



# **SELF STUDY REPORT**

**FOR**

**1<sup>st</sup> CYCLE OF ACCREDITATION**

## **SIR ISSAC NEWTON COLLEGE OF ENGINEERING AND TECHNOLOGY**

**SIR ISSAC NEWTON COLLEGE OF ENGINEERING AND TECHNOLOGY,  
VELANKANNI ROAD, PAPPAKOVIL, ANTHANAPETTAI (PO) NAGAPATTINAM**

**611102**

**[www.sincet.ac.in](http://www.sincet.ac.in)**

**Submitted To**

**NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL**

**BANGALORE**

**June 2024**

# 1. EXECUTIVE SUMMARY

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## 1.1 INTRODUCTION

Sir Issac Newton Educational Institutions, operated by the Thandapani Pillai and Sons Educational and Charitable Trust, are located in Nagapattinam District, Tamil Nadu. Established to provide comprehensive education in an economically disadvantaged rural area, the Trust, led by prominent industrialists and educationists, oversees various educational initiatives. Situated on a spacious campus spanning over 10 acres near the National Highway, the institution is affiliated with Anna University, Chennai, and approved by AICTE, New Delhi. Sir Issac Newton College of Engineering & Technology, founded in 2010, aims to offer higher education opportunities to the less privileged. It provides 6 undergraduate programs including Mechanical Engineering, Agricultural Engineering, Computer Science and Engineering, Electronics and Communication Engineering, Artificial and Data Science Engineering, and Information Technology, each with an intake of 60 students. Additionally, the college started 4 postgraduate programs in Power Systems Engineering, Applied Electronics, Manufacturing Engineering, and Computer Science and Engineering in the same year.

The institution received ISO 9001-2015 certification and is recognized under 2(f) of the UGC Act, 1956. It offers modern teaching facilities and architecture, creating a vibrant learning environment with eco-friendly infrastructure. State-of-the-art amenities like computer labs, ICT-enabled classrooms, and multi-disciplinary workstations provide practical experience for engineering students. The faculty, composed of experienced members with numerous doctorates, focuses on holistic student development across ethical, moral, and academic dimensions. The institution emphasizes counseling, parental care, and discipline, promoting managerial intelligence and national values among students. It boasts an excellent library with a wide array of technical books, journals, and digital resources. The institution consistently produces 90% graduates, highlighting strong academic performance and preparation for global challenges.

The institution's research activities employ a distinctive technical approach to enhance students' skills in specific fields. Faculty and students are encouraged to share their technical knowledge and social commitments through outreach activities. Continuous club activities motivate and inspire students from diverse backgrounds to cultivate their talents through persistence. The institution excels in sports with playgrounds, indoor games, gym, and yoga facilities. Its excellent hostel offers a comfortable stay with comprehensive amenities. Through national and international partnerships with industries, students receive updated technical training to meet practical industrial demands. Student-led projects contribute positively to the engineering sector, supported by valuable campus guidance. The institution's vision, mission, and quality policies are clearly defined, published, and communicated to all stakeholders.

### **Vision**

To establish state-of-the-art engineering education with a definition of high quality in technical, professional and research skills including ethical character, producing engineers to meet the various needs of the Society, Nation and the World.

### **Mission**

1. To provide the platform to upgrade the teaching faculty with high standards of quality education, technical training and developments.
2. To establish an encouraging learning environment to create and improve the student's capacity-building skills.
3. To provide adequate infrastructural facilities to develop professional and research skills in line with global trends.
4. To create a linkage with other educational institutions at the national and international level for knowledge transformation.
5. To provide opportunities to mould the students' character and personalities on professional ethics and moral value

## 1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

### Institutional Strength

- The institute is sponsored by 16 years old society with philanthropic management.
- A team of committed and dedicated teaching faculty with good number of Ph.Ds.
- 60% of UG programs are permanently affiliated.
- ISO 9001:2015 certified Institution.
- UGC recognised institution under section 2f of 1956 act
- Member of NPTEL Local Chapter and Institute Innovation Council.
- Membership in National Digital Library (NAD) and other online platforms.
- Academic Process – Outcome-Based Education with Choice-Based Credit System for UG/PG programs.
- 62 State of the art laboratories with modern software tools.
- 11 acres of land area with adequate infrastructure.
- Encouraging research activities with funding assistance by the college.
- Ragging free campus.
- ICT-enabled classrooms, Wi-Fi-enabled campus with digitalized library
- The Department of Electrical Engineering is recognized as a research department by Anna University.
- Conducive environment for academics with Skill-based distinct training
- Student-centric functioning with mentoring, counseling through teachers and effective academic monitoring as a best practice.
- As a part of community development, more than needy and underprivileged students are provided technical education with a full or partial fee waiver as another practice.
- Representation of senior faculty members in various committees of other institutions and universities of repute.
- Environmentally clean campus with more than well-maintained green trees.
- A regular recipient of University Rank holders for various programs at the university level.
- 5 years student-staff ratio is 1:14.
- The entire campus is under CCTV surveillance.
- The average teaching experience of a faculty member is more than 5 years.
- A good number of publications by faculty members in reputed referred journals.
- Financial assistance for academic and research development.

### **Institutional Weakness**

- The faculty members' research papers and patents publications are limited
- Students' projects focused on societal needs are limited.
- More Functional associations with professional societies such as IETE, ISTE, SAE-India, CSI, etc are needed.
- More faculty members with PhD qualifications need to be recruited.
- Inadequate PG student admissions.
- Core company placements are limited.
- Less number of students pursuing higher education.
- Involvement of Alumni at the Institute level is limited.
- More funded research activities need to be carried out.

### **Institutional Opportunity**

- The Institution programs must be accredited
- To arrange more number of FDPs /STTPS/ National Level /International Level conferences.
- More departments need "Research Departments" recognition.
- Scope for interdisciplinary and sponsored projects.
- Stronger connection with the more experienced alumnus.
- Consultancy and testing work with local industries.
- Promoting Student internship.
- Developing entrepreneur skills.
- Make the institution a preferred choice for students.
- Improving the ranking of the institution in all means of quality.

### **Institutional Challenge**

- To face high competitive environment.
- To cope with the fast change of technological transformations.
- To bring more funded research projects for research and development.
- Encouraging students for competitive examinations and higher studies.
- Networking and strengthening relationships with stakeholders.
- More focus on Industrial training for faculty and students.
- Promote the college in the areas of excellence, value, and quality.
- Need to improve towards updated engineering education and research.
- Converting remote rural students into a smart engineer as expected by the society

## **1.3 CRITERIA WISE SUMMARY**

### **Curricular Aspects**

Sir Issac Newton College of Engineering and Technology (SINCET) are affiliated to Anna University, Tamilnadu and adopt the CBCS curriculum designed and prescribed by Anna University with its methods of

OBE. At the beginning of every academic year, Anna University releases the academic schedule and the institution's academic council headed by the Principal prepares the Academic Calendar of the Institution each department frames an academic calendar including the events and assessments of the concerned department as per the university calendar. The Principal conducts meetings with HODs and develops strategies for implementing the curriculum. Course files are prepared by the faculty with details of the teaching plan, teaching methodologies, notes, materials, question bank etc and distributed to the students. The Internal Assessment Tests are conducted as per the academic calendar to evaluate the teaching-learning process. The Institution offered 64 value-added/add-on/NPTEL /SWAYAM courses for the self-development and professional skill enhancement of the students in which 90.39% of the enrolled students participated and benefited.

The curriculum is incorporated and aligned with industry standards and technological advancements and it includes courses like crosscutting issues relevant to Professional Ethics, gender and Human Values, Environment and Sustainability. The institution ensures content beyond the university-prescribed syllabus is delivered to the students through skill based platforms during fieldwork; internships, industrial visits and the given practical exposure from the internship/fieldwork/project work during their course of study 63% of students are benefitted.

The college has the continuous process of obtaining feedback through the academic performance and ambience of the institution's various stakeholders such as students, teachers, alumni and Employers to enrich the effective environment for the teaching and learning process. The feedback obtained is analysed and recommendations of action to be taken are informed to the individuals concerned and the action taken report is uploaded to the institute website.

### **Teaching-learning and Evaluation**

Sir Issac Newton College of Engineering (SINCET) and Technology follows the direction of the Directorate of Technical Education, Tamil Nadu and the Single Window Counseling system of Anna University for the admission Process and achieved 67.27%. As per the Gazette Notification of the Government of Tamil Nadu, the Reservation Policy is implemented and 73.92% succeeded during the assessment periods. The institution has sanctioned and recruited 100% highly qualified and experienced full-time faculty members and maintains a 12:1 student and faculty ratio including 10 doctorates for better quality of teaching. The institution has created a platform for creative education. It cultivates a student-centric learning environment to ensure the students' thinking ability on their technical ideas to understand well and diverse learning styles through ICT tools like visual aids or videos for online classes for effective teaching and learning process.

The internal evaluation process is characterized by transparency, facilitated by a centralized exam cell under IQAC of SINCET to enhance the quality sustenance in the assessment process. The students are assessed through assignments, tutorials, internal assessments, quizzes and end-semester exams. Bloom's levels of knowledge of questions are indicated in the question papers. Based on the PO, PSO mapping with CO of individual subjects the attainment levels of POs PCOs are calculated and analyzed and actions are taken for improvement. For any grievance related to end-semester assessment during external evaluation conducted by Anna University, the college follows a transparent mechanism that is time-bound and efficient. As an outcome of these measures, the SINCET secures an average of 89% pass percentage in the final exams and produces many graduates every year. The institution's online feedback system comprises stakeholders' views on academic expectations ensuring the effectiveness of the educational system executed at the institutional level and recommends corrective action.

## **Research, Innovations and Extension**

The collaboration among Research, Innovation, and Extension is paramount in accelerating progress and development across diverse domains. Our institution has secured research grants totalling Rs 20 Lakhs from Non-Governmental Organizations to channel technical ideas into practical solutions. The institution is associated with the Indian Knowledge system and Intellectual property rights forums and conducted many programs with extension to facilitate the dissemination of knowledge and technologies for societal benefit. Our institution has fostered an environment conducive to innovation and knowledge creation. Faculty members are empowered to engage in research activities, while students are encouraged to participate in stimulating competitions organized by various entities. To cater to evolving academic and research needs, faculty enrichment programs are regularly conducted. Currently, we boast 08 Ph.D. holders with 06 faculty members actively pursuing their Ph.D. Over the past five years, we have organized 62 programs focusing on Research, Intellectual Property Rights (IPR), and Entrepreneurship to enrich the student experience. There has been a significant shine in research paper publications in reputable National and International Journals annually, with faculty members contributing 31 papers to UGC Care list Journals and Scopus-indexed publications. The institution registered in the IPR as an applicant through which our students and staff members are working for 2 patent publications. Additionally, our institution emphasizes students' involvement in addressing societal issues through various clubs and organizations, such as NSS, which has conducted 52 outreach programs aimed at societal enhancement. Furthermore, we provide students with hands-on experience through industry visits, in-plant training, and internships (30 days), fostering practical skill development. Moreover, our college has forged national and international 28 MoUs and 5 linkage certificates with esteemed organizations over the last five years, facilitating student opportunities for on-the-job training, internships, and projects

## **Infrastructure and Learning Resources**

Sir Issac Newton College of Engineering and Technology has adequate infrastructure and facilities, be it physical buildings, machinery, equipment, software, books, or other learning resources as per the statutory body directions.

An attractive ambience can be found at SINCET, which occupies 10.84 acres of green space with lawns and trees. The carpet space of the administrative (principal office, faculty and HOD cabins, IQAC, examination cell, general amenities, placement office, etc.) and boys and girls common room and hostels is also larger than needed. The carpeted area used for education (26 ICT-enabled classrooms, tutorial rooms, reading rooms and libraries, ICT-enabled seminar halls and auditoriums, workshops, smart classes, drawing halls, ICT-enabled 4 computer centres, etc.) exceeds the allotted space. The infrastructure and augmentation expenditure is 47.24% and the expenditure incurred on maintenance of physical facilities and academic supporting facilities to ensure the effectiveness of the system is 43.80%.

The SINCET's computing resources for teachers and students ratio is 4.46:1. The 241 computers, 10 printers, 4 legal application software programs, 22 multimedia projectors, 100 Mbps of internet bandwidth and 15 secure Wi-Fi access points are among the advanced IT facilities.

SINCET places a high value on holistic development, which is demonstrated by the facilities it offers for sports, yoga classes, and physical and mental health. A safe learning environment is provided for everyone by security measures like RO-purified drinking water, more than 15 surveillance cameras, and round-the-clock security guards.

The institution houses a 500 sq.m library stocked with 15000 volumes of books. Journals, periodicals, and digital resources like LMS, DELNET, NDL, TNDL & IIE Journals. SINCET provides a robust digital library, with 20 highly configured computers including high-speed internet connectivity for e-learning platforms. The campus offers sports facilities, including indoor and outdoor sports, gymnasiums, etc.

### **Student Support and Progression**

The institution students get benefited from an average of 82.12% meritorious scholarships as freeships that achieve high scores in qualifying examinations and scholarships from governmental and non-governmental organizations. Emphasizing holistic student development, the institution offers training and conducted programs in soft skills, language proficiency, and effective communication through its EDI cell, Yoga and other fitness health-related awareness. The institution also conducted programs in technical capacity building for the students in advanced information and communication tools. The institution offers specific training and 65.42% of students benefitted from competitive exams like TOEFL, TANCET, GATE, TNPSC, and UPSC, providing career counselling services as well.

Institutional support structures include anti-ragging measures, grievance redressal mechanisms, and internal compliance committees, ensuring students feel comfortable voicing their concerns. A dedicated placement cell assists final-year students in securing suitable employment, providing training to alleviate interview anxiety and enhance aptitude, communication, and group discussion skills through which the institution achieved an average of 75.89% placements in leading companies from various sectors.

Sports and cultural activities play a pivotal role in fostering well-rounded personalities among students and contribute to zone, state and national levels, the institution actively engages with its alumni association to facilitate significant developments through their active participation and supporting students in all means of development. The registered alumni association contributes above 5 lacs as financial assistance to the institution and serves as a platform for the institution's development.

### **Governance, Leadership and Management**

Sir Issac Newton College of Engineering and Technology (SINCET) operates under a robust organizational framework of transparent governance, characterized by clear policies, procedures, and decentralized yet unified decision-making processes from the Management and Governing Council are efficiently executed by the College Principal, in collaboration with Heads of Departments and specialized committees. The institute engages in strategic planning processes to set clear goals, objectives, and priorities aligned with its vision and mission. The institution emphasizes quality assurance mechanisms in NEP implementation, and quality sustained developments through IQAC. The institution has progressively deployed a five-year perspective plan (2021-2026). SINCET has implemented robust HR policies and service rules to improve governance. They have embraced e-governance with biometric systems for staff, an online student reporting system, and an ERP for managing academic and administrative activities. The institution follows Anna University guidelines for examinations and utilizes a dedicated ERP system for administrative oversight. The governing Council supports staff welfare with benefits like free transportation, medical leave, and opportunities for professional development such as faculty programs and research. Financial assistance is provided for duty-related expenses and travel, while the IQAC ensures financial transparency through regular audits. Staff performance is evaluated using the Academic Performance Indicator, with top performers recognized through incentives and other acknowledgments. 74.19% of faculty have benefited through FDPs through professional development

programmes (PDP). The IQAC at the institution conducts regular internal and external audits each semester to ensure adherence to regulatory standards and accreditation requirements. These audits include academic and administrative assessments aimed at enhancing institutional governance through well-defined planning, execution, auditing, and constructive feedback utilization. The IQAC also evaluates the teaching-learning process and maintains standards through initiatives like MoUs. As a result, the institution continually evolves and actively participates in NIRF ranking procedures and obtains certifications aligned with international standards such as ISO.

