRACTICE 2 - Development and Upgradation of FISAT Campus Automation System

IQAC has initiated the development of the FISAT Campus Automation System with the help of the FISAT Software Cell to automate the important functions such as admissions, academics, student management, human resources management, finance and accounts management, placements and others. It is intended to make the entire system of administration efficient and paperless. The outcome of this system is the ease of capturing and dissemination of information among students, staff and various sections of administration.

The FISAT Software Cell team has enough potential to coordinate all the activities of the System Development Cycle like Analysis, Design, Coding, Testing, Implementation and Maintenance. It benefits from having a single username to get everything connected and to analyse the future of the data captured by the modules. FISAT campus automation system will have functions for both the students and management.

Benefits

- Timely dissemination of information pertaining to student availability, attendance, result analysis, etc.
- Availability of academic performance of students in a consolidated manner has helped the review process.
- The Course Diary module helps in effective implementation and review of OBE implementation on campus.
- Leave management and payroll management have become effective and quick.
- Stock management has become efficient.
- Placement details can be easily recorded and retrieved.
- Easy to generate and export the reports regarding academics, administration and others.
- Easy and timely availability of relevant and accurate information to all stakeholders.

File Description	Document
Upload any additional information	<u>View Document</u>
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:

Yes, The institution reviews its Teaching-Learning process, structures & methodologies of operations and

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learning at periodic intervals through IQAC set up as per norms.

1. Periodical meetings for governance

IQAC initiated the constitution of the Department Advisory Committee, Programme Assessment Committee, Course Assessment Committee and Class Committee which help to review the effectiveness of Outcome-Based Education and progress of course completion, effective teaching-learning, assessment and attainment of learning outcomes. Periodic meetings of all committees are conducted regularly in which the committee members evaluate the measures taken by the institution to improve the teaching-learning process, enhance the employability of students and ensure their holistic development.

Committee	Structure	Frequency
Class Committee	Class representatives, Batch Coordinator, Faculty members, HoD	Twice a semester
Course Assessment Committee	CAC Head, Faculty	Thrice a semester for theory & twice a semester for lab
Programme Assessment Committee	HoD, Senior Faculty Member, NAAC/NBA Coordinator, Department IQAC Coordinator	Twice a semester
Department Advisory Committee	Academic experts, Industry experts, Alumni, Parents, HoD, Senior Faculty Member, NAAC/NBA Coordinator, Department IQAC Coordinator	Once a year

Reforms facilitated: -

- Formulation of COs, POs/PSOs for implementation of OBE, assessment (formative and summative) and attainment for COs, POs/PSOs are carried out.
- NBA accreditation for five departments in 2019-20.
- Bridging the gap between industry and academia through various MoUs, industry-interaction programmes, site visits, field projects etc.
- Enriching the curriculum through certification programmes, Add On courses and Life skill courses.
- Enhancing the employability of the students by offering skill development programmes through ASAP (Additional Skill Acquisition Programmes).
- Upgrading the FISAT Campus Automation System (ERP software) for effective implementation of OBE.

2. Stakeholder feedback on the Teaching-Learning Process

The IQAC of the institution collects regular feedback from students on curriculum, teaching methodology, faculty competencies in handling classes, facilities on the campus, etc. This process is administered through FISAT Campus Automation System, the institution's ERP. The Feedback is collected from students twice a semester (middle and end of the semester) and the report is shared with the faculty

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members. Feedback from students is obtained through the Course end survey and Program exit survey to understand the effectiveness of OBE implementation. Feedback is collected annually from other stakeholders- parents, alumni, and employers. The IQAC prepares a feedback analysis report and submits it to the Principal.

Reforms facilitated: -

- The Principal and IQAC coordinator meet faculty members in person for clarifications on the student's feedback as required.
- The faculty members need to submit an action plan based on the feedback to the Head of the Department.
- Remedial and supportive measures are suggested by IQAC to cater to the needs of student diversity.
- Faculty Development Programmes, workshops and seminars are offered for the faculty members.
- The faculty members are also encouraged to take up MOOC/SWAYAM courses.
- IQAC suggests the need to introduce more add-on courses based on the feedback of different stakeholders on the curriculum.
- An option is added in FISAT Campus Automation System for the parents to keep a track of the internal marks and attendance of their wards.

File Description	Document
Upload any additional information	<u>View Document</u>
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 intitiatives with other institution(s)
- 3. Participation in NIRF
- 4.any other quality audit recognized by state, national or international agencies (ISO Certification, NBA)

Response: A. All of the above

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

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Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

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

Response:

Being affiliated to KTU, the institution offers a wide range of courses for UG and PG programmes that address gender equity and sensitisation. Apart from this, the institution has a Gender Equity Cell, which functions with an objective to make the students and staff sensitive to the needs of various sections of the society with special emphasis on gender equity and gender sensitivity. The institution also has Women's Cell, Anti–Ragging Committee and Internal Complaints Committee which prepare students to have an inclusive attitude in society, be aware of their social and civic responsibilities, and be sensitive to gender issues with zero tolerance toward sexual harassment. The institution is a co-education institution with about more than 60% of the staff and over 40% of the students being female. Women play crucial administrative roles in the institution as Chairman, Members of the managing committee, Vice Principal, Dean and IQAC Coordinator and Heads of various Departments. Female students are encouraged to take up key roles in the Student Council and various other committees. Equal opportunity is provided in sports and cultural activities.