### **Institutional Values and Best Practices**

Sir Isaac Newton College of Engineering and Technology conducts gender equity through various programs for embedding moral instruction and value education into the curriculum. The Institution Women Empowerment Cell, with its motto "Towards a self-empowered mind," aims to create a safe campus for women, addressing welfare and equal opportunities. Safety is further ensured through the Anti-ragging, Prevention of Sexual Harassment, and Disciplinary Committees. Regular gender audits and International Women's Day celebrations contribute to holistic student development.

Sustainability initiatives include biogas plants, solar street lights, LED bulbs, and automatic sensor lights, alongside water conservation measures like rainwater harvesting, farm pond irrigation, RO plant and e-waste and solid waste management are demonstrating environmental responsibility. Energy and green audits are routine, complemented by clean and green programs. The institution provides a lift, ramp, washroom and other comforts for physically challenged students.

As a secular campus, SINCET promotes diversity and inclusion by conducting orientations and celebrating cultural and national events. Social development activities like eye camps, medical camps, blood donation drives, and NSS initiatives are integral. We prioritize health and safety awareness, along with value-based education in yoga, meditation, and ethics.

Our institution focuses on two best practices: mentoring technocrats and institutional rural empowerment through scholarships, the college offers a complete fee reduction for students who need to discontinue their studies due to unforeseen circumstances. Fostering rural student empowerment is a distinctive approach and this comprehensive approach bridges academia and industry, ensuring student success and societal impact.



## 2. PROFILE

### 2.1 BASIC INFORMATION

Name and Address of the College	
Name	SIR ISSAC NEWTON COLLEGE OF ENGINEERING AND TECHNOLOGY
Address	Sir Issac Newton College of Engineering and Technology, Velankanni Road, Pappakovil, Anthanapettai (po) Nagapattinam
City	Nagapattinam
State	Tamil Nadu
Pin	611102
Website	<a href="http://www.sincet.ac.in">www.sincet.ac.in</a>

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal	A.kUmaravadivel	04365-220261	9443850603	-	principalcontact@sincet.ac.in
IQAC / CIQA coordinator	N.sUbramanyan	04365-220262	7010919524	-	subramaniyan@sincet.ac.in

Status of the Institution	
Institution Status	Self Financing

Type of Institution	
By Gender	Co-education
By Shift	Regular

Recognized Minority institution	
If it is a recognized minority institution	No

Establishment Details	
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State	University name	Document
Tamil Nadu	Anna University	<a href="#">View Document</a>

Details of UGC recognition		
Under Section	Date	View Document
2f of UGC	26-07-2023	<a href="#">View Document</a>
12B of UGC		

Details of recognition/approval by stationary/regulatory bodies like AICTE,NCTE,MCI,DCI,PCI,RCI etc(other than UGC)				
Statutory Regulatory Authority	Recognition/Approval details Institution/Department programme	Day,Month and year(dd-mm-yyyy)	Validity in months	Remarks
AICTE	<a href="#">View Document</a>	02-06-2023	12	

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

Location and Area of Campus				
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.
Main campus area	Sir Issac Newton College of Engineering and Technology, Velankanni Road, Pappakovil, Anthanapettai (po) Nagapattinam	Rural	10.84	7985

## 2.2 ACADEMIC INFORMATION

<b>Details of Programmes Offered by the College (Give Data for Current Academic year)</b>						
<b>Programme Level</b>	<b>Name of Programme/Course</b>	<b>Duration in Months</b>	<b>Entry Qualification</b>	<b>Medium of Instruction</b>	<b>Sanctioned Strength</b>	<b>No.of Students Admitted</b>
UG	BE,Computer Science And Engineering,Computer Science and Engineering	48	HSC	English	60	53
UG	BE,Mechanical Engineering,Mechanical Engineering	48	HSC	English	60	21
UG	BE,Electronics And Communication Engineering,Electronics and Communication Engineering	48	HSC	English	60	41
UG	BTech,Artificial Intelligence And Data Science,Artificial Intelligence and Data Science	48	HSC	English	60	59
UG	BTech,Information Technology,Information Technology	48	HSC	English	60	57
UG	BTech,Agricultural Engineering,Agricultural Engineering	48	HSC	English	60	50
PG	ME,Compute	24	B.E.	English	24	4

	r Science And Enginee ring, Comput er Science and Engineering					
PG	ME, Mechanical Engineering, CAD CAM	24	B.E.	English	24	3
PG	ME, Electronics And Communication Engineering, Applied Electronics	24	B.E.	English	24	3
PG	ME, Electrical And Electronics Engineering, Power Systems Engineering	24	B.E.	English	24	3

**Position Details of Faculty & Staff in the College**

Teaching Faculty												
	Professor				Associate Professor				Assistant Professor			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government	0				0				0			
Recruited	0	0	0	0	0	0	0	0	0	0	0	0
Yet to Recruit	0				0				0			
Sanctioned by the Management/Society or Other Authorized Bodies	2				8				78			
Recruited	2	0	0	2	6	2	0	8	32	46	0	78
Yet to Recruit	0				0				0			

<b>Non-Teaching Staff</b>				
	<b>Male</b>	<b>Female</b>	<b>Others</b>	<b>Total</b>
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				20
Recruited	14	6	0	20
Yet to Recruit				0

<b>Technical Staff</b>				
	<b>Male</b>	<b>Female</b>	<b>Others</b>	<b>Total</b>
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				0
Recruited	0	0	0	0
Yet to Recruit				0

### **Qualification Details of the Teaching Staff**

<b>Permanent Teachers</b>										
<b>Highest Qualification</b>	<b>Professor</b>			<b>Associate Professor</b>			<b>Assistant Professor</b>			<b>Total</b>
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt/LLD/DM/MCH	0	0	0	0	0	0	0	0	0	0
Ph.D.	2	0	0	5	2	0	0	0	0	9
M.Phil.	0	0	0	0	0	0	4	13	0	17
PG	0	0	0	1	0	0	28	33	0	62
UG	0	0	0	0	0	0	0	0	0	0

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

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

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

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

<b>Programme</b>		<b>From the State Where College is Located</b>	<b>From Other States of India</b>	<b>NRI Students</b>	<b>Foreign Students</b>	<b>Total</b>
UG	Male	137	5	0	0	142
	Female	137	2	0	0	139
	Others	0	0	0	0	0
PG	Male	6	0	0	0	6
	Female	6	1	0	0	7
	Others	0	0	0	0	0

<b>Provide the Following Details of Students admitted to the College During the last four Academic Years</b>					
<b>Category</b>		<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>
SC	Male	79	131	66	38
	Female	37	73	50	36
	Others	0	0	0	0
ST	Male	1	0	0	0
	Female	0	0	0	0
	Others	0	0	0	0
OBC	Male	116	127	83	59
	Female	79	59	64	21
	Others	0	0	0	0
General	Male	3	1	0	2
	Female	2	0	0	0
	Others	0	0	0	0
Others	Male	0	0	0	0
	Female	0	0	0	0
	Others	0	0	0	0
<b>Total</b>		<b>317</b>	<b>391</b>	<b>263</b>	<b>156</b>

### **Institutional preparedness for NEP**

<p>1. Multidisciplinary/interdisciplinary:</p>	<p>Our institution aspires to establish a gold standard among education providers in the realm of Engineering and Technology, committed to delivering top-notch technical education that nurtures a culture of learning and research through an inventive and synergistic educational model. Our vision is to promoting a multidisciplinary approach among our student community, empowering young minds to tackle everyday societal challenges and fostering academic excellence, scientific exploration, and professionalism. The SET (Science, Engineering, and Technology) Club has been involved in a variety of student activities aimed at merging humanities and science with engineering and technology. Through</p>
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workshops, guest lectures, project expos, and other events planned at the beginning of each academic year, the club aims to instill a comprehensive understanding of STEM concepts. As a non-autonomous institution presently following the curricula and syllabi provided by Anna University, Chennai, we ensure that our students are well-versed not only in technical subjects but also in essential non-credit mandatory courses. These courses emphasize general health, mental well-being, history, culture, nation-building, gender equality, and industrial safety. Anna University further enriches our curriculum by offering credit courses in human values and ethics, environmental science and sustainability, as well as internships and project work. These elements contribute to a holistic and multidisciplinary education for our students. Looking towards the future, we envision the institution obtaining autonomous status, allowing us to offer a flexible curriculum that facilitates multiple entry and exit points at the end of the first, second, and third years of undergraduate education. This approach supports students in tailoring their educational journey to their interests and aspirations. Since we take pride in our Indian Knowledge System, which serves as a hub for comprehensive information, apart from Anna University curriculum, the institution offers various skill development courses on Internet of Things, Industry 4.0, Python Programming, Networking, Employability Skills, IBM Programming etc., to ensure the eligible students getting maximum exposure in their interested areas. In the view of NEP 2020, the best practice of the institution is giving Contemporary Practical Exposure right from the first year to the final year students through its "Skills Laboratory". This initiative includes six distinct basic skills labs, namely Matlab Lab, Robotics Lab, Water Harvesting Lab, Assembling and Dismantling Lab, CAD Lab, and Computer Lab. Through these labs, students gain proficiency in essential areas, preparing themselves for future technological challenges.

2. Academic bank of credits (ABC):

Academic Bank of Credits, modeled after the National Academic Depository (NAD), has been established with the aim of students earning a maximum of two online courses, with a cap of six credits. We actively encourage our students to engage

	<p>in continuous learning and to earn credits through online platforms such as SWAYAM, NPTEL, and others. Many of our students have already demonstrated success by completing online courses offered by these platforms. Additionally, our faculty members are also actively participating in these online courses, which are recognized as equivalent to Faculty Development Programs (FDPs). Notably, our institution boasts an active NPTEL local chapter, further reinforcing our commitment to promoting online learning. Our institution is currently in the process of obtaining approval for registration with the ABC from governing bodies such as the Governing Council, Academic Council, and university authorities. As a non-autonomous institution, the faculty members are restricted from designing their own curricula; however, they are free to design their pedagogical approaches within the approved framework, including textbook, reading material selections, assignments, and assessments etc., under the approval and guidance of IQAC. In view of NEP 2020 pertaining to the implementation of Academic bank of credits (ABC), the institution views encouraging faculty members and students by providing remunerations and ODs to earn maximum credits through SWAYAM, NPTEL, and other online platforms as its good practice.</p>
<p>3. Skill development:</p>	<p>To instill life-oriented basic skills in students' right from their first year, the institution has established the "Skills Laboratory". This initiative includes six distinct basic skills labs, namely Matlab Lab, Robotics Lab, Water Harvesting Lab, Assembling and Dismantling Lab, CAD Lab, and Computer Lab. Through these labs, students gain proficiency in essential areas, preparing themselves for future technological challenges. The institution also conducts several Employability Skills Workshops with resource persons outside as well as inside on Communication Skills and Soft Skills under the guidance of Training and Placement Cell which will nurture the students' professional career. The Tamil Nadu State Skill Development Corporation and Anna University collaboratively organize Skill Development programs for the students' benefit. These programs, conducted in partnership with leading industry brands, offer students the opportunity to acquire skills relevant to professional</p>

	<p>practices within their respective fields. Additionally, the institute conducts a variety of value-added courses to ensure that each student completes a minimum of two such courses before graduating. Over the assessment period, the institute has conducted 140 value-added courses. In view of NEP 2020, the institution finds "Skills Laboratory" as one of its best practices pertaining to the Skill development.</p>
<p>4. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course):</p>	<p>Anna University has implemented courses on 1. Heritage of Tamil and 2. Tamils and Technology. These courses aim to help students comprehend and appreciate the integration of Indian knowledge systems, allowing them to embrace the genuine cultural and societal values of India. Faculty members adopt a bilingual or vernacular teaching approach to cater to the needs of students who may require a slower pace of learning. As a non-autonomous institution, our establishment provides non-credit mandatory courses focusing on the Constitution of India, its culture, and nation-building. The institution prioritizes a bilingual teaching approach, particularly for faculty members instructing Tamil medium students from rural backgrounds. In view of NEP 2020, the institution finds its "Thamizh Ilakkiya Mandram Club", one of the notable clubs that conducts various awareness programs and exhibits online videos of popular Tamil Orators for students, covering topics such as the importance of Tamil language, culture, environment, sustainability, energy conservation, ancient knowledge, as well as arts, and traditions of our country as its good practice pertaining to the appropriate integration of Indian Knowledge system.</p>
<p>5. Focus on Outcome based education (OBE):</p>	<p>The institution has embraced a comprehensive strategy to prepare students for the future, ensuring they are equipped to confront challenges in their professional lives. This is achieved by implementing Outcome-Based Education through experiential learning, participatory learning, and problem-solving methods, thereby enhancing students' overall learning experiences. The Department Academic Committee (DAC) convenes regularly to deliberate on the Course Outcomes (CO) for each course. The institute is steadfastly committed to implementing outcome-based education, characterized by well-defined Programme Outcomes (PO), Programme Specific</p>

	<p>Outcomes (PSO), and Programme Educational Objectives (PEO). All courses are meticulously crafted with a focus on the core outcomes of Blooms Taxonomy Levels - Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating. In addition to honing domain-specific skills, learning outcomes at various levels encompass social responsibility, moral values, and entrepreneurial aptitudes. This approach ensures that students actively contribute to the economic, environmental, and social well-being of the nation. In view of NEP 2020, the regular follow-up of IQAC regarding PO, PSO, PEO and attaining of Blooms Taxonomy Levels becomes the good practice of the institution pertaining to the Outcome based education (OBE).</p>
6. Distance education/online education:	<p>The institution endorses online learning and assessment methods through platforms like Google Classrooms and Google Meet, complementing traditional teaching approaches. Faculty members can seamlessly share educational materials with students to enrich their learning experiences. Moreover, the institution has extended its offerings to include online certificate courses designed for professionals and value-added courses, particularly during lockdown periods imposed by the COVID-19 pandemic, addressing the evolving challenges of society. Additionally, the college has earned recognition as a NODAL Centre for NPTEL, encouraging students to engage with courses available on NPTEL. Successful completion of these courses enables students to accrue additional credits.</p>

### Institutional Initiatives for Electoral Literacy

1. Whether Electoral Literacy Club (ELC) has been set up in the College?	Yes. SINCET has set up its Electoral Literacy Club (ELC) which functions very actively with the contribution of both the students and the staff members.
2. Whether students' co-ordinator and co-ordinating faculty members are appointed by the College and whether the ELCs are functional? Whether the ELCs are representative in character?	Yes. The college has appointed students' co-ordinator and co-ordinating faculty members. The club conducts awareness programs among the public as well as its students occasionally. It has also conducted various Voters Awareness Signing Campaigns inside and outside the campus. The club

	<p>takes responsibility of applying for Voter IDs for the students who have attained their 18th age. It also arranges campaigns for corrections in electoral roll periodically.</p>
<p>3. What innovative programmes and initiatives undertaken by the ELCs? These may include voluntary contribution by the students in electoral processes-participation in voter registration of students and communities where they come from, assisting district election administration in conduct of poll, voter awareness campaigns, promotion of ethical voting, enhancing participation of the under privileged sections of society especially transgender, commercial sex workers, disabled persons, senior citizens, etc.</p>	<p>SINCET engages in a range of initiatives aimed at fostering student involvement in the electoral process. These endeavors include facilitating student and community voter registration, aiding local election authorities, conducting voter awareness campaigns, advocating for ethical voting practices, and promoting the inclusion of marginalized groups such as transgender individuals, persons with disabilities, and senior citizens. Additionally, the club annually hosts informational sessions for first-year students to educate them about their voting rights and encourage participation. SINCET actively supports the Systematic Voter Education and Electoral Participation (SVEEP) Program to bolster understanding and confidence in the electoral process. Furthermore, the club organizes campus competitions, endorsed by local administrative officials, offering prizes, certificates, and medals to participants. Collaboration between the Faculty Coordinator and SINCET members drives outreach efforts, empowering rural communities and stressing the significance of voting.</p>
<p>4. Any socially relevant projects/initiatives taken by College in electoral related issues especially research projects, surveys, awareness drives, creating content, publications highlighting their contribution to advancing democratic values and participation in electoral processes, etc.</p>	<p>SINCET has spearheaded numerous dynamic awareness campaigns geared towards illuminating the significance of the voting system and the pivotal role of every vote cast, both within our student body and the broader public. Our initiatives have encompassed innovative endeavors such as the Voters Awareness Signing Campaigns, which have not only captured attention but have also ignited active participation and dialogue surrounding electoral responsibilities. Moreover, the institution celebrates National Voter's Day every year on January 25th by hosting distinguished guest speakers who have imparted invaluable insights, enriching our understanding of civic duty and democratic engagement. These guest speeches have served as beacons of inspiration, empowering individuals to recognize their agency in shaping the future through the power of their votes. Through our multifaceted programs, we have cultivated a culture of informed citizenship, fostering a deep-seated commitment to active participation in the democratic process. As we continue to champion</p>

	<p>these initiatives, we strive to ignite a collective consciousness that recognizes the vote as not merely a right, but a solemn responsibility and a potent instrument for effecting positive change.</p>
<p>5. Extent of students above 18 years who are yet to be enrolled as voters in the electoral roll and efforts by ELCs as well as efforts by the College to institutionalize mechanisms to register eligible students as voters.</p>	<p>The club takes responsibility of applying and arranging New Voter IDs for the students who have attained their 18th age. It also arranges campaigns for corrections in electoral roll periodically. The Electoral Literacy Club at SINCET has been actively engaging its members in a variety of impactful initiatives, garnering recognition and accolades along the way. K. Santhosh Kumar, an Assistant Professor in Mechanical Engineering, was honored with the prestigious title of Best Nodal Officer of Nagapattinam District by the Governor of Tamil Nadu, R.N. Ravi, for his outstanding contributions. The club organized a drawing competition, drawing in participation from approximately 500 students across various disciplines. S. Devasharshini from the 3rd year of Computer Science and Engineering clinched the 1st prize, followed by Nithishkumar from Mechanical Engineering in 2nd place, and Gunadharshini from Information Technology securing the 3rd prize. Further showcasing their commitment to community and environmental welfare, around 50 students actively participated in a beach cleaning drive at Vedaranyam Beach, demonstrating their dedication to preserving natural resources and promoting cleanliness. In addition, the club facilitated an inland letter writing campaign, with an impressive turnout of 300 students. This initiative underscores their commitment to fostering literacy and civic engagement among the student body. Notably, S. Hariharan received recognition for his photographic talents, securing the 2nd prize honor from the Nagapattinam Collectorate, further highlighting the diverse talents and achievements within the club. These accomplishments underscore the Electoral Literacy Club's commitment to promoting civic engagement, environmental stewardship, and community involvement, showcasing the dedication and initiative of SINCET's student body.</p>

## Extended Profile

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### 1 Students

#### 1.1

Number of students year wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
1076	981	783	698	864

File Description	Document
Upload Supporting Document	<a href="#">View Document</a>
Institutional data in prescribed format	<a href="#">View Document</a>

### 2 Teachers

#### 2.1

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

Response: 147

File Description	Document
Upload Supporting Document	<a href="#">View Document</a>
Institutional data in prescribed format	<a href="#">View Document</a>

#### 2.2

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

2022-23	2021-22	2020-21	2019-20	2018-19
90	82	78	84	95

### 3 Institution

#### 3.1

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

2022-23	2021-22	2020-21	2019-20	2018-19
259.71	220.00	156.96	199.19	205.76

File Description	Document
Upload Supporting Document	<a href="#">View Document</a>



## 4. Quality Indicator Framework(QIF)

### Criterion 1 - Curricular Aspects

#### 1.1 Curricular Planning and Implementation

##### 1.1.1

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

**Response:**

Sir Issac Newton College of Engineering and Technology, under the visionary leadership of the Principal and the Academic Council, is dedicated to delivering a high-quality education through strategic planning and innovative approaches. The Academic Council, comprising Heads from diverse academic departments, engages in strategic discussions to determine optimal approaches for curriculum implementation. These discussions consider factors such as student requirements, educational objectives, resource availability, and external mandates. The policies devised by the council act as a roadmap for implementing the curriculum, covering decisions on course structures, learning materials, teaching methods, and assessment criteria.

Sir Issac Newton College of Engineering and Technology is affiliated with Anna University and approved by AICTE. It adheres to Anna University syllabi and regulations, with a meticulously planned Academic Calendar guiding key dates and events. The institution prioritizes excellence, regularly evaluates schedules, and welcomes feedback for continual improvement. Faculty members are strategically assigned subjects based on their expertise, enhancing the overall teaching quality. The timetable includes academic sessions, training, club activities, and library hours, fostering a well-rounded schedule for students beyond conventional academics. This approach ensures a deep understanding of subjects and sustained student engagement.

Incorporating previous years' university question papers into the course file at Sir Issac Newton College proves invaluable for both instructors and students, facilitating a comprehensive understanding of exam formats and question types for enhanced preparation. The course file may feature a dedicated section on teaching methodology, outlining instructional approaches, techniques, and strategies such as lectures, discussions, group activities, and hands-on exercises. Additionally, it specifies assessment and evaluation methods, including the weighting of different assessments, types of exams, projects, presentations, and grading criteria.

The HODs at the institution regularly monitor faculty members' course delivery, classroom management, and syllabus completion to ensure consistency and alignment with departmental objectives. Ongoing improvement is facilitated through continuous student feedback collected in class committee meetings, and feedback form from various levels, fostering open communication for addressing concerns collaboratively. To enhance teaching, academic courses incorporate diverse elements such as NPTEL lecturer videos, mini projects, technical quizzes, application-oriented assignments, video content, and surveys.

The institution IQAC conducts three Internal Assessment Tests (CIA1, CIA2, Model test) after every two

units, ensuring regular evaluation of students' progress. The incorporation of Program Outcomes, Program Specific Outcomes, and Program Educational Objectives enhances the curriculum's coherence and establishes clear learning outcomes. The two sets of question papers prepared by the subject staff members and IQAC ensure the question papers, alignment with learning outcomes. The Continuous Internal Assessment (CIA) process involves crafting question papers aligned with Bloom's Taxonomy (BT) levels, Program Outcomes (PO), and Program Specific Outcomes (PSO). Department head and IQAC member verification ensures quality assurance in the assessment process. The Department Assessment Committee comprises HoD, Senior Staff Members, Industrial experts, Alumni, Parents, etc., and actively participates and serves as a bridge between industry and academia, the DAC integrates industry-relevant practices, preparing students for professional challenges. Creative learning at Sir Issac Newton College fosters an innovative environment, promoting critical thinking through activities like projects and participative learning. Peer learning and Problem-Based Learning enhance understanding, emphasizing practical application and interdisciplinary skills.

File Description	Document
Upload Additional information	<a href="#">View Document</a>

## 1.2 Academic Flexibility

### 1.2.1

**Number of Certificate/Value added courses offered and online courses of MOOCs, SWAYAM, NPTEL etc. (where the students of the institution have enrolled and successfully completed during the last five years)**

**Response:** 39

File Description	Document
List of students and the attendance sheet for the above mentioned programs	<a href="#">View Document</a>
Institutional programme brochure/notice for Certificate/Value added programs with course modules and outcomes	<a href="#">View Document</a>
Institutional data in the prescribed format	<a href="#">View Document</a>
Evidence of course completion, like course completion certificate etc. Apart from the above:	<a href="#">View Document</a>
Provide Links for any other relevant document to support the claim (if any)	<a href="#">View Document</a>

### 1.2.2

***Percentage of students enrolled in Certificate/ Value added courses and also completed online courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years***

**Response:** 54.29

1.2.2.1 Number of students enrolled in Certificate/ Value added courses and also completed online courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
612	449	492	444	393

File Description	Document
Upload supporting document	<a href="#">View Document</a>
Institutional data in the prescribed format	<a href="#">View Document</a>

### 1.3 Curriculum Enrichment

#### 1.3.1

***Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability in transacting the Curriculum***

**Response:**

The institution places a strong emphasis on the holistic development of its students, integrating crosscutting issues such as Professional Ethics, Gender Equality, Human Values, Environmental Conservation, and Sustainability into its curriculum. Engineering students are required to take mandatory courses prescribed by Anna University in Environmental Science, Professional Ethics, and Principles of Management. These courses serve as the foundation for discussions on critical topics like Gender Equality, Women's Empowerment, Human Values, Personality Development, Time Management, and Ethics.

**Human Values and Professional Ethics:**

In terms of Human Values and Professional Ethics, the institution offers two mandatory courses that delve into morality, societal responsibilities, and civic virtues. In particular, the course 'Human Values and Professional Ethics' is an enlightening journey that delves into the realms of morality, societal obligations, and the cultivation of civic consciousness and virtues. The institution has taken the laudable step of offering two foundational courses on Human Principles and Professional Ethics as mandatory credits for all B. E. degree programs. The college is actively involved in outreach initiatives like blood donation camps, eye care programs, cleanliness drives, and awareness campaigns etc., Furthermore, at the commencement of each academic year, the university conducts AICTE-recommended induction

programs, preparing students to navigate contemporary challenges. This comprehensive curriculum effectively weaves threads of value-based education, emphasizing themes such as women's empowerment, healthy living, gratitude, ethics, and the resilience to overcome failures.

### Gender Equality

Gender Equality is a central theme, with separate accommodations for male and female students, thought-provoking debates, and guest lectures on gender sensitization. Equal opportunities and inclusivity are hallmarks of this institution, extending from participation in competitions to anchoring programs. To ensure the safety and well-being of all students, especially the female student body, an anti-harassment and anti-ragging committee has been formed. A dedicated team of student counselors offers guidance on matters of gender equality and ethical concerns, while a special cell, comprising female faculty and students, stands as a bulwark to protect the rights and safety of women on campus. International Women's Day is celebrated every year to honor accomplished women from various fields. Besides, the institution also encourages celebrating Hostel Day every year.

### Environment and Sustainability:

The institution is strongly committed to Environmental Conservation and Sustainability. Students take a mandatory "Environment and Sustainability" course that raises awareness about environmental contamination and broader socio-environmental issues. They can also choose elective courses like "Disaster Management," "Non-conventional Energy Sources," and "Industrial Pollution and its Control." This college's active National Service Scheme (NSS) wing is at the forefront of community engagement, with students participating in a wide array of programs, including tree planting initiatives, Swacch Bharat Abhiyan cleanliness drives, support for the police department during festivals, and the organization of rallies to raise awareness about renewable energy sources, water conservation, electricity conservation, and much more. The institution's thriving Eco Club adds an extra layer of environmental consciousness by inviting specialists to deliver enlightening guest lectures and hosting an annual Eco Week, where the spotlight is cast on the paramount importance of environmental protection.

File Description	Document
Upload Additional information	<a href="#">View Document</a>

### 1.3.2

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

**Response:** 63.29

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

**Response:** 681

File Description	Document
Upload supporting document	<a href="#">View Document</a>
Institutional data in the prescribed format	<a href="#">View Document</a>

## 1.4 Feedback System

### 1.4.1

*Institution obtains feedback on the academic performance and ambience of the institution from various stakeholders, such as Students, Teachers, Employers, Alumni etc. and action taken report on the feedback is made available on institutional website*

**Response:** C. Feedback collected and analysed

File Description	Document
Feedback analysis report submitted to appropriate bodies	<a href="#">View Document</a>
At least 4 filled-in feedback form from different stake holders like Students, Teachers, Employers, Alumni etc.	<a href="#">View Document</a>
Action taken report on the feedback analysis	<a href="#">View Document</a>
Provide Links for any other relevant document to support the claim (if any)	<a href="#">View Document</a>
Link of institution's website where comprehensive feedback, its analytics and action taken report are hosted	<a href="#">View Document</a>

## Criterion 2 - Teaching-learning and Evaluation

### 2.1 Student Enrollment and Profile

#### 2.1.1

##### Enrolment percentage

**Response:** 67.27

##### 2.1.1.1 Number of seats filled year wise during last five years (Only first year admissions to be considered)

2022-23	2021-22	2020-21	2019-20	2018-19
317	391	263	156	205

##### 2.1.1.2 Number of sanctioned seats year wise during last five years

2022-23	2021-22	2020-21	2019-20	2018-19
396	396	396	396	396

#### File Description

#### Document

Institutional data in the prescribed format

[View Document](#)

Final admission list as published by the HEI and endorsed by the competent authority

[View Document](#)

Document related to sanction of intake from affiliating University/ Government/statutory body for first year's students only.

[View Document](#)

Provide Links for any other relevant document to support the claim (if any)

[View Document](#)

#### 2.1.2

*Percentage of seats filled against reserved categories (SC, ST, OBC etc.) as per applicable reservation policy for the first year admission during the last five years*

**Response:** 65.86

##### 2.1.2.1 Number of actual students admitted from the reserved categories year wise during last five years (Exclusive of supernumerary seats)

2022-23	2021-22	2020-21	2019-20	2018-19
199	234	199	135	132

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

2022-23	2021-22	2020-21	2019-20	2018-19
273	273	273	273	273

File Description	Document
Institutional data in the prescribed format	<a href="#">View Document</a>
Final admission list indicating the category as published by the HEI and endorsed by the competent authority.	<a href="#">View Document</a>
Copy of communication issued by state govt. or Central Government indicating the reserved categories(SC,ST,OBC,Divyangjan,etc.) to be considered as per the state rule ( Translated copy in English to be provided as applicable)	<a href="#">View Document</a>
Provide Links for any other relevant document to support the claim (if any)	<a href="#">View Document</a>

## 2.2 Student Teacher Ratio

### 2.2.1

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

**Response:** 11.96

## 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 and teachers use ICT- enabled tools including online resources for effective teaching and learning process**

**Response:**

The methodology of the teaching-learning process is student-centric and focused on the academic and social welfare of the students through outcome-based education, which is practiced in the institution. The academic experiences of the teachers on their subjects are influenced by the students through experiential learning, participative learning, and problem-solving methodologies. The institution provides virtual learning facilities to the students for their effective learning process using ICT-enabled classrooms.

**Experiential learning:**

As per the University curriculum, the practical classes are conducted to enrich their practical knowledge by providing laboratory experiments for their course of study. They have given special hands-on training for the software subjects through Value added programs. They are encouraged to perform mini projects and attend internship training programs during semester vacations. The students are permitted industrial visits/field visits to enrich their knowledge in practical cases of study in the industrial exposure with theoretical knowledge consequently students are allowed to do their project work on a topic of their interest. Students are given innovative assignments where they are given space to think and act individually.

**Participative learning:**

The Students are encouraged to participate in many programs, organized by the institution and conducted by Various other institutions enhance their individual skill development. The Students are encouraged to participate in and organize technical symposiums, workshops, seminars, quizzes, paper presentations, etc, and various inter & intra college events through which improve their managerial skills to face realistic industrial problems. The institution encourages the students to develop interactive/ communication skills, the students are given a topic to take seminars in the regular classes. The students are motivated to perform role play as a part of activity-based learning in the class rooms. The students are encouraged to do research projects and internships in various industries during the vacation so that they gain knowledge about the recent trends in the engineering field.

**Problem-solving methodology:**

The students are motivated to participate in the competitions organized by other institutions with regard to problem-solving methodologies such as puzzles, quizzes, coding competitions, etc., The students are given chance to discuss the complex problem in the tutorial classes and thereal case studies are discussed to share the real industrial experience related to the field of study through which they understand the issues associated with the field and corresponding remedies. The students are motivated to select industrial projects and use the latest technologies. The students and faculty are motivated to study problem-based subjects through the NPTEL certificate course in addition to their regular classes.