The major activities undertaken by the institution to promote gender sensitivity and equity include

- Fair and transparent recruitment and promotion process for the staff
- Equal opportunity in placements
- Sports and physical training infrastructure in boys and girls' hostel
- Male and Female trainers for sports and physical fitness
- Personality development and Self defense classes for girls
- Women entrepreneurship activities
- A well-qualified female clinical psychologist for ensuring the mental well-being of students
- Colloquy and seminars on Women Empowerment, Welfare Laws, Consumer Protection Laws, Cyber Security, Anti-Narcotics, Gender Equity and Child Welfare
- Round-the-clock security at all entrances and at all prominent locations across the campus
- Institute premises covered under the video surveillance system
- Secured environment for male and female students in the hostel premises
- Fire safety training and other safety awareness training programs are organized for the staff and students of both the gender
- The institution owns an ambulance and is parked in the vicinity of the hostels
- A common room facility is provided for boys and girls. A sufficient number of toilets are available for the students
- A dietician is appointed in boys' and girls' hostels to ensure the quality of the diet
- Complaint/suggestion boxes are kept at various locations on the campus and immediate measures are taken on the complaints received
- Sanitary napkins are kept for distribution on a separate counter in the store room. Red coloured bins are kept at the toilets to collect the used pads.
- A sick room with first aid kits and four beds is arranged on the ground floor of the North block. Wheel chair facility is also available

- Special toilets are also available for differently-abled (Divyanjan) students
- A gender audit is conducted and policies and processes are updated based on the audit report
- Students of the Department of Electronics and Instrumentation under the guideship of Ms. Raji P Asst Professor, Department of EIE designed a new product for washing reusable sanitary pads.

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

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	<u>View Document</u>
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:

The institution has established an integrated sustainable waste management approach that minimizes waste production and provides economic benefits through scientific waste management. The institution has a robust waste management system to handle the diverse nature of wastes generated from the academic buildings, hostels, canteen, stationary stores and kiosks. FISAT conducts green audits regularly with the

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help of Government recognised external agencies.

Solid Waste Management

Separate colour-coded bins for different types of wastes are placed throughout the campus at important vantage points for proper collection and segregation of wastes. This prevents any intermixing of wastes and is beneficial in the utilisation and recovery of components through sustainable waste management.

Dedicated vermicompost units are established on the campus for the disposal of biodegradable wastes generated through garden trimming and vegetable wastes from the canteen and hostel mess.

The organic waste generated from hostels and canteen is used in the biogas plant.

Paper wastes generated on the campus are collected by an external agency for recycling. A part of the paper waste is recycled within the campus for making decorative items and paper bags during various events.

As per the green protocol, the institution optimizes the usage of paper by using technology for information sharing and documentation. The institution uses eco-friendly paper where ever needed.

The use of single-use plastic is strictly banned within the campus. The institution follows green protocol for all its official and public meetings, seminars and conferences. The institution has established a plastic-free zone around the campus.

Plastic bottles are collected by the students and recycled by using as planters in our garden or recycled.

Liquid Waste Management

The institution has installed a sewage treatment plant to manage liquid waste.

- ·Liquid waste from the various sources is treated with bleach and decontaminated prior to discharge.
- ·Coolant water released from the distillation units is used in gardens and for washing and cleaning purposes.
- The institution has aquaponics and employs rainwater harvesting systems for gardens and bathrooms.

Bio-Medical Waste Management

Red coloured bins are kept at the toilets and various locations to collect the used masks, cotton, sanitary pads and any other bio-medical waste.

E-Waste Management

- ·A minimal e-waste generation is ensured by optimal and periodic maintenance of computers and other electronic peripherals. E wastes are managed separately by qualified staff.
- •The institution has entered an e-waste disposal agreement with a Govt. agency Kerala Enviro

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Infrastructure Ltd. (KEIL).

Waste Recycling System

The institution generates over 150 kg of solid and semi-solid waste, in the form of leftover food and remains of vegetables and fruits. The same is used for generating electricity and fuel through biogas plants.

The use of plastic is discouraged on campus. The leftover plastic bottles from the canteen are recycled by using them as planters in our garden.

Hazardous Chemicals and Radioactive Waste Management

The quantity of Chemical Waste generated is very minimal. The institution has well-structured policies and protocols to handle hazardous chemicals. There is no activity that generates radioactive waste on the campus.

File Description	Document
Link for Relevant documents like agreements/MoUs with Government and other approved agencies	View Document

7.1.4 Water conservation facilities available in the Institution:

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

Response: B. 3 of the above

File Description	Document
Geotagged photographs / videos of the facilities	View Document
Any other relevant information	<u>View Document</u>
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: A. 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
Link for any other relevant information	View Document

7.1.6 Quality audits on environment and energy are regularly undertaken by the Institution and any awards received for such green campus initiatives:

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

Response: C. 2 of the above

File Description	Document
Reports on environment and energy audits submitted by the auditing agency	View Document
Certification by the auditing agency	View Document
Certificates of the awards received	View Document
Any other relevant information	<u>View Document</u>
Link for any other relevant information	View Document

7.1.7 The Institution has disabled-friendly, barrier free environment

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

Response: B. 3 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
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:

FISAT has made a considerable amount of effort to cater to the students from different states, caste, creed & religion. At the beginning of the academic year, all the first-year students are taken through an induction program, which highlights the importance of inclusiveness, and respect for different cultures, castes and creeds. Elaborated human values and ethics are discussed and debated during the induction program. Students are informed during the induction program about the usage of social media and the ill effects of posting inflammatory messages on social media. The institution organises special student development programs on the Fundamental of Computers for students coming from rural backgrounds and having low computer skills. Various activities/programmes organized in FISAT to celebrate the harmony of this collective inclusiveness are as follows:

- Every year the institution sponsors NSS students to attend National Integration Camp.
- Commemorates "Gandhi Jayanthi", "Independence Day", "Republic Day" and "National Unity Day", to highlight the importance of Peace, Unity and Diversity.
- Visits to Old-Age Homes and orphanages in which students and faculty members take active participation in distributing materials, cleaning activities etc.
- Value-based learning for students facilitated by conducting life-skill training sessions and tour programmes for lesser privileged
- Active participation of students and staff members in "Kerala Floods Relief Work". Electrical
 maintenance, the survey of damaged properties and cleaning works were done by students and staff
 of FISAT
- Cancer Awareness sessions, Blood Donation camps, and Anti-Narcotics campaigns were organized in association with various local bodies and health departments.
- 'A day to remember' a day celebrated by FISAT students with differently-abled children encouraging them to showcase their talents.
- Students participate in the extension activity of **Mobile FABLAB to help the mentally challenged children** to explore the possibilities of using technology to overcome their limitations.
- Community Mobile Medical Clinic by Mobile FABLAB to ensure that appropriate medical help reaches old age people.
- Electoral Literacy Day organised to impart awareness among the youth of the nation with respect to active participation in the electoral process.