**ICT-enabled teaching learning**

The institution's class rooms and seminar halls are equipped with ICT tools including online resources for effective teaching and learning process through which the updated technologies in the subject are delivered to the students virtually. The faculty members use LCD projectors, video conferencing, smart class, google platform, YOU tube video lecturing, and other e-learning technologies for delivering lectures to the students frequently. The subjects are being taught using PowerPoint and Videos with the



aid of ICT tools for better visual impact on the student's learning process. The Institution provides various resources such as multimedia projectors with Computers, Wi-Fi, LAN-connected systems centralized data server, and adequate internet facility.

File Description	Document
Upload Additional information	<a href="#">View Document</a>

## 2.4 Teacher Profile and Quality

### 2.4.1

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

**Response:** 100

#### 2.4.1.1 Number of sanctioned posts year wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
90	82	78	84	95

File Description	Document
Sanction letters indicating number of posts sanctioned by the competent authority (including Management sanctioned posts)	<a href="#">View Document</a>
Provide Links for any other relevant document to support the claim (if any)	<a href="#">View Document</a>

### 2.4.2

***Percentage of full time teachers with NET/SET/SLET/ Ph. D./D.Sc. / D.Litt./L.L.D. during the last five years (consider only highest degree for count)***

**Response:** 6.06

#### 2.4.2.1 Number of full time teachers with NET/SET/SLET/Ph. D./ D.Sc. / D.Litt./L.L.D year wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
7	6	6	4	3

<b>File Description</b>	<b>Document</b>
List of faculties having Ph. D. / D.Sc. / D.Litt./ L.L.D along with particulars of degree awarding university, subject and the year of award per academic year.	<a href="#">View Document</a>
Institution data in the prescribed format	<a href="#">View Document</a>
Copies of Ph.D./D.Sc / D.Litt./ L.L.D awarded by UGC recognized universities	<a href="#">View Document</a>

## 2.5 Evaluation Process and Reforms

### 2.5.1

**Mechanism of internal/ external assessment is transparent and the grievance redressal system is time- bound and efficient**

**Response:**

The primary goal of both internal and external assessments is to gauge student performance within a course, aiding faculty in monitoring their progress while enabling students to prepare for semester exams and gain a thorough understanding of the subject matter.

**Institutional level Internal Assessment Test (IAT):**

At the institutional level, various assessments such as IAT-I, IAT-II, and Model Exams are conducted each semester to evaluate academic performance and assign internal marks. These tests adhere to a pre-determined academic calendar, prominently displayed on departmental notice boards and the college website. The centralized exam cell oversees the preparation of hall plans, administers assessments, and secures approval from the principal. Question papers for these assessments are crafted by staff members, ensuring coverage of all Course Outcomes (COs) and alignment with Bloom's Taxonomy standards. In general, the question papers of the IAT and Model exams must have covered all COs. Each staff member prepares a set of two question papers with an answer key. The Department Assessment Committee (DAC) reviews the IAT questions and forwards them to the exam cell for IQAC verification. The IQAC examines its quality and confirms its compliance with Bloom's Taxonomy level before printing.

**Internal Evaluation Process**

The internal evaluation process involves faculty members grading answer scripts using answer keys and rubrics within a three-day timeframe following exams. Students receive feedback on their performance and are notified of continuous assessment components such as theory, lab work, projects, assignments, and seminars through regular circulars. Internal test marks are posted on notice boards and communicated to parents, with any discrepancies addressed by faculty and department heads. Students can request retests to improve internal marks, and opportunities are provided to earn marks through

additional assignments if they are dissatisfied with retest results. All evaluation processes adhere to the schedule provided by Anna University's web portal.

### **External Evaluation Process (Affiliated University) through Institution Exam Cell**

The Exam Cell coordinates and conducts both internal and external exams as per the guidelines of Anna University and communicates to the students through the exam cell notice board. The cell addresses the students' grievances regarding the university exam process, exam questions, and mark sheets and is referred by the principal to the Controller of Exams at Anna University for further action. After the publication of results by the university websites, unsatisfied students regarding semester exam results can get photocopies of the answer sheets and can apply for re-evaluation through the exam cell if they want. After providing the photocopy to the university, the concerned staff members evaluate the answer scripts, and the deserving answer scripts are recommended for reevaluation through HoD and the principal. The university re-evaluates and publishes the results on the official website and also provides a challenging option to review the re-evaluation results. After the challenge review, if their result grade is improved, the reevaluation expenses will be reimbursed within the stipulated time. The Internal and external exam marks are communicated and proper instructions are given to their parents All the above procedures are timebound, transparent, and effective in terms of the mechanism involved with exams.

<b>File Description</b>	<b>Document</b>
Upload Additional information	<a href="#">View Document</a>

## **2.6 Student Performance and Learning Outcomes**

### **2.6.1**

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

#### **Response:**

Our institution has been granted instructions to define the objectives of each course by Anna University, Chennai. The department chair and senior faculty members create program specified outcomes (PSOs), which are then meticulously documented and published by the accreditation authority—a body that is worldwide recognized by all professional colleges. Department heads and a group of senior faculty members frame COs following brainstorming meetings with the subject matter and faculty members aligning with the course content unit-wise and Blooms Taxonomy.

At our institution, we use outcome-based education. The university's curriculum and learning objectives are followed by the institution that is affiliated with it. It is relayed to the organization by means of the examiner's controller.

#### **Programme Outcomes (POs):**

Programme Outcomes (POs) represent overarching declarations delineating the anticipated attributes and accomplishments of our graduates following the culmination of their respective programmes. These outcomes encapsulate the fundamental competencies and principles we aim to cultivate in our students, equipping them for thriving professional endeavours and conscientious participation in society. Each programme possesses a distinct array of POs tailored to harmonize with the overarching mission and vision of our institution.

### Course Outcomes (COs):

Course Outcomes (COs) delineate precise learning targets associated with individual courses within a programme. These outcomes elucidate the knowledge, skills, and attitudes that students are anticipated to attain upon proficiently concluding each course. COs are strategically crafted to harmonize with the overarching POs, thus actively contributing to their attainment.

### Display on Website:

To enhance transparency and accessibility, our institution's official website prominently showcases all Programme Outcomes (POs) and Course Outlines (COs) for our programs. These essential details are readily available on the respective pages of each program, offering comprehensive insights into course objectives and the overall program structure.

File Description	Document
Upload Additional information	<a href="#">View Document</a>

## 2.6.2

*Attainment of POs and COs are evaluated.*

**Explain with evidence in a maximum of 500 words**

### Response:

The institution evaluates course attainment levels using Bloom's taxonomy of the learning domain, ensuring a comprehensive assessment of student learning outcomes. Students scoring below 70% are provided with remedial support through various interventions like remedial classes, re-tests, quizzes, and objective tests to enhance their attainment of Course Outcomes (COs).

To address Program Outcomes (POs) not covered in the regular curriculum, the institution organizes co-curricular activities, extra-curricular events, industrial visits, and training programs. These activities contribute to a well-rounded educational experience and aid in achieving broader programmatic goals.

Course outcomes are evaluated using a combination of internal assessment and university exam performance, with assessment tools aligned with specific COs and teaching methods. Internal assessment tool is utilized, with greater weightage assigned to internal assessments (70%) compared to external assessments (30%).

The institution's evaluation system comprehensively assesses the attainment of COs, POs, and Program Specific Outcomes (PSOs), ensuring alignment with educational objectives and facilitating continuous improvement. By prioritizing direct assessment and incorporating diverse assessment tools, the institution promotes a robust evaluation process aimed at enhancing student learning outcomes.

The institution evaluates the attainment of COs, POs, and PSOs through its evaluation system, and the process is mentioned below.

#### **CO Attainment:**

Computation of Overall CO Attainment in the course:

70% of Internal Assessment Test Attainment + 30% of End Semester Exam Attainment.

The assessment of Course Outcomes (COs) is evaluated using assessment tools, which include internal and external assessments. Internal assessments contribute 70% and external assessment contributes 30% to the overall assessment of COs.

#### **PO and PSO Direct Attainment:**

Evaluations of direct attainment of POs and PSOs calculation are based on Overall obtained CO with individual PO for all the courses and the average is calculated for the direct attainment of PO and PSO

#### **POs and PSOs Indirect Assessment Tool:**

**End of Course Evaluation Form:** During the survey, students provide their responses on a given scale to the questions which are the Pos and PSOs of the respective courses. The procedure to measure the Indirect-PO and PSO attainment of a course is the same as the direct attainment method, where the results are student's responses.

#### **Overall PO Attainment Calculation:**

Evaluations of overall attainment of POs and PSOs based on 80% of direct assessment + 20% of indirect assessment combined to arrive at the Final Evaluation.

**PO** = 80% of Direct Attainment + 20% of Indirect Attainment

<b>File Description</b>	<b>Document</b>
Upload Additional information	<a href="#">View Document</a>

### **2.6.3**

**Pass percentage of Students during last five years (excluding backlog students)**

**Response:** 89.01

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

2022-23	2021-22	2020-21	2019-20	2018-19
158	133	219	172	185

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

2022-23	2021-22	2020-21	2019-20	2018-19
187	148	226	195	218

<b>File Description</b>	<b>Document</b>
Institutional data in the prescribed format	<a href="#">View Document</a>
Certified report from Controller Examination of the affiliating university indicating pass percentage of students of the final year (final semester) eligible for the degree programwise / year-wise.	<a href="#">View Document</a>
Provide Links for any other relevant document to support the claim (if any)	<a href="#">View Document</a>

**2.7 Student Satisfaction Survey****2.7.1****Online student satisfaction survey regarding teaching learning process****Response:** 3.99

<b>File Description</b>	<b>Document</b>
Upload database of all students on roll as per data template	<a href="#">View Document</a>

## Criterion 3 - Research, Innovations and Extension

### 3.1 Resource Mobilization for Research

#### 3.1.1

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

**Response:** 0

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

2022-23	2021-22	2020-21	2019-20	2018-19
0	0	0	0	0

#### File Description

#### Document

Upload supporting document

[View Document](#)

Institutional data in the prescribed format

[View Document](#)

### 3.2 Innovation Ecosystem

#### 3.2.1

**Institution has created an ecosystem for innovations, Indian Knowledge System (IKS), including awareness about IPR, establishment of IPR cell, Incubation centre and other initiatives for the creation and transfer of knowledge/technology and the outcomes of the same are evident**

**Response:**

The Sir Issac Newton College of Engineering's innovation ecosystem is a vibrant and versatile platform created to nurture creativity, entrepreneurship, and the practical utilization of knowledge in real-world settings, ultimately leading to well-rounded education and societal advancement.

**Indian Knowledge System (IKS)** The institution empowers students with traditional Indian knowledge through the "Heritage of Tamil" course (GE3152), a component of the Anna University curriculum. This initiative plays a crucial role in preserving and sharing Indigenous Knowledge Systems (IKS) for the betterment of society.

**Research Centers:** The Department of Electrical Engineering (EEE) has been recognized as a research-focused department by Anna University.

**Research and Development Initiatives:** Students are strongly encouraged to engage in projects aimed at creating innovative solutions to address societal challenges. They have made significant contributions through various projects and initiated the electoral literacy club that has been set up in our institution and its awareness program shall be conducted under this club.

**Center of Excellence:** As a central element within the innovation ecosystem, the institution boasts two specialized centers, namely the Computer Integrated Manufacturing Center for the Mechanical Department and the Big Data Analytics Center for CSE. These centers act as focal points for stimulating creativity, promoting research, and facilitating collaboration among students, faculty, and external stakeholders.

**Institution Innovation Council (IIC):** The institution maintains a dynamic Innovation and Incubation Center (IIC) aimed at fostering research-based innovation. This is achieved through the organization of programs designed to acquaint young engineers with essential topics such as Intellectual Property Rights, Entrepreneurship development, and research empowerment. Over the past five years, our institution has successfully conducted workshops and seminars, focusing on IPR and entrepreneurship, and published a good number of patents.

**SWAYAM-NPTEL Research Support:** The institution places a strong emphasis on fostering ongoing education for both faculty members and students. Our distinguished faculty members, Mr. A. Arivazhagan, the Professor of Electronics and Communication Engineering, and Mrs. A. Gowri, the Professor of Electrical and Electronic Engineering, have directly benefited from their commitment. The individual has obtained the esteemed SWAYAM-NPTEL Domain Certification in the area of Patents and Intellectual Property Rights.

**Industrial Collaboration and Partnerships:** The institution had signed an MOU with 5 companies to promote Collaborative research works and knowledge transformation functional activities.

**Skill lab:** The institution established skill labs for students from various fields such as a Robotics lab, Electrical and Wiring lab, Coding lab, CAD lab, and dismantling lab for updating basic science and solving problems in day-to-day life.

**Exposure on higher education program:** Our institution organized a program on “Exposure to Higher Education” in our campus and various institution as an outreach **Publication:** As part of creating, and transferring knowledge process in our institution, staff members actively promotes the research efforts by providing equitable compensation incentives for research article publications and patents through institute IPR cell.

File Description	Document
Upload Additional information	<a href="#">View Document</a>

### 3.2.2

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



**Response:** 49**3.2.2.1 Total number of workshops/seminars/conferences including programs conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship year wise during last five years**

2022-23	2021-22	2020-21	2019-20	2018-19
15	10	7	7	10

**File Description****Document**

Upload supporting document

[View Document](#)

Institutional data in the prescribed format

[View Document](#)**3.3 Research Publications and Awards****3.3.1****Number of research papers published per teacher in the Journals notified on UGC care list during the last five years****Response:** 0.04**3.3.1.1 Number of research papers in the Journals notified on UGC CARE list year wise during the last five years**

2022-23	2021-22	2020-21	2019-20	2018-19
5	0	1	0	0

**File Description****Document**

Link to the uploaded papers, the first page/full paper(with author and affiliation details)on the institutional website

[View Document](#)

Link to re-directing to journal source-cite website in case of digital journals

[View Document](#)

Links to the papers published in journals listed in UGC CARE list or

[View Document](#)

Institutional data in the prescribed format

[View Document](#)

**3.3.2**

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

**Response:** 0.01

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

2022-23	2021-22	2020-21	2019-20	2018-19
0	0	0	1	1

File Description	Document
List of chapter/book along with the links redirecting to the source website	<a href="#">View Document</a>
Institutional data in the prescribed format	<a href="#">View Document</a>

**3.4 Extension Activities****3.4.1**

**Outcomes of Extension activities in the neighborhood community in terms of impact and sensitizing the students to social issues for their holistic development during the last five years.**

**Response:**

Sir Isaac Newton College of Engineering & Technology is actively engaged in various extension activities to promote social responsibility among its students. Through the initiatives of the Red Ribbon Club (RRC), Youth Red Cross (YRC), and National Service Scheme (NSS), the college fosters social welfare, community service, and personal development among its students. Below is a description of each club:

**National Service Scheme (NSS)**

The primary goal of the National Service Scheme (NSS) is to cultivate students' character and personality through voluntary community service, with a core emphasis on 'Education through Service'. At SINCET, the NSS unit began its operations in 2018, with Mr. Malaiselvaraja P, an Assistant Professor in the Department of Mechanical Engineering, serving as its coordinator. The NSS philosophy is summarized in the motto "Not Me But You," stressing the interconnectedness of individual and societal welfare, urging volunteers to work towards society's betterment.

SINCET has actively participated in NSS activities in and around Nagapattinam District, benefiting

numerous communities. These endeavors aim to demonstrate students' commitment to community service while pursuing their education and to cultivate a sense of social responsibility among them. Volunteers engage in various activities such as volunteering at Velankanni Temple, organizing tree plantation drives, campus clean-ups, stress management workshops, and providing career guidance sessions in collaboration with local schools.

Additionally, SINCET students have organized initiatives including first aid training, health check-ups, and dengue prevention programs in different villages of Nagapattinam District. The NSS club has also facilitated the free distribution of masks and sanitizers in partnership with the Government Hospital in Sengamangalam. Furthermore, collaborative efforts with the Government Hospital in Nagapattinam have led to events like blood donation drives and general health awareness programs in the region.

### **Red Ribbon Club (RRC)**

The Red Ribbon Club (RRC) at SINCET was established in 2018 with the primary objective of fostering students' personalities and character through voluntary community service. Mr. Navaneethakrishnan P, M.E., Assistant Professor in the Department of Electronics and Communication Engineering, serves as the coordinator for the Red Ribbon Club. The students of the RRC engage in various activities such as a Program on HIV/AIDS and its impact on family and society at Karunganni Village, a Breast Cancer Signs and Symptoms program at Paravai Village, a Covid-19 Vaccination Camp at Valivalam Village, and a No Tobacco – Door to Door Meeting Program at Vilunthamavadi Village.

Moreover, our RRC students organized an Eye Camp at Killukudi Village and Thirupoondi Village in Nagapattinam district, in association with Aravind Hospital, Madurai.

### **Youth Red Cross (YRC)**

The establishment of the Youth Red Cross (YRC) at SINCET in 2018 aimed to foster students' personal development and integrity through active participation in community service. Mr. Raguvaran N, M.E., Assistant Professor in the Department of Electrical and Electronics Engineering, plays a pivotal role as the coordinator for the Youth Red Cross (YRC).

The students of YRC engage in various activities such as a Dengue Fever Rally at Thiruvasal Village, a Breast Cancer Signs and Symptoms Program at Kameswaram and Erayankudy Village, Free Diabetes Detection and Awareness Camp at Melapidagai Village, and a Corona Virus Program at Ponveli Village. Additionally, our students actively participate in the distribution of Traditional Medicine (Nilavembu) at Esanoor Village, Akarapettai Village, and Puthur Village in Nagapattinam district.

<b>File Description</b>	<b>Document</b>
Upload Additional information	<a href="#">View Document</a>

### **3.4.2**

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

**Response:**

Students of Sir Isaac Newton College of Engineering & Technology participated in various events organized by the college and other organizations. Our campus frequently hosts government activities such as higher education awareness programs, public grievance days, medical camps, blood donation camps, and drug awareness programs. These activities reflect our commitment to corporate social responsibility and inspire us to make a positive impact in our community. Our efforts have been recognized and appreciated by government officials, motivating us to continue with even greater passion and dedication.

**Drug Awareness Program Award:**

During the 2022-2023 academic year, we focused on educating students about responsible substance use, addiction prevention, and the legal implications of drug abuse. Collaborating with the Red Ribbon Club (RRC), we organized activities such as HIV/AIDS awareness programs and a No Tobacco – Door to Door Program. These initiatives were instrumental in spreading critical information and Meeting fostering a culture of responsibility and awareness among students. Our dedicated efforts in drug awareness and prevention earned us an award and widespread appreciation, highlighting our significant contributions to this vital cause.

**Medical Awareness Program Award:**

At SINCET, we prioritize community health and have implemented extensive medical awareness initiatives. One notable program occurred at the Government Higher Secondary School in Thirupondi, Nagapattinam district, benefiting over 800 students and teachers. This event included informative sessions and practical health checks, emphasizing the importance of regular medical screenings and preventive care. Our proactive approach and thorough execution were recognized by the Health Education Department in Nagapattinam District, earning us an appreciation award for organizing these impactful programs. This recognition underscores our commitment to improving public health and educating the community on essential health practices.

**Blood Donation Camp Award:**

SINCET is committed to engaging with the community, running programs to raise awareness about medical issues, and organizing blood donation camps with the Blood Bank Medical Center. We have received an appreciation award from government hospitals, demonstrating our commitment to the community's well-being and the active involvement of our students and faculty.

**Road Safety Program Award:**

SINCET was recognized for its Road Safety Program by the NSS Club on 18th January 2023, with the Muttam Police Station appreciating their efforts in promoting road safety awareness and enhancing community well-being. This acknowledgement encourages SINCET to persist in improving road safety and educating the public on safety measures.

**Eye Camp Award:**

We received an award from the Block Medical Officer for organizing an Eye Camp. This recognition

was given to us by government hospitals in Thevur, Killukudi, Thirupoondi, and Naluvethapathy. The Eye Camp provided essential eye care services and raised awareness about eye health in the local population. This award highlights our commitment to improving vision health and supporting the well-being of our club community.

#### **General Health Check-up Award:**

SINCET received an award for organizing a health check-up program in Manakudi Village. It aimed to raise health awareness and provide basic healthcare services to the local community. The program was well-received for its impact on health education and awareness.

<b>File Description</b>	<b>Document</b>
Upload Additional information	<a href="#">View Document</a>

### **3.4.3**

*Number of extension and outreach programs conducted by the institution through organized forums including NSS/NCC with involvement of community during the last five years.*

**Response:** 45

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

2022-23	2021-22	2020-21	2019-20	2018-19
14	10	8	6	7

<b>File Description</b>	<b>Document</b>
Photographs and any other supporting document of relevance should have proper captions and dates.	<a href="#">View Document</a>
Institutional data in the prescribed format	<a href="#">View Document</a>
Detailed report for each extension and outreach program to be made available, with specific mention of number of students participated and the details of the collaborating agency	<a href="#">View Document</a>
Provide Links for any other relevant document to support the claim (if any)	<a href="#">View Document</a>

### 3.5 Collaboration

#### 3.5.1

*Number of functional MoUs/linkages with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research during the last five years.*

**Response:** 33

File Description	Document
Summary of the functional MoUs/linkage/collaboration indicating start date, end date, nature of collaboration etc.	<a href="#">View Document</a>
List of year wise activities and exchange should be provided	<a href="#">View Document</a>
List and Copies of documents indicating the functional MoUs/linkage/collaborations activity-wise and year-wise	<a href="#">View Document</a>
Institutional data in the prescribed format	<a href="#">View Document</a>
Provide Links for any other relevant document to support the claim (if any)	<a href="#">View Document</a>

## Criterion 4 - Infrastructure and Learning Resources

### 4.1 Physical Facilities

#### 4.1.1

The Institution has adequate infrastructure and other facilities for,

- teaching – learning, viz., classrooms, laboratories, computing equipment etc
- ICT – enabled facilities such as smart class, LMS etc.

Facilities for Cultural and sports activities, yoga centre, games (indoor and outdoor), Gymnasium, auditorium etc (Describe the adequacy of facilities in maximum of 500 words.)

#### Response:

The institution has a good academic ambiance, spread over an extensive campus of 11 acres with more green trees environment and grasslands for a learning atmosphere. The institution consists of administrative blocks, A, B, C, D, E, and F blocks for various departments and every department has its own self-contained buildings connected with the classrooms, laboratories, R&D cell, and other cell and club facilities. The staircase, corridors, administrative block, Principal Office, HoD and faculty cabins, Examination cell, IQAC, Training and Placement cell, and the other instructional facilities (tutorial room, library and reading room, seminar halls, auditoriums, workshops, drawing halls, computer centers, etc.) are available as per the statutory bodies requirements. A separate area for boys' & girls' hostels, girls' common room, toilets, cafeteria, sports, gymnasium, student center, and Security office are adequately provided by the institution for academic purposes.

#### Class Rooms

The institution has 30 classrooms and drawing halls for the UG and PG academic departments with ICT-enabled provisions consisting of 22 LCD projectors and Smart android TVs, Laptop/Computer with WIFI connection for the effective teaching-learning process

#### Laboratories

The institution has 60 laboratories as mentioned in the curriculum and to provide hands-on experience beyond the curriculum. The language lab is equipped with audio-video facilities, computers, chairs, and microphones for enhancing the listening and learning practices of students.

#### Seminar hall and Auditorium

The college has 3 air-conditioned seminar halls and a closed auditorium with LCD projectors internet connectivity and public addressing system.

#### ICT and Computing Facilities

The institution provides sophisticated IT facilities which include 241 Computers, 10 Printers, and 4 Legal System Software. Video Conferencing/ are also available to interact with experts from remote locations.

The institution has a well-equipped internet lab working 24X7 with a 100 Mbps high-speed connection from BSNL. The computing facility consists of a LAN system with licensed software (system software, applications software, and open source software) along with Wi-Fi connectivity access points at prominent places of the institution including the hostel.

### Library

The institution has a spacious central library with 100 seating capacity provided to the students and faculty members. The digital library is equipped with 20 PCs which are connected to LAN for streaming of NPTEL lectures and for using other e-Resources for the benefit of its users. Reprographic facilities are also available in the library.

### Sports and games Facilities:

The Institution has various infrastructure sports facilities like a Cricket ground, Football ground, Volleyball Court, and various facilities for indoor and outdoor games. The athletic facilities such as 200m track, long jump pit, etc. are available. The Institution's Gym is equipped with various workout machines for students and staff members.

### Cultural facilities

The institution provides music rooms and instruments for cultural activities. The auditorium is provided with adequate facilities to conduct various cultural activities on various occasions like Independence Day, Republic Day, Hostel Day, women's Day, and on such other important occasions.

### Yoga Facilities

As part of mental development Yoga sessions are arranged, for the students, and delivered by expert yoga trainers. Separate yoga trainers are allotted for boys and girls.

File Description	Document
Upload Additional information	<a href="#">View Document</a>

#### 4.1.2

*Percentage of expenditure for infrastructure development and augmentation excluding salary during the last five years*

**Response:** 10.41

**4.1.2.1 Expenditure for infrastructure development and augmentation, excluding salary year wise during last five years (INR in lakhs)**



2022-23	2021-22	2020-21	2019-20	2018-19
33.58	22.04	7.77	11.45	33.64

File Description	Document
Institutional data in the prescribed format	<a href="#">View Document</a>
Audited income and expenditure statement of the institution to be signed by CA for and counter signed by the competent authority (relevant expenditure claimed for infrastructure augmentation should be clearly highlighted)	<a href="#">View Document</a>

## 4.2 Library as a Learning Resource

### 4.2.1

*Library is automated with digital facilities using Integrated Library Management System (ILMS), adequate subscriptions to e-resources and journals are made. The library is optimally used by the faculty and students*

#### Response:

Sir Isaac Newton College of Engineering and Technology takes great pride in its advanced library facility, which encompasses a spacious carpeted area and functions from 8:30 AM to 6:30 PM. This library serves as a cornerstone of our commitment to providing an exceptional learning environment for our students and faculty. Our library boasts an extensive collection of engineering books, which includes both national and international journals. It includes a vast collection of 13,975 volumes and purchased at a cost of approximately Rs.41,92,500/-. spanning approximately 4607 titles. This comprehensive repository of knowledge ensures that our academic community has access to a wide array of research materials, fostering academic excellence and innovation.

#### Integrated Library Management Software Package:

Integrated Library Management Software Package (AUTO LIB version 1.2) was installed in the year 2016 and coded with SQL as the robust backend and PHP 2018 as the user-friendly frontend. This software marked a significant step in our library's modernization. The modules of the Auto lib software were

#### 1. Catalogue module

The Catalogue Module in AutoLib enhances library operations, ensuring the precise organization of collections of books, simplifying the search for books and resources, and improving the borrowing experience significantly.

## 1. Circulation

The circulation module in AutoLib has streamlined the intricate task of book circulation management, simplifying the borrowing and return processes with computerized bar-coded circulation services for both our esteemed students and dedicated staff members.

### 1. WEB OPAC (Online Public Access Catalogue)

AUTO LIB also bestowed upon our library an Online Public Access Catalogue (OPAC) of unparalleled precision, allowing for pinpoint-accurate searches by title and periodical. Furthermore, it demonstrated its prowess through the generation of exhaustive general book reports, impeccably sorted by accession number, title, author, and publisher.

### Digital Library

In our Digital Library, we provide 20 computer systems with internet access to benefit our students and faculty. This library embodies the best teaching and learning practices from esteemed institutions like IITs, IISCs, and IIMs. Users can easily access e-books and e-journals.

### Subscription to e-resources:

Our college library offers a wealth of e-resources and e-journals, including memberships with NDLI and NPTEL. We have a dedicated 100 Mbps BSNL leased line for high-speed access, direct access to 976 DELNET e-journals, and a collection of faculty and student publications. We also provide NPTEL video courses and SWAYAM programs.

### Streamlined Stock Check

Annual stock verification is now effortless with our ILMS, replacing manual processes. Barcode technology within our library automation software ensures accuracy, reduces labor costs, and eliminates typing errors, guaranteeing reliable verification reports.

### User log report:

We can generate and print more numbers of reports like book issued and return reports, categorized by accession number, author, subject, department, publisher, and title. Monthly reports and yearly report facilities are also available in the library management system. The module records an average of 206 or more users per day.

File Description	Document
Upload Additional information	<a href="#">View Document</a>

## 4.3 IT Infrastructure

### 4.3.1

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

*Describe IT facilities including Wi-Fi with date and nature of updation, available internet bandwidth within a maximum of 500 words*

### **Response:**

The institution aims to provide comprehensive IT facilities for students and staff members so that they can utilize these resources and achieve greater goals. The college has adequate facilities for information technologies including Wi-Fi and the internet connection is well spread with internet-connected computers and LAN facility. The college has well-equipped smart classrooms, an auditorium, conference, and seminar halls with LCD projectors and internet connections. Our college website provides information about upcoming events and reports of all programs along with pictures. The institution has a separate server through which all the activities are controlled and the entire campus is monitored by a CCTV facility.

### **Computer Resources and Network Facility**

The institution has excellent IT facilities with a good number of 241 desktop computers with high configuration available in various department laboratories. The highly configured system i7 processor 7th gen with 16 GB crucial DDR4 RAM, 1TB SATA HDD, ASUS 710 2GB Graphics Card. The server room is available to provide network connectivity in the campus and all the laboratories with high-speed internet connectivity of 100 Mbps provided by BSNL for academic and administrative purposes.

### **Software**

Software including windows10/8/7, Microsoft Office, Microsoft visual studios, MS SQL server, MATLAB, E TAB, AUTO CAD, XILINX, Mi Power, Pspice, Lab view software, open source operating systems such as Ubuntu and software such as AUTO CAD, Solid works, ANSYS, CATIA, JAVA, Argo UML, Python, Eclipse, Scilab, NS simulator, Android, etc, are installed and used in various department laboratories of our college.

### **Wi-Fi**

Wi-Fi access is provided to all the students and faculty. Individual 15 Wi-Fi access points have been created in a library, hostels and laboratories, and administrative buildings, etc.

### **E-services**

Our college assigns individual email addresses to each staff member (e.g., staffname@sincet.ac.in), facilitating easy access to academic and administrative updates. The college website serves as a comprehensive resource for stakeholders, offering vital information and enabling online fee payments for students. Faculty members share technological advancements on the website, while Google Classroom enhances the teaching-learning process. The Integrated Library Management System (ILMS) regularly updates its resource lending system for students and staff. The Learning Management System (LMS) ensures seamless teaching and learning activities, especially in remote areas. An Enterprise Resource Planning (ERP) system manages day-to-day attendance and essential information for documentation

purposes, streamlining administrative tasks. Additionally, an E-biometric attendance system accurately records employee attendance.

### **CCTV surveillance**

The institution's entire Campus is connected with a CCTV surveillance system to monitor the campus activities from one end of control and to have a better-secured environment.

### **Information Security**

A firewall is installed for the security of the campus network with features like IP NAT, DMZ, Port blocking, and content filtering.

### **Updating the IT facilities**

Due to the progressive rise in student enrollment, the quantity of computer systems across all labs has been revised to comply with AICTE standards regarding the student-to-computer ratio.

Responsibility for IT affairs, including ERP management, software and hardware maintenance, networking, website development, and SMS solutions, lies with the College IT team. Online classes, educational resource sharing, and collaborative learning are facilitated through webinars, Google Classroom, and YouTube platforms. High-speed internet connectivity, operating at 100 Mbps, is provided by BSNL.