- International Women's Day is celebrated on 08th March with seminars and activities to highlight the importance of Women's contribution to society, sensitization of gender equality and respect for women.
- Pandemic relief activities are carried out by assisting Angamaly Taluk hospital and local primary health centres by providing technical support for vaccination drives, setting up low-cost sanitiser dispensers in public places, etc.
- FISAT Open Agricultural Activities In association with IIT Mumbai to help the rural farmers.
- FISAT Space Olympiad, FAB@School & Hour of Code programmes are organised for school students which helped them to learn science through games.
- Mobile FABLAB was used extensively during the pandemic **to provide geriatric care in Angamaly under the scheme 'Community Mobile Medical Clinic'** in association with Taluk hospital
- Student participation in Community Kitchen at Chellanam (coastal area) which was worst affected by the cyclone

FISAT students are appreciated by the Prime Minister of India Shri. Narendra Modi during the finals of Smart India Hackathon for presenting a project on low-cost reusable and eco-friendly sanitary pads and sterilisation machines for rural India.

File Description	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:

FISAT takes initiatives in organizing various events and programmes for moulding the students and staff to become responsible citizens by sensitizing them to the constitutional obligations: values, rights, duties and responsibilities of the citizens. Following are the various initiatives taken by the institution.

- During the first-year student induction program, various sessions on Universal Human Values, Professional Ethics, Fundamental duties, Directive Principles and Responsibilities of citizens are offered by experts.
- The institution also **offers two courses on Universal Human Values and the Indian Constitution** as a part of the University Curriculum.
- FISAT offers a **course on Disaster Management for UG and PG programmes** as per the university curriculum to raise awareness of the roles and responsibilities of students in potential preparedness and response measures during a natural calamity so as to serve the society better.
- Every year institution celebrates Republic Day and Independence Day to infuse young minds with a sense of patriotism and nationalistic feelings. The Principal and senior staff members of the institution give messages on fundamental rights & duties. The institution organises essay writing, elocution and patriotic song competitions for students on the topic of fundamental rights and duties of the citizens.
- Orientation and awareness programmes on topics such as Child and Women related Laws,

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Counselling, Consumer Protection Act, Cyber Laws, Digitization and Cashless Transaction, Electoral Rights and duties etc. are organised.

- Seminars are organised on **World Day against Child Labour**to create awareness in the students regarding the policies and laws for dealing with child labour.
- FISAT Alumnus Ms. Reeshma Ramesan IPS (ASP CCR Ranchi, Jharkhand) interacted with the students on the theme 'Moulding Socially Committed Professionals'.
- Students were trained in Future Engineering to ensure sustainable development of the society by Dr. Muralee Thumarukudi, Chief, Disaster Reduction- UN Environment.

FISAT organised 'Reboot Kerala Hackathon 2020' in association with the Additional Skill Acquisition Programme (ASAP), Government of Kerala in which young techies tried to find solutions to the problems faced by the health and social justice departments of the Government of Kerala.

File Description	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	<u>View Document</u>
Any other relevant information	View Document

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

Response:

The institution celebrates national festivals and commemorative days on campus. All students enthusiastically participate in such events. The institution also organises special programmes on the occasion of the birth or death anniversaries of great Indian personalities. Activities are conducted in the

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most appropriate manner to commemorate and celebrate the following days.

- Gandhi Jayanti Celebrations: The institution celebrates Gandhi Jayanti every year on the 2nd October with community services. As part of this, the NSS unit of the institution organises 'Service Week' with the motto of Swachh Bharat. Various lectures are also organised on Gandhian philosophy, teachings and ideals.
- National Youth Day Celebrations: National Youth Day is observed on 12th January of every year
- National Science Day Celebrations: The institution celebrates National Science Day on 12th June every year.
- **National Unity Day:** The birth anniversary of Sardar Vallabhai Patel is celebrated as National Unity Day on 31st October.
- **Independence Day:** India's independence is celebrated every year in the institution on the 15th of August with solemnity. As part of this, the National Flag will be hoisted at the institution.
- **Republic Day**: Republic Day is celebrated every year with flag hoisting and talks on national integration, the importance of the constitution, etc.
- World Environment Day: NSS unit of the institution in collaboration with various departments organises several activities on World Environment Day which falls on June 5 every year. The activities include the distribution of saplings, beautification of government offices by planting saplings, etc.
- Yoga Day: Highlighting the importance of physical and mental wellness Yoga Day is celebrated every year on June 21st with yoga demonstrations and talks.
- World Earth Day: It is celebrated on April 22nd. Various talks and seminars emphasizing the need to protect the natural habitat of the Earth to prevent climate changes and natural disasters are held on this day.
- National Engineers' Day is celebrated every year on September 15th with seminars and activities organized in recognition of Bharat Ratna Mokshagundam Visvesvaraya's contribution towards nation-building.
- International Women's Day is celebrated on March 8th every year with seminars and discussions on topics related to women's health, empowerment and security.
- **Kargil Vijay Diwas** is commemorated on July 26th to instill the spirit of patriotism and valour in youth.
- "International Day against Drug Abuse" was observed by organising talks in association with the Anti-Narcotics Cell.
- **NSS Day is celebrated** with a variety of programmes and competitions to commemorate Swami Vivekananda's 150th Birth Anniversary.

- Blood Donors Day, Reading Day, Anti Child Labour Day, World Heart Day, and Aids Day are observed by organising activities and talks.
- **Festivals:** The institution also celebrates national festivals like Onam, Diwali, Holi, Christmas, Eid-Ul-Fitr, etc.
- · World Energy Day, World Mental Health Day, International Computer Science Week, National Pollution Control Day, World Music Day, (schools)National Reading Day

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

7.2 Best Practices

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

Response:

Best Practice - 1

Title of the Practice - Innovative practices for Participatory Learning

Objectives of the Practice

The practice's objective is to enrich the learning experiences of the students by supplementing the traditional lecture method with participatory learning techniques. This would make the teaching-learning activity more effective and foster global competencies among students. To motivate students in this regard, the institution has constituted several cells, clubs and chapters of professional associations that organise numerous co-curricular activities and events to create a positive attitude and approach among young adult learners. This practice encourages students to exercise a participatory approach to learning which aids our quest for excellence in this technological era.

The Context

Traditional methods of delivering higher education have become less motivating to a large number of students. To succeed in today's world, engineers need to learn, unlearn, and relearn new skills. Along with the technical skills, they also need to develop superior interpersonal and communication skills. The

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feedback from the stakeholders, especially students, clearly indicates that the traditional lecture method alone is inadequate to sustain the students' interest and help them become industry-ready. They also need to develop superior learning skills, critical thinking skills, problem-solving skills, and technology-specific skills. To impart these skills, application-oriented and skill-based activities need to be introduced in all disciplines through a wide range of programmes offered by various cells, clubs and chapters of professional associations. The activities and events organised by these student associations would aid in imparting not just technical knowledge, but also leadership and management skills.

The Practice

The institution has active student associations in each department to organise and conduct various cocurricular and extra-curricular activities. One of the major events conducted annually by these associations is the exhibition of the main projects of final year students. This activity helps the knowledge transition to students in lower semesters and also in setting benchmarks for their upcoming projects. To nurture the student interests in specific areas, the college has constituted clubs such as Kerala Blockchain Academy Innovation Club (KBAIC), Electronics Hobby Club (EHC) and Maths club. The institution runs student chapters of professional bodies which include the American Society of Mechanical Engineers (ASME), Institute of Electrical and Electronics Engineers (IEEE), American Society of Civil Engineers (ASCE), Indian Concrete Institute (ICI), Instrumentation System Automation (ISA), Indian Society for Technical Education (ISTE), Association for Computing Machinery (ACM). In addition, a diaspora of activities ranging from Hackathons, International and National Conferences and Seminars, Panel Discussions, Extension and Outreach Activities, Project Exhibitions, Onsite learning and field visits, Creativity workshops, Product Development, Expert Talks, etc. are organised by different cells, clubs, and Professional chapters. Apart from participating in these events, students take leadership roles and are actively involved in planning, decision-making, and implementation. Sustained efforts are put forward by the staff-in-charges of various clubs, cells and committees to ensure the effectiveness of participatory learning strategies and hence bring about attitudinal changes in students with regard to acquiring knowledge and wisdom.

Evidence of Success

The first evidence of success is the substantial interest in the participation level of students. The confidence and enthusiasm among the students of different cells, clubs, and chapters of professional bodies are worth mentioning. The students have won international accolades, scholarships, and awards including the American Society Of Mechanical Engineers (ASME) Foundation Scholarship, Christopher L.Hoffmann Memorial Scholarship, and International Gas Turbine Institute (IGTI) Scholarship. These innovative practices enhance the technical skills of the student along with Professional self-initiative and Entrepreneurship skills. The student chapter of the Institute of Electrical and Electronics Engineers (IEEE) received grants worth 2848\$ in the year 2021 and was selected as the best student branch chapter (SBC) in IEEE Robotics & Automation Society (RAS) Kerala chapter. Several international conferences have been organized in association with professional bodies, and the number of student publications has improved. Project exhibitions are organised with the support of experts from professional bodies like ASME, American Society of Civil Engineers (ASCE), Indian Concrete Institute (ICI), IEEE etc. The students' employability has improved, which is reflected in the number of placement offers students have received, which tops in the year 2022.

Problems Encountered and Resources Required

- Since the events and programmes are in addition to the regular work, the students, as well as the faculty, had to put in extra hours and work on holidays to organise and conduct the same.
- Getting knowledgeable resource persons is difficult due to time constraints.
- Cost escalations due to unforeseen environmental factors.
- The attitude and motivation of staff and students connected with cells, clubs and chapters of professional bodies are enough to march forward.
- Infrastructure support from all other administrative departments/infrastructure and finance office for organizing programmes.

Best Practice - 2

Title of the Practice - Social Outreach and Extension Activities

Objectives of the Practice

FISAT always keeps social transformation and social justice well above individual prosperity and success. One of the core values of the institution is "social commitment." The institution believes that higher education institutions are responsible to all its stakeholders. It can be fulfilled only through continuous community engagement and fostering the social responsibility of the students and teachers. The objective of this practice is to catalyse new initiatives of community engagement to help the local community and contribute to the socio-economic development of the rural community. (85 words)

The Context

FISAT has a tradition of community engagement, and the institution is always committed to the progress and development of the local community. The institution has been organising several programmes to empower society and help the downtrodden. The programme's objectives were highly in tune with the Ministry of Human Resource Development initiatives on "Fostering Social Responsibility in Higher Education Institutions" in 2012. The institution has active NSS units and actively participates in the Unnat Bharat Abhiyan initiative of MHRD. (78 words)

The Practice

The institution has organised a good number of programmes with the purpose of educating and helping the society through continuous community engagement and extending support. The practices followed under this initiative are given below.

1. Social Change and Community Engagement

- Blood donation camps and stem-cell donation camps organised by various departments and clubs every year.
- Organ donation awareness programmes arranged for the staff and students
- Organised a programme "Hair for Hope" a hair donation programme, in association with Amala

Cancer Centre, Thrissur

- The departments visit orphanages on a regular basis and interact with the inmates. The students and teachers often celebrate important events with the members in orphanages.
- Home for the Homeless: The students offer financial and physical help to build homes for poor sections of society.
- To support the education of tribal children, mobile handsets were distributed in Adimaly and Marayoor, under the scheme Higher Education Boostage programme, in association with Janamaithri Police and Federal Bank Officers' Association.
- Observed Road Safety Week in association with NATPAC and Kerala Road Safety Authority.
- Provided land (free of cost) to Mookkannoor panchayat to construct an Anganawadi (P.V.Mathew Memorial Anganavadi, Mookkannoor).

2. Knowledge Sharing

- 'Hour of Code' Computer Awareness programme organised for school children every year by the Department of Computer Science.
- 'Fab@School' Technology Popularising Programme at schools all over Kerala through Mobile FABLAB
- Awareness programmes on Cashless Economy and Digital Banking organised to support the Central Government initiatives on Digital India.
- Maker's Fest is organised in association with Kerala Start Up Mission for social entrepreneurs to support the Make in India initiative of Central Government.
- Rural Innovators Meet is organised to encourage and support rural entrepreneurial activities.
- Awareness programme by the students on "Clean Ocean" organised at Munambam Harbour in association with an NGO PLan@Earth and MPEDA.