<b>File Description</b>	<b>Document</b>
Upload Additional information	<a href="#">View Document</a>

### **4.3.2**

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

**Response:** 4.46

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

**Response:** 241

<b>File Description</b>	<b>Document</b>
Purchased Bills/Copies highlighting the number of computers purchased	<a href="#">View Document</a>
Extracts stock register/ highlighting the computers issued to respective departments for student's usage.	<a href="#">View Document</a>

## 4.4 Maintenance of Campus Infrastructure

### 4.4.1

*Percentage expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component, during the last five years (INR in Lakhs)*

**Response:** 20.83

**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)**

2022-23	2021-22	2020-21	2019-20	2018-19
54.20	45.36	31.18	45.7	40.57

File Description	Document
Institutional data in the prescribed format	<a href="#">View Document</a>
Audited income and expenditure statement of the institution to be signed by CA for and counter signed by the competent authority (relevant expenditure claimed for maintenance of infrastructure should be clearly highlighted)	<a href="#">View Document</a>
Provide Links for any other relevant document to support the claim (if any)	<a href="#">View Document</a>

## Criterion 5 - Student Support and Progression

### 5.1 Student Support

#### 5.1.1

*Percentage of students benefited by scholarships and freeships provided by the institution, government and non-government bodies, industries, individuals, philanthropists during the last five years*

**Response:** 88.14

**5.1.1.1 Number of students benefited by scholarships and freeships provided by the institution, Government and non-government bodies, industries, individuals, philanthropists during the last five years**

2022-23	2021-22	2020-21	2019-20	2018-19
927	882	681	635	755

#### File Description

#### Document

Year-wise list of beneficiary students in each scheme duly signed by the competent authority.

[View Document](#)

Upload Sanction letter of scholarship and free ships (along with English translated version if it is in regional language).

[View Document](#)

Upload policy document of the HEI for award of scholarship and freeships.

[View Document](#)

Institutional data in the prescribed format

[View Document](#)

Provide Links for any other relevant document to support the claim (if any)

[View Document](#)

#### 5.1.2

*Following capacity development and skills enhancement activities are organised for improving students' capability*

- 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
Report with photographs on Programmes /activities conducted to enhance soft skills, Language and communication skills, and Life skills (Yoga, physical fitness, health and hygiene, self-employment and entrepreneurial skills)	<a href="#">View Document</a>
Report with photographs on ICT/computing skills enhancement programs	<a href="#">View Document</a>
Institutional data in the prescribed format	<a href="#">View Document</a>
Provide Links for any other relevant document to support the claim (if any)	<a href="#">View Document</a>

### 5.1.3

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

**Response:** 65.42

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

2022-23	2021-22	2020-21	2019-20	2018-19
719	561	503	524	573

File Description	Document
Upload supporting document	<a href="#">View Document</a>
Institutional data in the prescribed format	<a href="#">View Document</a>

### 5.1.4

***The institution adopts the following for 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
Proof w.r.t Organisation wide awareness and undertakings on policies with zero tolerance	<a href="#">View Document</a>
Proof related to Mechanisms for submission of online/offline students' grievances	<a href="#">View Document</a>
Proof for Implementation of guidelines of statutory/regulatory bodies	<a href="#">View Document</a>
Details of statutory/regulatory Committees (to be notified in institutional website also)	<a href="#">View Document</a>
Annual report of the committee motioning the activities and number of grievances redressed to prove timely redressal of the grievances	<a href="#">View Document</a>
Provide Links for any other relevant document to support the claim (if any)	<a href="#">View Document</a>

## 5.2 Student Progression

### 5.2.1

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

**Response:** 75.89

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

2022-23	2021-22	2020-21	2019-20	2018-19
131	74	161	157	135

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

2022-23	2021-22	2020-21	2019-20	2018-19
158	133	219	172	185



File Description	Document
Number and List of students placed along with placement details such as name of the company, compensation, etc and links to Placement order(the above list should be available on institutional website)	<a href="#">View Document</a>
List of students progressing for Higher Education, with details of program and institution that they are/have enrolled along with links to proof of continuation in higher education.(the above list should be available on institutional website)	<a href="#">View Document</a>
Institutional data in the prescribed format	<a href="#">View Document</a>
Provide Links for any other relevant document to support the claim (if any)	<a href="#">View Document</a>

### 5.2.2

*Percentage of students qualifying in state/national/ international level examinations during the last five years*

**Response:** 3.83

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

2022-23	2021-22	2020-21	2019-20	2018-19
2	3	3	0	0

File Description	Document
List of students qualified year wise under each category and links to Qualifying Certificates of the students taking the examination	<a href="#">View Document</a>
Institutional data in the prescribed format	<a href="#">View Document</a>
Provide Links for any other relevant document to support the claim (if any)	<a href="#">View Document</a>

## 5.3 Student Participation and Activities

**5.3.1**

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

**Response:** 13

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

2022-23	2021-22	2020-21	2019-20	2018-19
8	5	0	0	0

**File Description****Document**

Upload supporting document

[View Document](#)

list and links to e-copies of award letters and certificates

[View Document](#)

Institutional data in the prescribed format

[View Document](#)

Provide Links for any other relevant document to support the claim (if any)

[View Document](#)

**5.3.2**

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

**Response:** 36.4

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

2022-23	2021-22	2020-21	2019-20	2018-19
41	37	27	40	37

File Description	Document
Upload supporting document	<a href="#">View Document</a>
Institutional data in the prescribed format	<a href="#">View Document</a>

## 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:**

Our institution's Alumni association was registered with over 1000 graduates who play an important role in extending the institution's global reach. Alumni actively contribute to the college's growth as effective marketing delegates. These illustrious graduates contribute to the institution by presenting guest lectures and seminars, sharing their knowledge, and inspiring future innovators. The organization promotes a mentoring culture, with successful alumni entrepreneurs offering vital advice and support to students. This involves arranging for summer internships and postings in their businesses.

Alumni have an impact on facility changes, with graduates providing feedback on infrastructure, computer, library, gaming, sports, and placement activities. Their suggestions help improve the entire institution. Career development is emphasized heavily, with alumni assisting final-year engineering students in obtaining careers in both the public and commercial sectors. Regular alumni association meetings are critical in ensuring that students are placed successfully. Alumni regularly engage in teaching junior students to foster ethical and technical excellence. The alumni organization works relentlessly to grow the alumni network and link graduates with commercial prospects. The Alumni Meet, which is supported by management on an annual basis, provides a forum for alumni to share thoughts, recommendations, and professional experiences, promoting a sense of community among members.

#### **Curriculum enrichment:**

Alumni are actively involved in curriculum enrichment by identifying gaps and developing new courses and value-added modules. Senior postgraduates provide job options within their businesses, advising students with alumni insights. Successful alumni entrepreneurs provide vital ideas on overcoming difficulties and implementing good strategies to aspiring technocrats. Alumni also contribute to departmental development out of gratitude for their academic growth while at the university.

#### **Mentorship:**

Alumni have traditionally mentored students in technical fields, offering inspiring teachings based on real-life experiences. Alumni mentor and inspire current college students to achieve in various areas.

#### **Industry linkup:**

Alumni facilitate Memorandums of Understanding with businesses, organize industrial tours for students, and provide advice on launching businesses and securing employment. Alumni also volunteer guidance for student internships.

**As an Entrepreneur:**

Alumni help students establish Memorandums of Understanding with businesses, conduct industrial visits, and offer guidance on starting enterprises and finding work. Alumni also serve as mentors for student internships.

**Facilitator for employment opportunities:**

Alumni serve as brand ambassadors, spreading information about academic institutions and encouraging juniors to apply for opportunities. They function as references in the industry in which they operate and offer information about job opportunities in other industries.

**Experience sharing:**

Alumni offer their ideas and experiences at open forum debates, covering the transition from college to industry life, techniques for success in competitive evaluations, technical interviews, and placement chances. They offer invaluable assistance with university applications and educational courses for certification. Students attentively listen to their seniors, taking notes and using what they learn in their journey of adapting to the market and conquering obstacles.

**Financial Contribution:**

Alumni have graciously donated more than Rs. 5 lakh to the Association to support various initiatives. They grant scholarships to deserving students for undertaking industrial visits at their organizations and fund events such as seminars and workshops hosted by the institute.

File Description	Document
Upload Additional information	<a href="#">View Document</a>

## Criterion 6 - Governance, Leadership and Management

### 6.1 Institutional Vision and Leadership

#### 6.1.1

*The institutional governance and leadership are in accordance with the vision and mission of the Institution and it is visible in various institutional practices such as NEP implementation, sustained institutional growth, decentralization, participation in the institutional governance and in their short term and long term Institutional Perspective Plan.*

#### Response:

#### The Nature of Governance and Leadership

The vision is to establish state-of-the-art engineering education with the mission steps to define high-quality technical professional and research skills including ethical character, producing engineers to meet the various needs of society, nation, and the world.

The governance is implemented through e-governance software, ensuring efficient management and decision-making processes. The institute's independent decision-making system is centered on using a strong and proactive teaching-learning process to build an excellent educational foundation. Every important decision and strategy regarding assignments and activities, academic as well as non-academic, is discussed at meetings of the Governing Council. With the help of a well-rounded Governing Council made up of members with and without academic degrees, the Institute is headed for success. As the principal of the institute, he is in charge of implementing the decisions made by the Governing Council. He is in charge of making plans and decisions for both academic and extracurricular pursuits.

#### Decentralized and Participative Management

The institution practices decentralization and participative management, recognizing that the success of the institution is the collective effort of all stakeholders. The Principal efficiently delivers the Governing Council's recommendations while working with the Heads of Departments (HODs) from various academic areas. Academic and non-academic concerns are brought up at regular meetings and shared with the workforce as a whole by their respective heads of departments and IQAC devises diverse committees, including admission, Student Welfare, Research, Examination, and Grievance Redressal etc, to foster participative management and ensure effective decision-making processes. The principal makes sure that all staff members—teaching and non-teaching—actively participate in the decision-making process. This method encourages staff members to take responsibility for their actions.

#### Perspective Plan

The main elements in the perspective plan are: improving the quality of the teaching-learning process; growing infrastructure; increasing graduation; improving placement outcomes; maintaining outreach activities; and enhancing accreditation, as specified in the strategic plan.

A perspective strategy developed from the stated vision and mission of the Institute is to attain

Autonomous status by 2026 by achieving the Strategic Plan's goals and objectives. It focuses on

Acquiring all qualifying UG programs recognized by NBA, and NAAC Accreditation with A+,

Aiming for NIRF ranks in the top 200, ARIIA ranking, and sustaining placement rates of 95% or higher including top-notch companies.

### NEP Implementation

- The institution has prioritized the areas envisioned in NEP2020.
- Implementation of Value Education by introducing Universal Human Values courses as per the AICTE model curriculum.
- Various skill enhancement training and certification programs are organized in collaboration
- Promotion and adoption of the Indian Knowledge System.
- Faculty members and students are involved in translating the NPTEL/SWAYAM lectures into regional languages and take part in online education through NPTEL platforms.

### Institutional growth

Institutional governance and its approaches driven by visionary leaders and supported by participative management, are the tools for achieving the institution's vision and mission. The commitment to quality higher education, industry collaboration with various functional MoUs, student welfare, and holistic development is evident in the institution's practices and initiatives, the institution prepares students to excel in their chosen fields and contribute meaningfully to society.

File Description	Document
Upload Additional information	<a href="#">View Document</a>

## 6.2 Strategy Development and Deployment

### 6.2.1

*The institutional perspective plan is effectively deployed and functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment, service rules, and procedures, etc*

#### Response:

Human resource policies may also be described as a set of principles and rules of conduct that govern how an organization interacts with its employees. The SINCET has a well-organized hierarchy consisting of the Chairman, Administrator, Principal, and Heads of departments

The Chairman of the institution leads the Governing body, and the organizational structure facilitates a well-organized decision-making process that takes into account all relevant factors for the efficient operation of the organization. At the HOD level, all academic ideas are discussed in the presence of the

Principal and the Director, and the issues are then brought up with the Chairman for discussion at the IQAC meetings. At the administrative level, the administrator makes the ideas, and in a high-level meeting, addresses financial activities and different policies about academics and administration with ERP guidance.

The College Governing Council, Academic Council. Internal Compliance Committee and Anti-Ragging Unit are among the institutional structures that the institute uses to run its operations. IQAC, exam cell, training and placement cell, women's development cell, industry institute interaction cell, institute innovation council, R&D cell, alumni association, and SC/ST welfare cell. Each of these organizations follows policy guidelines that guarantee the transparency of their objectives and roles. Frequent evaluations and observations are carried out to ensure their effective operation, delivering optimal benefits to all concerned parties. To implement the established policies and identify the type of work that needs to be done, IQAC has established several committees to conduct departmental-level events and regular internal audits.

The institution created the strategy plan with the long term in mind, hoping to achieve its goals. The plan provides a clear roadmap for improvement while accounting for the institution's strengths and shortcomings. It was created together with contributions from a range of stakeholders, including staff, students, alumni, industry partners, and leadership.

Creating value-added courses in response to industry demands, expanding the scope of undergraduate programs and courses, fostering industry-institution collaboration, facilitating student publications and internships, enhancing faculty expertise and skills, encouraging student innovation and product development, and supporting research and development initiatives are just a few of the important areas that the strategic plan focuses on.

The management believes that offering generous leave policies to its staff will encourage them to work more when they return from vacation. Appointment procedures are based on institutional needs and AICTE student-staff ratios. Recruitment advertisements are posted on the website, social media, and newspapers. The selection committee includes the Principal, HoD, and domain experts to select the candidates from the interview. Service rules are framed and approved by the Governing Council with the expectation that faculty members will contribute to teaching, research, and extra-curricular activities.

Curriculum development aligns with institutional objectives, guided by perspective plans to enhance academic programs and student development. The annual college calendar facilitates goal achievement, with regular meetings between the Principal and department heads to discuss academic and administrative matters. Effective deployment of the institutional perspective plan ensures efficient functioning of institutional bodies, maintaining policies, administrative setup, and procedures to advance institutional goals.

<b>File Description</b>	<b>Document</b>
Upload Additional information	<a href="#">View Document</a>

### 6.2.2

***Institution implements e-governance in its operations***

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

**Response:** A. All of the above

<b>File Description</b>	<b>Document</b>
Screen shots of user interfaces of each module reflecting the name of the HEI	<a href="#">View Document</a>
Institutional expenditure statements for the budget heads of e-governance implementation ERP Document	<a href="#">View Document</a>
Annual e-governance report approved by the Governing Council/ Board of Management/ Syndicate Policy document on e-governance	<a href="#">View Document</a>
Provide Links for any other relevant document to support the claim (if any)	<a href="#">View Document</a>

### **6.3 Faculty Empowerment Strategies**

#### **6.3.1**

**The institution has performance appraisal system, effective welfare measures for teaching and non-teaching staff and avenues for career development/progression**

**Response:**

The institution has well-defined welfare measures both for teaching and non-teaching staff, aimed at enhancing their job satisfaction which results in an organized functioning of all the academic and administrative activities.

**Performance Appraisal System:**

The qualifications, experience, and salary for the various teaching positions are in line with AICTE norms. Annual increments and cash prizes will be awarded based on the performance assessed through the Academic Performance Indicator (API). Academic Performance Indicator (API) is followed for all the faculty members. A written appraisal consisting of both self-appraisal and the appraisal by the Head of the Department is obtained from every faculty member. This appraisal consists of details like courses handled, pass percentage, innovation in teaching, laboratory sessions, student projects, mentorship, research publications, funding, industry consultancy, and student feedback.

The appraisal is conducted based on the self-appraisal suggesting the scope of improvement in the



various domains of the faculty responsibility. This practice helps for continuous development and improvement for every faculty and hence the department and the institution as a whole.