3. Disaster Management

- Staff and Students of FISAT contributed 10 lakhs to PM CARES Fund to support COVID relief initiatives of Central Government and 10 lakhs to Kerala Chief Minister's Relief Fund to support COVID relief measures.
- Staff and students of FISAT contributed 20 lakhs to Chief Minister's Relief Fund during the time of Kerala.
- Staff and Students of various departments participated in the survey and reconstruction process of flood affected houses in association with Angamaly Muncipality.
- Acted a centre for distributing relief materials to flood affected areas in 2018.
- The students took active participation in the cleaning process and making the homes ready for living.
- Ten Houses were constructed under the scheme "Punarjani" to help the poor and marginalised people who lost their houses during Kerala floods of 2018.
- 'Doctor on Wheels' Mobile FABLAB converted into a Geriatric clinic during the time of pandemic and served the society in association with Taluk Hospital, Angamaly.
- To support the vaccination drive of the Central Government, the NSS units of FISAT have actively served in the vaccination activities of Mookkannoor Panchayath and received special appreciation.
- Developed and donated a UV sanitisation machine to the Taluk Hospital, Angamaly.

4. Unnat Bharath Abhiyan

- The institution has adopted five villages Thuravur, Karukutty, Manjapra, Mookkannoor and Ayyampuzha under UBA programme of MHRD in 2018.
- A socio-economic survey of residents of these villages is completed.
- Computer Literacy programmes are organised in association with the panchayats in these villages as a part of skill development initiatives.

Evidence of Success

- The institution undertook the construction of ten houses in Chackola Colony, Angamaly.
- In the flood relief camp, materials worth Rs. 25,00,000 were distributed.
- The NSS units, FABLAB and Mobile FABLAB have received several awards and recognitions for the outstanding contributions made to the society during the time of flood and pandemic.

Problems Encountered and Resources Required

- Lack of time and no credits for students for many of the activities undertaken by them.
- Financial constraints are high as the institution is under the self-financed category.
- Appreciation letters may be provided by the institution to outstanding student contributors to social outreach and extension activities. Their contribution is also considered while selecting the 'Best Outgoing Student.
- More collaborations with NGOs are initiated to overcome the financial constraints faced.

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

FISAT vision and mission aims at moulding globally competent professionals and technocrats with social commitment. This is achieved by "Education through Experience for Integral Development", an inclusion of activities and engagements involving students, faculty, community and environment. FISAT aims to ensure the integral development of all its students through an enriching learning experience that will help them to realise their true potential and excel in all walks of life.

Title: "Education through Experience for Integral Development" – A unique experience of "Moulding Professionals with Social Commitment"

The Distinctiveness

"Education through Experience for Integral Development" – The Methodology

- Academic innovation to develop FISATians into socially-committed human-beings
- Programmes designed to mould value-based, socially-committed, competent, industry-ready

citizens

- Prudently drafted activities/events to influence the student's personality
- Transformation to industry-ready, globally competent, socially sensitive and complete individuals

"Education through Experience for Integral Development" at FISAT has four dimensions.

Dimension 1: Conceptual Learning, where students are introduced to concepts and theoretical framework through curriculum teaching, projects, case methods, lectures, etc. and thus, into real world.

- One hundred and thirty-three Add On courses are offered to students to keep them abreast with the industry requirements.
- Participation of students and faculty in projects, conferences and research at national and international levels.
- MoU with State Government for Additional Skill Acquisition Programme (ASAP)
- NPTEL local chapter which won several accolades for encouraging students to take up MOOC courses.
- Student enrichment programs like GATE coaching are offered for fast learners, while remedial classes, tutoring systems, and peer-learning circles help slow learners to achieve their potential.
- A dedicated team composed of group advisors, Heads of Departments, Alumni, Placement Coordinators, Professional counsellors, and Industry Mentors to provide guidance and mentor for the students.

Dimension 2: Education through Experience, where students experience practical life through innovative methodologies like international and national industrial visits, FABLAB, Technical workshops, Project Expos, Field visits etc.

- More than 90% of the courses have projects/hands-on training opportunities for students.
- Industry internships and projects
- To empower the students to become industry-ready, socially committed individuals who can deliver technological and entrepreneurial solutions to the issues faced by society, they are provided with state-of-the-art facilities like Fablab, Robotics Lab, etc., for gaining hands-on experience to enhance their practical knowledge.
- A wide range of activities organised by various cells and clubs to encourage participative and experiential learning.
- MoUs with Industry to facilitate student participation in consultancy and project works.
- Organises state-level, and national-level competitions like Ideathons and Hackathons in association with various departments of the Government of Kerala and encourages students to find technological solutions to social problems.
- Departmental and institutional technical associations like ECHO, THYRA, ASME, IDEA, IEEE, ISTE etc. organize project exhibitions and conduct technical programs.

Dimension 3: Professional & Industry Competence, where students are moulded into complete

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individuals by the inculcation of key skills like communication, analytical skills, etc. through various training programmes.

- Innovation and Entrepreneurship Development Centre (IEDC) and Institution Innovation Council (IIC) for instilling entrepreneurial skills.
- Collaboration of society, faculty and students to undertake research programmes.
- Regular Executive Grooming, Personality Development and Skill Development sessions.
- Collaborations with International Professional societies and chapters are established to provide professional growth and connectivity for the advancement of engineering professionals. Chapters of various professional bodies like IEEE, ISTE, CSI, SAE, SAME etc are functioning in the institution to promote student technical activities.
- Associations with various National/State departments/Corporate agencies for Technology Popularisation Programmes.
- Corporate Talks, Technical Sessions by subject experts, Enrichment Lectures and Industry Interaction programmes offered regularly to the students thereby ensuring continuous interaction with industry professionals.
- Industry Internships and projects, guided seminars, simulation, aptitude training and communication labs to enrich the professional competencies of the students.

Dimension 4: Social Competence, where the social and environmental consciousness of the students are fostered through a wide range of awareness programmes and activities offered under the banner of various clubs and cells.