#### **For Professional Growth:**

- A transparent policy is available ensuring career development and progression. The teaching faculty are encouraged to register for PhD while working with the institution. The non-teaching staff are encouraged to upgrade their qualification improvement. Those holding a diploma are being supported to pursue B.E/B.Tech part-time programs and on completion of graduation become eligible for elevation/ promotion.
- Faculty members will be rewarded for receiving funded research projects, highly cited publications, publications in journals with high impact factors, and Securing the Best Paper Award for papers presented at conferences.
- Seed Money is provided to start a research work, which has the potential to grow into a major research project.
- Sponsorship is offered for the faculty who are attending FDP, seminars, conferences, and Paper publications.
- Cash prizes are given to teaching faculty and highly skilled non-teaching staff on College Day.

#### **Employee well-being and facilities:**

- Casual Leave (CL), Medical leave, and maternity leave with pay for 2 children.
- Earned leave with an option for accumulation and encashment.
- OD facilities are extended to the teaching staff for attending seminars, workshops, and conferences.
- Salary will be paid before the completion of the month to the individual based on their genuine request.
- The staff members are eligible to get financial assistance of up to 100000 as a loan for their medical treatment and personal request.
- A medical facility with qualified Doctors and nurses is also available in the campus.
- Lunch and refreshments and to and fro bus facility are provided at no cost for all the teaching and non-teaching staff.
- Group Insurance and Partial financial support with medical leave is given for all the teaching and non-teaching staff for hospitalization.
- Fee concession will be given to the wards of the staff members.
- Staff members receive gifts and compliments on special occasions and celebrations, such as Women's Day, Men's Day, Teacher's Day, Diwali, and Pongal.
- All staff member tours in the name of "SINCETSTEP" (Staff Training Empowerment Program) are permitted with financial assistance every year as decided by the institution.
- There is a Grievance Redressal Committee, which looks into the specific grievances reported by the employees and resolves them with suitable recommendations.

File Description	Document
Upload Additional information	<a href="#">View Document</a>

**6.3.2**

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

**Response:** 69.7

**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**

2022-23	2021-22	2020-21	2019-20	2018-19
63	54	54	55	73

File Description	Document
Policy document on providing financial support to teachers	<a href="#">View Document</a>
Institutional data in the prescribed format	<a href="#">View Document</a>
Copy of letter/s indicating financial assistance to teachers and list of teachers receiving financial support year-wise under each head.	<a href="#">View Document</a>
Audited statement of account highlighting the financial support to teachers to attend conferences / workshops and towards membership fee for professional bodies	<a href="#">View Document</a>
Provide Links for any other relevant document to support the claim (if any)	<a href="#">View Document</a>

**6.3.3**

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

**Response:** 74.07

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

2022-23	2021-22	2020-21	2019-20	2018-19
83	83	65	79	87

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

2022-23	2021-22	2020-21	2019-20	2018-19
23	22	21	22	19

File Description	Document
Refresher course/Faculty Orientation or other programmes as per UGC/AICTE stipulated periods, as participated by teachers year-wise.	<a href="#">View Document</a>
Institutional data in the prescribed format	<a href="#">View Document</a>
Copy of the certificates of the program attended by teachers.	<a href="#">View Document</a>
Annual reports highlighting the programmes undertaken by the teachers	<a href="#">View Document</a>
Provide Links for any other relevant document to support the claim (if any)	<a href="#">View Document</a>

## 6.4 Financial Management and Resource Mobilization

### 6.4.1

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

#### Response:

The Thandapani Pillai Trust in Nagapattinam operates the Sir Isaac Newton College of Engineering and Technology in Pappakoil. The Institution periodically conducts internal and external audits.

The team in charge of institutional accounts is in charge of overseeing and managing all financial transactions within the institution. They monitor the following processes: voucher, day-to-day expense settlement, asset and liability balance confirmation, statutory payments (such as TDS, EPF, and other local taxes), and prompt payment of bank receivables. The institutional accounting team verifies all the documentation every three months, after which the records are sent to the auditor for an external audit.

### **Finance committee:**

According to UGC regulations, the finance committee serves as an advisory body on all financial matters. The Finance Committee's proceedings are reviewed and ratified by the Governing Body. The finance committee takes great care in verifying income and expenditure data.

### **Budget preparation:**

The budget proposal is prepared by the department heads, who take into account both recurring and non-recurring items. Budget presentation meetings with various Heads and Principals are scheduled at the start of each fiscal year. The Common budget for college is being prepared based on the discussions that have taken place. The College budget is submitted for approval to Management. The final budget is approved by Management based on the year's allocation and mobilization of funds.

The proposed budget includes salary, consumable charges such as electricity and water, laboratory equipment purchase, maintenance, furniture requirements, service and repair costs, R&D costs, and other infrastructure development costs. The Finance department monitors spending under the approved budget.

### **Financial Audit**

The purpose of a financial audit is to check financial statements for compliance with accounting principles, to ensure an appropriate monitoring and control system for money flow, and to forecast/manage appropriate asset-related risk.

### **Internal Financial Audit:**

The Trust Office's accounts division conducts internal audits. Twice a year, a financial audit is carried out to make sure that actual costs are within budget and that there is an internal approval process in place for every expense incurred. No issues or grievances have been found because the organization has put in place a productive system for getting quotes, getting ready drafting purchase orders, negotiating, and creating comparison statements. After delivery, the products and services are thoroughly inspected, and each process step needs approval from the execution procedure. The following sections provide an analysis and verification of all significant financial transactions:

- Research and Development
- Training and Placement
- Internet and software fees
- Books and Journals from the Library
- Development along with Maintenance of Infrastructure
- Membership, and Licenses
- Consumables & Equipment

### **External Financial Audit**

Once a year, qualified external auditors conduct external audits. The management appoints an external auditor to oversee the institution's entire financial transaction audit process. The book of accounts is prepared under legal requirements and is audited every year. External auditors are in charge of filing returns with the income tax department and conducting document audits. The organization keeps distinct

books of accounts, which are audited annually, and the audit firm certifies the financial statements each year. The college auditor audits the documents each year as part of the audit of accounts and income tax return submission.

File Description	Document
Upload Additional information	<a href="#">View Document</a>

## 6.5 Internal Quality Assurance System

### 6.5.1

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

#### Response:

In 2018, the establishment of the IQAC at SINCET marked a significant milestone in ensuring service quality to stakeholders. The IQAC council was established to oversee quality assurance methods and implement initiatives to enhance faculty awareness of effective strategies for academic excellence.

#### The key strategies include:

- Facilitating sound decision-making and improving institutional functioning.
- Enhancing and integrating various activities while institutionalizing good practices.
- Acting as a monitoring body to regulate academic and administrative processes.
- Imparting quality education to promote employability, research, and development.
- Producing engineers of high quality and ethics to meet industrial standards.

#### Based on these strategies, the following processes are followed:

- Development and circulation of an academic calendar at the beginning of each academic year.
- Timetable allocation through standardized centralized procedures.
- Organization of seminars, conferences, FDPs, workshops, and hands-on training by IQAC in collaboration with academic institutions.
- Periodic collection of student feedback and timely addressing of concerns by faculty members.
- Conducting periodic Academic and Administrative Audits by the IQAC.
- Periodic internal assessment tests aligned with the academic calendar using a centralized examination system.
- Setting question papers based on Blooms' Taxonomy (BT) level and approval by DAC and IQAC members at the department level.
- Monitoring and counseling absentees at the end of examinations.
- Conducting course-end surveys to assess the performance of the teaching-learning process in each subject.

- Promote institute industry activities to bridge the gap.
- IQAC introduces Outcome-Based Education (OBE) for measuring student performances through outcomes.
- The governing body is periodically monitoring the institution's developments.

**Academic audits include:**

- Faculty members assigned subjects based on expertise and submission of course files to HODs for evaluation by IQAC.
- Current audits of lab manuals by the committee after assessments, forwarding suggestions for quality assurance.
- Mentors counseling students on academics and personal issues, with Class Committee meetings reviewing student performance.
- Remedial classes for slow learners and motivational sessions for fast learners tailored to individual needs.

An external audit at the end of the academic year evaluates various aspects, including departments, the library, the Department of Physical Education, administrative offices, examination cells, placement cells, statutory bodies, and supporting units. Recommendations contribute to quality improvement and operational streamlining.

**Outcome-Based Education (OBE)**

Student performance is assessed according to Bloom's Taxonomy (BT), with faculty training to improve teaching and exam materials. Three Internal Assessment (IA) tests evaluate academic progress.

The Internal Quality Assurance Cell (IQAC) oversees theory and practical exams, with student learning levels assessed internally and by the university. Remedial classes aid struggling students, while advanced learners participate in external events.

**Skill Development through Research, Academic Enhancement, and Publishing**

Faculty research and publishing are encouraged, with the institution participating in recognized assessments like NIRF, ISO Certification, and NAAC accreditation. Staff and students enhance technical skills through collaborations, benefiting teaching.

Annual programs like Orientation focus on skill development in communication, programming, and industry readiness. Mini-projects allow students to apply knowledge beyond class.

In summary, IQAC initiatives like academic audits and OBE, alongside faculty research, enhance institutional quality. ISO certification and diverse committee activities demonstrate commitment to holistic student development and improved education.

File Description	Document
Upload Additional information	<a href="#">View Document</a>

**6.5.2**

**Quality assurance initiatives of the institution include:**

- 1.Regular meeting of Internal Quality Assurance Cell (IQAC); quality improvement initiatives identified and implemented**
- 2.Academic and Administrative Audit (AAA) and follow-up action taken**
- 3.Collaborative quality initiatives with other institution(s)**
- 4.Participation in NIRF and other recognized rankings**
- 5.Any other quality audit/accreditation recognized by state, national or international agencies such as NAAC, NBA etc.**

**Response:** A. Any 4 or more of the above

<b>File Description</b>	<b>Document</b>
Quality audit reports/certificate as applicable and valid for the assessment period.	<a href="#">View Document</a>
NIRF report, AAA report and details on follow up actions	<a href="#">View Document</a>
List of Collaborative quality initiatives with other institution(s) along with brochures and geo-tagged photos with caption and date.	<a href="#">View Document</a>
Provide Links for any other relevant document to support the claim (if any)	<a href="#">View Document</a>
Link to Minute of IQAC meetings, hosted on HEI website	<a href="#">View Document</a>

## Criterion 7 - Institutional Values and Best Practices

### 7.1 Institutional Values and Social Responsibilities

#### 7.1.1

**Institution has initiated the Gender Audit and measures for the promotion of gender equity during the last five years.**

*Describe the gender equity & sensitization in curricular and co-curricular activities, facilities for women on campus etc., within 500 words*

**Response:**

Sir Isaac Newton College of Engineering and Technology has a commitment to advancing gender equity through a number of programmes. Their fundamental principles of core values and objectives are created to educate students about every aspect of campus life, including academics, extracurricular, and other activities. By incorporating moral instruction and value education into the curriculum, they prioritize gender equity and make sure that all students are taught the core principles of gender justice.

The women empowerment cell of Sir Isaac Newton College of Engineering and Technology was established with the motto of “towards self-empowered mind”. The cell aims to empower female students and faculty, enhance their understanding of issues related to women to make a college campus a safe place for women and girls and address the practical issues related to welfare and equal opportunities for women faculty, staff and students.

The mission of our institution is to advance education that is considerate of the needs of many societal groups, with a focus on gender equality and sensitivity. Students of both genders are given equal opportunities to grow and develop into able, responsible citizens in the future. Many gender equity programs are conducted to promote women's empowerment. During these programs, cultural, special sessions and interaction of the dignitaries with the students are organized to maintain their professional dignity.

A Separate ladies' hostel is available in the campus with well-furnished rooms. Safety and security 24/7 security support are available in the campus with CCTV surveillance cameras, and security guards with a medical care centre are available within the campus to ensure the wellness of staff members and students. Anti-ragging Committee, Prevention of Sexual Harassment Committee and Disciplinary Committee are functioning to ensure safety and security in the campus for students and faculty. A separate female counsellor is available to provide guidance for female students and staff members. Common waiting rooms and restrooms are available for the female staff and students.

The mentoring system works well and aids students in taking care of their academic, emotional, social, and intellectual growth. The institution provides safety and security facilities for the women staff and students, such as CCTV Surveillance, common rooms, rest rooms for women students in the college campus, and a woman counsellor who is solely dedicated to addressing the emotional and psychological issues of women students in the counselling centre.

International Women's Day is celebrated on 8th March every year as a prestigious function in the



campus. Female faculties are actively involved in research and Publication. They hold positions in the institution at several levels such as HoDs, staff selection committee members, Club / Cell in-charges and all college committees.

In an educational institution, the Gender Audit is a tool for action planning from the view of gender perspective. It ensures a safe and secure ambience for female students, Teaching and Non-teaching staff in Sir Issac Newton College of Engineering and Technology. The Gender audit survey is taken every year in our college, which helps to identify the strengths and challenges towards integrating gender and gender equity.

File Description	Document
Upload Additional information	<a href="#">View Document</a>

### 7.1.2

**The Institution has facilities and initiatives for**

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

**Response:** A. 4 or All of the above

File Description	Document
Policy document on the green campus/plastic free campus.	<a href="#">View Document</a>
Geo-tagged photographs/videos of the facilities.	<a href="#">View Document</a>
Circulars and report of activities for the implementation of the initiatives document	<a href="#">View Document</a>
Bills for the purchase of equipment's for the facilities created under this metric	<a href="#">View Document</a>
Provide Links for any other relevant document to support the claim (if any)	<a href="#">View Document</a>

### 7.1.3

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

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

**Response:** A. All of the above

File Description	Document
Report on Environmental Promotional activities conducted beyond the campus with geo tagged photographs with caption and date	<a href="#">View Document</a>
Policy document on environment and energy usage Certificate from the auditing agency	<a href="#">View Document</a>
Green audit/environmental audit report from recognized bodies	<a href="#">View Document</a>
Certificates of the awards received from recognized agency (if any).	<a href="#">View Document</a>
Provide Links for any other relevant document to support the claim (if any)	<a href="#">View Document</a>

#### 7.1.4

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

**Response:**

Sir Isaac Newton College of Engineering and Technology is a secular campus that gives equal importance to all religions, languages, and cultures. Our students come from diverse backgrounds, including different economic and community backgrounds. We make significant efforts to help students adapt to the college environment and maximize the available opportunities. We also teach students about their rights and duties as responsible citizens and encourage them to become professionals who contribute to the nation's well-being.

To familiarize incoming students with our institution's policies, regulations, and ethical code, we conduct formal orientations and bridge courses. Additionally, we organize various events such as commemorative days, annual celebrations, sports events, cultural festivals, and International Women's Day, providing platforms for students to showcase their talents and skills.

Our National Service Scheme (NSS) members actively engage in social development initiatives like eye camps, medical camps, blood donation drives, and awareness programs in local schools, promoting higher education and community welfare. We encourage our students to exercise their voting rights

during elections and provide our campus facilities for government programs, benefiting both students and the general public.

Students are encouraged to exercise their voting rights during elections. Our college premises are utilized for conducting government programs by the local administrative office and government primary health center, benefiting our students and the general public. We ensure that every student has an equal opportunity in both their academic pursuits and job placements, free from discrimination based on religion, culture, gender, or socio-economic status. Our students also receive value-based education through sessions on yoga, meditation, universal human values, and ethical behavior, delivered via guest lectures, motivational workshops, and seminars.

Republic Day and Independence Day are celebrated with reverence, emphasizing the fundamental rights enshrined in our constitution, including the right to equality, freedom, religion, culture preservation, constitutional remedies, and voting. Guest lectures and awareness campaigns, such as those conducted by the Regional Transport Office (RTO) on helmet safety and COVID-19 awareness, further educate our students on critical issues.