- Active participation of students is encouraged in social outreach and sensitisation programmes through various cells like NSS, Unnat Bharat Abhiyan (UBA), SWAN, SAME, ASME, IEEE, FMS etc.
- Experts offer various sessions on Universal Human Values, Professional Ethics, Fundamental duties, Directive Principles, and Responsibilities of citizens.
- Enrichment lectures on topics of societal relevance along with disaster Management Course for UG and PG programmes to raise the awareness of the roles and responsibilities of students in potential preparedness and response measures during a natural calamity are offered to serve society better.
- An active blood donor's forum is functioning on campus.
- Emphasizing the importance of sports and physical activity in maintaining a healthy mind, FISAT provides ample physical fitness facilities to students and encourages them to participate in games and sports activities. Facilities for indoor and outdoor sports and games, including cricket, football, basketball, volleyball, badminton, table tennis, etc, are provided. A well-equipped gymnasium is available for use by all students and staff. The institution encourages the students to compete in institutional and university-level sports competitions.
- Students with an inclination to arts, academic and literary activities are given opportunities to participate in institutional level and university level arts and literary competitions through Arts club, Maths Club, Rolling stones, etc.
- Inter and Intra collegiate arts festivals like Bharatham, Arangu, etc. are conducted to bring out the artistic talents of students. Furthermore, students interested in literary activities like debate, essay writing etc. are encouraged to exhibit their skills through the Rolling Stones club.
- Students are encouraged to participate in decision-making processes to have greater involvement and responsibility in various roles in the future. An active student council is functioning in the institution. The institution also ensures student representation in various academic and administrative bodies.

Way Ahead

FISAT aims at moulding professionals and technocrats with social commitment. This is achieved by exposing the stakeholders to social problems and providing them platforms to explore technological and entrepreneurial solutions for these problems, thereby contributing to nation-building. The strategic plans of FISAT are continuously revisited to adapt to the changing environment to achieve its vision and mission.

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

5. CONCLUSION

Additional Information:

Prominent achievements & milestones of the Institution are:

- An ISO 9001 Certified Institution since 2004.
- Obtained NBA Accreditation for five undergraduate programmes.
- FISAT received the award of 'Best Innovation and Entrepreneurship Development Centre' by Kerala Startup Mission during 2016-2017.
- FISAT won the recognition of 'Valuable Local Chapter' with a rating of A By NPTEL 2019
- FISAT won the 'Best Private Institution Award for Project Based Cultivation' instituted by the Department of Agriculture, Govt. of Kerala 2016.
- FISAT was adjudged the 'Best Educational Brand' by Economic Times Group, New Delhi.
- Competition Success Review in its annual survey of students for the quality of engineering colleges has awarded FISAT the rank of 'Third Best Engineering College of Kerala'.
- FISAT Won the 'Best Institute for Excellence in Engineering Education' Unfolding human Elements in Technology' instituted by the Future Kerala Educational Conclave in 2018.
- TIMES Cybermedia Group Pvt. ltd has awarded FISAT the 'Best Research Oriented Private Engineering College in Kerala 2017'.
- FISAT achieved a Special Jury Mention under the category of 'The Environment and Green Initiatives' instituted by the Kerala Management Association (KMA) in 2017.
- FISAT received a 'Corporate Social Responsibility Award' instituted by Kerala Management Association (KMA) in 2017 under the category of 'The Environment and Green Initiatives' for their ventures in environmental upgradation.
- FISAT won the 'Best Institute for Excellence in Professional Engineering Education 2018' instituted by ANRIA, Abu Dhabi.
- FISAT received the Business Deepika Excellence award 2018' from Mr. Ravi Shankar Prasad, Union Minister for Electronics and Information Technology.
- 'Excellence in SAP Training' at the SAP-EME University conclave in 2019The Economic Times Group has awarded FISAT the title of 'Best Education Brand, 2017'.
- FISAT received the Best Entrepreneurship Enabler Award' instituted by Kerala Start Up Mission in 2018.
- Top Performer Award' for FISAT FAB LAB in the Fab Challenge 2019-20 by Kerala Start-Up Mission
- 'Certificate of Recognition' by Mahatma Gandhi National Council of Rural Education, Hyderabad. This was to recognize the Federal Institute of Science and Technology Ernakulam District, Kerala State as a member of the Beat Covid Campaign initiative.

Concluding Remarks:

Federal Institute of Science and Technology (FISAT) was born out of the epoch-making decision of a few officers of the Federal Bank who, enthused by their sense of social commitment and bold divergent thinking, moving beyond traditional perceptions of trade unionism to put their savings to start an institution that offers quality professional technical education. Twenty years have passed since its inception and FISAT has emerged as a preferred brand for engineering education in Kerala. With a strong focus on community, FISAT is

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technologically primed and innovation-driven. The institution aims to bring out technically competent, valuedriven professionals who would be assets to the country and to the community. The core values of FISAT aligns well with the accreditation framework of NAAC as detailed below.

- 1) Contribution to National Development FISAT nurtures the young professionals to blossom into morally upright, emotionally resilient and intellectually sharpened citizens of India through a wide range of curricular and co-curricular activities.
- (2) Fostering Global Competencies among Students The institution fosters global competencies among the students by making them innovative, creative and entrepreneurial in their approach and to face the global challenges successfully. Incubation Centre and IIC, IEDC, along with the tie-ups and collaborations with industry and academia enrich the global competencies of students.
- (3) Inculcating a Value System in Students At FISAT, a strong sense of human values are developed through curricular and co-curricular interventions. Extension activities and community-based programmes sensitise students and make them better human beings
- (4) Promoting the Use of Technology Being a technological institution with a strong social commitment, FISAT gives opportunities to the students to develop technological solutions for social issues, through Hackathons, Ideathons and live projects. Moreover, technological interventions at the time of crises like floods and pandemic also promote the use of technology. Technology Popularisation Programmes for schools in rural areas are also organised by the institution.
- 5) Quest for Excellence 'Aspiration 2030' is the strategic plan that showcases the long-term goals of the institution of becoming an autonomous institution or deemed university and a prominent research institution in technical education.

6.ANNEXURE

1.Metrics Level Deviations

Metric ID Sub Questions and Answers before and after DVV Verification

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

Answer before DVV Verification : A. All of the above Answer After DVV Verification: A. All of the above

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

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

Answer before DVV Verification: 16 Answer after DVV Verification: 14

Remark: Excluding Ph.D HEI is offering 14 programmes

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

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
26	23	32	29	23

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
26	21	32	29	23

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

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

2020-21	2019-20	2018-19	2017-18	2016-17
1606	1581	2106	2052	1754

2020-21	2019-20	2018-19	2017-18	2016-17
1649	1338	2114	2050	1751

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
335	326	333	315	328

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
208	289	330	146	214

- 1.3.3 Percentage of students undertaking project work/field work/ internships (Data for the latest completed academic year
 - 1.3.3.1. Number of students undertaking project work/field work / internships

Answer before DVV Verification: 1494 Answer after DVV Verification: 1494

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

Answer before DVV Verification : A. Feedback collected, analysed and action taken and feedback available on website

Answer After DVV Verification: A. Feedback collected, analysed and action taken and feedback available on website

- 2.1.1 Average Enrolment percentage (Average of last five years)
 - 2.1.1.1. Number of students admitted year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
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2.3.3	Ratio cacaden 2.3 Average 2.6 during	3.1. Numb Answer bet Answer aft ge pass pe 3.1. Numb g the last fi	er of mento fore DVV Ve er DVV Ve rcentage of oer of final ive years	ors Verification rification: 1	: 144 44 during last nts who pa	five years	ssues (Data for the late	
	Ratio cacaden	of students nic year) 3.1. Numb Answer bei Answer aft ge pass pe	er of mentor fore DVV Ver DVV Ver COVV Ver COVV	ors Verification rification: 1	mic and oth : 144 44 during last	ner related i		
2.3.3	Ratio cacaden	of students nic year) 3.1. Numb	s to mentor er of mento	r for acade	mic and oth		ssues (Data for the lat	est complet
2.3.3	Ratio	40 of students	s to mentor				ssues (Data for the late	est complet
			56	72	69	67		
	Г	2020-21		-				
	A		2019-20	2018-19	2017-18	2016-17		
	_	Answer Af	ter DVV Vo	erification :				
		45	56	72	69	67		
		2020-21	2019-20	2018-19	2017-18	2016-17		
	five year	ars		Verification:		i tilo Tosoi ve	reacegories year wise o	ading the it
		2.1 Numb	er of actual	students ac	lmitted fron	n the recerve	d categories year-wise o	during the l
.1.2	,	_	_	_		_	rs (exclusive of super	-
.1.2	Averag	ge nercení	age of seat	s filled aga	inst reserv	ed categorie	s (SC, ST, OBC, Divya	angian, etc.
		999	1008	1008	1008	1008		
	Г	2020-21	2019-20	erification : 2018-19	2017-18	2016-17		
		A newer Af	tor DVV V	arification :				
		999	1008	1008	1008	1008		
	Г	2020-21	2019-20	2018-19	2017-18	2016-17		
				tioned seats Verification:	•	during last	five years	
		712	828	806	874	879		
		2020-21	2019-20	2018-19	2017-18	2016-17		
	A	Answer Af	ter DVV Ve	erification :				
			828	806	874	879		

2020-21	2019-20	2018-19	2017-18	2016-17
740	845	818	822	844

2020-21	2019-20	2018-19	2017-18	2016-17
737	845	818	822	844

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

Answer before DVV Verification:

2020-21 2019-20 2018-19 2017-18 2016-17

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
5.56	1.078	1.05	0	0.235

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
5.56	1.078	1.05	0	0.235

- 3.1.2 Percentage of teachers recognized as research guides (latest completed academic year)
 - 3.1.2.1. Number of teachers recognized as research guides

Answer before DVV Verification: 16

Answer after DVV Verification: 10

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

2020-21	2019-20	2018-19	2017-18	2016-17
6	5	2	0	2

2020-21	2019-20	2018-19	2017-18	2016-17
6	5	2	0	2

3.1.3.2. Number of departments offering academic programes

Answer before DVV Verification:

2020-21 2019	9-20 2018-19	2017-18	2016-17
--------------	--------------	---------	---------

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
25	26	26	15	10

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
20	20	20	11	7

- 3.3.1 Number of Ph.Ds registered per eligible teacher during the last five years
 - 3.3.1.1. How many Ph.Ds registered per eligible teacher within last five years

Answer before DVV Verification: 26 Answer after DVV Verification: 27

3.3.1.2. Number of teachers recognized as guides during the last five years

Answer before DVV Verification: 16 Answer after DVV Verification: 16

- Number of research papers per teachers in the Journals notified on UGC website during the last five years
 - 3.3.2.1. Number of research papers in the Journals notified on UGC website during the last five years.

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
29	24	18	16	10

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
17	24	18	16	10

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

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
1	7	5	13	5

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	0

Remark: HEI has not provided any e-copies for Extension awards (NSS/NCC/Red Cross). Local awards are not to be considered

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

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
52	16	13	16	9

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
17	7	8	9	8

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

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

2020-21	2019-20	2018-19	2017-18	2016-17
2000	2454	2387	2550	1470

2020-21	2019-20	2018-19	2017-18	2016-17
1825	1048	1800	910	876

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
203	355	277	336	206

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
25	17	14	14	6

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
11	18	15	8	4

Answer After DVV Verification:

ms wer ritter by the trifficultion.				
2020-21	2019-20	2018-19	2017-18	2016-17
10	17	13	7	3

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

2020-21	2019-20	2018-19	2017-18	2016-17
74.90	213.44	304.30	1353.87	1535.74

Answer Aft	ter DVV Ve	erification:		
2020-21	2019-20	2018-19	2017-18	2016-17

2020 21	2017 20	2010 17	2017 10	2010 17
74.9	213.44	304.30	1353.87	1535.74

- 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

Answer before DVV Verification: A. Any 4 or more of the above Answer After DVV Verification: A. Any 4 or more of the above

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
25.6	34.44	43.09	60.19	43.35

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
25.6	34.44	43.09	60.19	43.35

- 4.2.4 Percentage per day usage of library by teachers and students (foot falls and login data for online access) during the latest completed academic year
 - 4.2.4.1. Number of teachers and students using library per day over last one year

Answer before DVV Verification: 110 Answer after DVV Verification: 167

4.3.3 **Bandwidth of internet connection in the Institution**

Answer before DVV Verification : A. ?50 MBPS Answer After DVV Verification: A. ?50 MBPS

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

academic support facilities) excluding salary component year-wise during the last five years (INR in lakhs)

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
191.24	686.36	657.46	651.76	623.94

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
191.24	686.36	657.46	651.76	623.94

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
341	361	520	332	506

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
327	329	360	347	416

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
471	1286	367	1087	928

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
471	1286	367	1087	928

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

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
2049	1907	2024	1540	2000

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
1450	1085	820	716	1039

- The Institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases
 - 1. Implementation of guidelines of statutory/regulatory bodies
 - 2. Organisation wide awareness and undertakings on policies with zero tolerance
 - 3. Mechanisms for submission of online/offline students' grievances
 - 4. Timely redressal of the grievances through appropriate committees

Answer before DVV Verification : A. All of the above Answer After DVV Verification: A. All of the above

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
20	74	78	64	58

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
20	32	48	27	31

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

Answer before DVV Verification : A. ? 5 Lakhs Answer After DVV Verification: A. ? 5 Lakhs

6.2.3 Implementation of e-governance in areas of operation

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

Answer before DVV Verification : A. All of the above Answer After DVV Verification: A. All of the above

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

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
4	21	44	50	13

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
4	21	44	50	13

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 intitiatives with other institution(s)
- 3. Participation in NIRF
- 4. any other quality audit recognized by state, national or international agencies (ISO Certification, NBA)

Answer before DVV Verification: A. All of the above Answer After DVV Verification: A. All of the above

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

Answer before DVV Verification: A. 4 or All of the above Answer After DVV Verification: A. 4 or All of the above

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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

Answer before DVV Verification: A. Any 4 or all of the above

Answer After DVV Verification: B. 3 of the above

Remark: DVV has updated the data as per the documents provided by the HEI

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

Answer before DVV Verification: A. Any 4 or All of the above Answer After DVV Verification: A. Any 4 or All of the above

Quality audits on environment and energy are regularly undertaken by the Institution and any awards received for such green campus initiatives:

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

Answer before DVV Verification: A. Any 4 or all of the above

Answer After DVV Verification: C. 2 of the above

Remark: DVV has updated the data as per the documents provided by the HEI

7.1.7 The Institution has disabled-friendly, barrier free environment

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

Answer before DVV Verification: A. Any 4 or all of the above

Answer After DVV Verification: B. 3 of the above

Remark: DVV has updated the data as per the documents provided by the HEI

7.1.10 The Institution has a prescribed code of conduct for students, teachers, administrators and

other staff and conducts periodic programmes in this regard.

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

Answer before DVV Verification : A. All of the above Answer After DVV Verification: A. All of the above

2.Extended Profile Deviations

Extended	Questions			
Number o	of courses of	fered by the	Institution	across all p
A 1	.C DXXXX			
í	efore DVV V		2017 10	2016 17
2020-21	2019-20	2018-19	2017-18	2016-17
641	602	635	633	587
Answer A	fter DVV Ve	erification:		
2020-21	2019-20	2018-19	2017-18	2016-17
508	504	529	552	514
		J		
Number o	f programs	offered yea	r-wise for la	st five years
Answer be	efore DVV V	erification:		
 	2010.20	2018-19	2017-18	2016-17
2020-21	2019-20	2010 17	2017 10	
2020-21 16	16	14	14	14
16		14		
16	16	14		
16 Answer A	16 fter DVV Ve	14 erification:	14	14
Answer A 2020-21	16 fter DVV Ve 2019-20	14 erification: 2018-19	2017-18	2016-17
Answer A 2020-21 15	16 fter DVV Ve 2019-20	14 erification: 2018-19 14	2017-18 14	2016-17 14
Answer A 2020-21 15 Number 6	fter DVV Ve 2019-20 15 of students y	erification: 2018-19 14 ear-wise du	2017-18 14	2016-17 14
Answer A 2020-21 15 Number 6	16 fter DVV Ve 2019-20 15	erification: 2018-19 14 ear-wise du	2017-18 14	2016-17 14
Answer A 2020-21 15 Number 6	fter DVV Ve 2019-20 15 of students y	erification: 2018-19 14 ear-wise du	2017-18 14	2016-17 14
Answer A 2020-21 15 Number of	fter DVV Ve 2019-20 15 of students y	erification: 2018-19 14 ear-wise du /erification:	2017-18 14 ring last fiv	2016-17 14 e years
Answer A 2020-21 15 Number of 2020-21	16 fter DVV Ver 2019-20 15 for students y 2019-20	erification: 2018-19 14 ear-wise du /erification: 2018-19	2017-18 14 ring last fiv	2016-17 14 e years
Answer A 2020-21 15 Number of 2020-21 2626	16 fter DVV Ver 2019-20 15 for students y 2019-20	14 erification: 2018-19 14 ear-wise du ferification: 2018-19 2872	2017-18 14 ring last fiv	2016-17 14 e years
Answer A 2020-21 15 Number of 2020-21 2626	16 fter DVV Ver 2019-20 15 f students y 2019-20 2774	14 erification: 2018-19 14 ear-wise du ferification: 2018-19 2872	2017-18 14 ring last fiv	2016-17 14 e years

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
171	178	178	178	178

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
171	178	178	178	178

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
762	855	872	870	913

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
760	855	872	870	913

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
191	203	203	211	215

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
191	203	203	211	215

3.2 Number of sanctioned posts year-wise during last five years

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
191	203	203	211	215

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
191	203	203	211	215

4.1 Total number of classrooms and seminar halls

•	Total Exp	enditure exc	cluding sala	ry year-wis	e during last	five years (INR in Lakh
A	Answer be	fore DVV V	erification:			_
2	2020-21	2019-20	2018-19	2017-18	2016-17	
[[814.06	1745.80	1687.68	2600.32	2732.05	
A	Answer Af	ter DVV Ve	rification:			-
	2020-21	2019-20	2018-19	2017-18	2016-17	
{	814.06	1745.80	1687.68	2600.32	2732.05	