As a reputable institution, we extend our infrastructure and resources to the public and governmental bodies, including hosting examinations by the Tamil Nadu Public Service Commission (TNPSC). Our commitment to non-discrimination based on caste, creed, color, gender, or socio-economic status ensures an inclusive environment that fosters tolerance and harmony among our diverse student and staff population.

We cherish diversity and actively promote unity among our students, encouraging them to respect and celebrate various religions, languages, and cultures. Festivals are joyfully embraced as opportunities for cultural exchange, fostering social and religious harmony within our institution.

File Description	Document
Upload Additional information	<a href="#">View Document</a>

## 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:**

1. **Title: Developing Technocrats Through Mentoring (DTTM)**
2. **Objective:**

The primary objectives of the DTTM program encompass a holistic approach to student development:

- **Academic Development:** Providing students with tailored academic support, resources, and guidance to excel in their studies, ensuring they grasp fundamental concepts and advanced topics effectively.
- **Personality Development:** Focusing on enhancing students' soft skills, such as communication abilities, teamwork, time management, problem-solving, critical thinking, and leadership qualities. These skills are crucial for their personal growth and future career success.
- **Career Guidance:** Assisting students in identifying their career goals, exploring various career paths, and providing guidance to help them make informed decisions about their professional aspirations.
- **Support for Different Learners:** Recognizing the diverse learning needs of students by identifying and supporting.
- **Slow Learners:** Offering additional academic assistance, personalized coaching, and resources to help them improve their understanding and performance.
- **Fast Learners:** Providing opportunities for advanced learning, challenging projects, and mentorship to nurture their talents and capabilities.
- **Weak Learners:** Offering targeted support, remedial classes, and interventions to help them overcome academic challenges and enhance their learning outcomes.
- **Overall Performance Improvement:** Creating a conducive learning environment that fosters academic excellence, personal growth, and professional development for all students.

### 3. Context:

The program is implemented in a college located in a rural area near Nagapattinam, catering primarily to economically disadvantaged Tamil medium students. These students often face unique challenges such as limited access to quality education, lack of exposure to career opportunities, and financial constraints. The DTTM program aims to bridge these gaps, empower students with essential skills and knowledge, and prepare them to succeed in the competitive engineering field while contributing positively to society.

### 4. Practices:

- **Identification of Student Goals:** Conducting an induction program to understand students' aspirations, academic goals, and personal development objectives through goal-setting forms.
- **Comprehensive Report Analysis:** Analyzing goal-setting forms by Academic and Governing Councils to develop actionable plans and strategies tailored to students' needs.
- **Mentoring:** Assigning mentors in a 1:20 ratio to provide personalized guidance, academic support, career counseling, and overall mentorship throughout students' academic journey.
- **Counseling Services:** Offering a range of counseling services including academic, personal, and career counseling to address students' diverse needs, challenges, and aspirations.
- **Skill Capacity Building:** Organizing skill development workshops, training programs, and value-added courses to enhance students' technical, soft, and communication skills essential for their academic and professional success.
- **Support for Different Learners:** Providing customized resources, coaching classes, remedial support, and interventions to meet the unique learning needs of slow, fast, and weak learners, fostering their continuous improvement and development.

### 5. Evidence of Success:

- **Improved Student Performance:** Observable enhancements in students' academic performance,

demonstrated by their semester results, grades, and achievements in various academic and extracurricular activities.

- **Increased Self-Confidence:** Students exhibit higher levels of self-confidence, motivation, and self-efficacy, reflected in their willingness to take on challenges, engage in leadership roles, and pursue innovative projects.
- **Innovative Projects:** Students actively participate in and contribute to innovative projects, research activities, and practical applications of their knowledge, showcasing their creativity, problem-solving skills, and real-world applicability of their learning.
- **Positive Feedback from Parents:** Parents express satisfaction and appreciation for the program's effectiveness in supporting their children's academic, personal, and career development, attributing their progress and growth to the dedicated mentoring and support provided.

## 6. Problems Encountered and Resources Required :

- **Limited Interaction Time:** Addressing constraints related to limited interaction time between mentors and students, exploring innovative ways to maximize mentorship effectiveness within the given time constraints.
- **Faculty Availability:** Ensuring sufficient availability of faculty members beyond college hours, leveraging technology and collaborative platforms to facilitate continuous mentorship, support, and engagement with students, enhancing their academic and personal development effectively.

## Best Practice 2:

### 1. Title of the practice: Rural Empowerment Program (REP) through scholarship

### 2. Objectives:

- Recognize and empower rural talent by supporting exceptional students demonstrating outstanding academic and intellectual abilities to foster highly skilled and innovative engineers.
- Eliminate financial barriers hindering talented individuals from pursuing engineering education.
- Emphasize the development of essential engineering skills, focusing on innovation and excellence.
- Cultivate a community-centric approach to engineering education, ensuring engineers are not only academically proficient but also equipped with a mindset to positively contribute to societal advancement through technological innovation.

### 3. Context:

Established in 2011, Sir Isaac Newton College of Engineering and Technology is dedicated to providing quality education within rural communities. The college's chairperson founded the institution with a mission to empower the upcoming generation of students, particularly those from rural backgrounds, to become skilled engineers. Over 14 years, the college has attracted numerous aspiring students, offering a conducive educational environment. Our college implements a merit-based scholarship program designed to identify and support outstanding students demonstrating exceptional academic and intellectual capabilities. The majority of students admitted belong to the first graduate category, with parents residing below the poverty line. Since its inception, the management has consistently provided merit scholarships and fee waivers to students based on their economic backgrounds.

**4. Practices:**

The college implements merit-based scholarship programs for:

- Exceptional students at the pre-university level.
- Offering fee concessions to the students whose parents work at the institution,
- Providing complete fee waivers to the students facing discontinuation.

The aim is to sustain this support to contribute to societal development by providing quality education. Scholarships are awarded based on 12th-grade exam and their semester results performance, with students achieving over 85% receiving Rs. 15,000 annually, over 75% receiving Rs. 12,500, and over 70% receiving Rs. 7,500. Fee concessions are also extended to children of staff members, benefiting around 10 students annually.

**5. Evidence of Success:**

This framework serves as a means to both support and reward students for their diligent efforts and academic achievements. This support ensured that financial constraints do not hold back their educational aspirations, demonstrating our dedication to enabling every student's academic journey.

**6. Problem faced and resources needed:**

Institutions face challenges in providing scholarships, including financial constraints, defining eligibility criteria, ensuring fair selection, and managing administrative tasks. Additionally, scholarship recipients may face pressure to maintain high academic standards, leading to increased stress.

File Description	Document
Best practices as hosted on the Institutional website	<a href="#">View Document</a>

**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:**

**Objectives:**

Sir Issac Newton College of Engineering and Technology (SINCET), established in 2011 and operated by the Thandapany and Pillai educational trust, stands as an AICTE – approved institution affiliated with Anna University, over the course of 12 years, SINCET has attracted aspiring engineers from various corner of the nation, creating a desirable educational space.

The aim of SINCET is to roster comprehensive skill development among on students through a wide range of initiative. These encompass value added courses, enhancement of communication skill, immersive institutional visit and the identification of specific subject related challenges to transform them into innovative design and development model (mini project). Through these activities provided by the institution, students are empowered to emerge an adept engineers and aspiring entrepreneurs. The approach aim to elevate students to attain high economic and societal status, thereby create a smart and skill potential are ready to make a positive impact in the world.

### **Capacity building:**

#### **Skill development programme:**

Sir Issac Newton College of Engineering and Technology (SINCET) offers a range of skill Development Program aimed at enhancing student's ability for career advancement and creating opportunities for self employment. These Program includes robotics, assembling and dismantling techniques for the fan , laptop and air condition unit , Autocad 2D modeling scratch programming & electrical wiring institution allocates 60 hours per semester for these skill development program, Provide students with comprehensive training & practice experience these initiative are design to equip students with valuable skill, prepare them for successful carrier and empower them to explore entrepreneurial opportunities in their respective field.

##### **1. Autocad 2D modelling:**

It is a fundamental tool in engineering and design. This program covers the essential of Autocad, providing students with the comprehensive understanding of 2D modeling, technical drawing, layering techniques, dimension& utilization of various commands for detail design criteria.

##### **1. Dismantling & Assembling:**

Through hands on approach, the students learn the art of dismantling & assembling devices. Such as laptop, fan & air condition units. They understand the mechanism, components & trouble shooting method.

##### **1. Robotics:**

Our institution offers both theoretical insights and practical exercises in robotics to students. They delve into various aspects including robot anatomy, programming, sensor integration, and the design aspects of functional robotic systems.

##### **1. Electrical wiring:**

Our institution covers fundamental concepts of electrical circuits, safety protocols, wiring configurations, and installation techniques. Practical training involves hands-on exercises in circuit connectors, troubleshooting, and understanding electrical installations.

##### **1. Scratch programming:**

This program introduces students to coding fundamentals using a trending visual interface. It focuses on

empowering students' thinking and problem-solving abilities. Through this program, students create games, animations, explore creativity, and enhance logical reasoning skills.

### **Industrial Visits:**

Our institution emphasizes experiential learning through industrial and institutional visits, providing invaluable practical knowledge to students. These visits encompass exploration of NIT and IIT campuses, allowing students to immerse themselves in cutting-edge labs focusing on design validation, advanced manufacturing, automation, and electrical practices. Such visits facilitate hands-on experiences in test optimization, instrumentation, mechatronics, CNC, robotics, and technology. Moreover, our internship program at KVK, Nagapattinam, engages agricultural engineering students actively. This internship exposes students to hands-on experiences in vermicomposting, mushroom cultivation, precision farming, greenhouses, and hydroponics. These structured visits and internships, integral to our educational approach, offer students real-world exposure within their field of study.

### **Entrepreneurship Development (Value Added Course):**

To foster and enhance entrepreneurial aptitude among students, this program aims to instill fundamental entrepreneurial competencies and comprehension for proficient and successful business management. The course encompasses various aspects of business motives, financing, accounting, and support for entrepreneurs. Upon completion, students will acquire the necessary knowledge and skills to effectively manage a business.

This programme serves as a foundational guide, offering students comprehensive insights into entrepreneurship. It empowers them with practical knowledge, enabling them to develop, manage, and grow successful businesses. The emphasis on motivation, business setup, financial management, and support strategies equips students to navigate the challenges of the entrepreneurial landscape. The course's practical approach, supported by comprehensive textbooks and references, provides students with the necessary tools to pursue their entrepreneurial aspirations confidently.

### **Communication Skills:**

A communication skills program is conducted each semester, providing students with essential communication skills. This program covers diverse areas such as time management, interview preparation, resume building, stress management, public speaking, leadership skills, and money management. All these aspects were comprehensively covered, enabling students to successfully acquire these skills. Consequently, they are well-prepared for employment and proficient in English speaking. This program has equipped them with valuable knowledge and skills.

### **Evidence of Achievements:**

The program encompasses a range of initiatives including skill development, value-added courses, communication skills enhancement, placements, and industrial visits, all aimed at enriching students' knowledge. A key aspect involves students engaging in the creation of developmental models (mini-projects) as part of their research activities. Such research proves crucial for societal progress, providing a path for innovation and practical application of theoretical learning.

Notably, students actively participate in international and national conferences hosted by renowned



institutions. Their commendable achievements in these forums, winning prizes in quizzes, project development, cultural events, and sports, underscore their holistic development and academic expertise. Moreover, the program create an impressive success rate, with 85% of SINCET students securing placements in esteemed companies such as NCR, NIYATA, NOBAL, JBM, and DEWAS. This remarkable outcome showcases the program's effectiveness in preparing students for the professional specialty, bridging the gap between academia and industry demands. The hands-on experience from industrial visits, along with learning important skills, shows that the program is working well. It helps students gain the knowledge and confidence they need to do well in tough job settings. This is making a big difference in their careers and also benefits society as a whole.

File Description	Document
Any other relevant information	<a href="#">View Document</a>

## 5. CONCLUSION

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### Additional Information :

1. The Management vision is to ensure the economic condition of the students would not stop continuing their education at any cost. Hence the institution identifies such economically weaker merit students and provides them with merit scholarships to continue their studies.
2. A good number of MoUs with Industry to enhance hands-on experiences, Internships, field projects, Field visits and Certification courses to the students.
3. Consistent institutional growth of quality in student admission, infrastructure augmentation, etc.,
4. The Institution has an active Entrepreneur Development Cell that organizes regular events to promote awareness of entrepreneurship.
5. The institution provides a platform to transform the creative ideas of students and staff members into outcome-based reality and linkages to the outside world through professional societies.
6. The institution is situated in a rural area and the students are come from this background are taught and motivated to the level that they get university ranks from the inception of college.
7. To make the first-year students understand the basic principles and concepts of Engineering subjects, Basic Science and Engineering Workshops like Robotics, Assembling and Dismantling Labs, Basic Laws of Science, Maths Lab, Artificial Intelligence Lab, CAD design, SCRATCH lab and Basics of Mechanical and Electrical and Electronics Labs.
8. The same set of skills training including entrepreneurship will be given to senior students of this college and also provided in a proper schedule every year. Due to this, our students published two Patents on its combined idea with institution staff members as applicants.
9. A good number of students bagged prizes and awards in various competitions organised by various top-level engineering colleges in and around Tamilnadu
10. The last five-year admission average is more than 80% and the placement record is more than 85% average. A greater number of students have undergone MS studies at foreign Universities and working in abroad reputed industries.
11. The institution established its Institution Innovation Council (IIC) in 2022-23 and it has organised many programs for encouraging students to achieve Best Performance in their challenging field. As an outcome of IIC, the second-year students of our college have designed Apps and participated in Hackathons conducted by Governments.
12. Incentives are given to the faculty members for their achievement in research and academic activities.
13. The institution has Impactful Pedagogy in addition to normal TLP to produce quality Engineers.
14. The institution has a Yoga Club and NSS unit to cultivate self-confidence and self-belief, help to develop humanism and reduce stress and anxiety
15. The institution progressively and strongly implemented NEP, as an outcome of the Indian Knowledge System (IKS), National Academic Depository (NAD), and Electoral Literacy Club ( ELC) activities initiated and registered. Our college bagged the Electoral Literacy Club's best nodal officer in Nagapattinam District of Tamilnadu from Tamilnadu State Governor.
16. Our college socially connected to serve the best that society expects such as real-time projects, the conduct of state and central competitive examinations, NSS, YRC, and RRC-related activities to connect the people for good cause.

### Concluding Remarks :

Sir Issac Newton College of Engineering Technology was established in the year 2010 and offers a high-quality holistic education in an underdeveloped rural area of Nagapattinam District, Tamil Nadu, aiming to impart a higher education. The vision of the Management is to establish state-of-the-art engineering education with a definition of high quality in technical, professional and research skills including ethical character, producing engineers to meet the various needs of the Society, Nation and World. The eco-friendly technical ambience produces and bestows a multi-disciplinary healthy learning environment. The institution is equipped with modern laboratories, skill-based training laboratories and workshop facilities, state of a state-of-the-art computer centre, ICT ICT-enabled classrooms providing adequate infrastructure. The academic system affiliated with Anna University is well-planned and executed through the Academic calendar and other Teaching-learning approaches. The institution has well-qualified, experienced, and efficient faculty members with good numbers of Doctorates to mould quality students as all-round performers. The institution adopts the Student Centric Classroom Teaching Method to make students get involved in classroom teaching-learning activities in an innovative approach. Necessary academic counselling is provided to the students to develop their managerial acumen, and knowledge integration with foremost ethical, and respectable discipline. The conduction of examinations as per the university's direction is regulated and executed by the IQAC at the institution level to maintain the quality of the process.

The average student's admissions has progressively increased in good numbers and above 70% of students are getting govt scholarships and Institution merit scholarships based on their eligibility.

The students are motivated and guided to do quality-related projects and patents to empower themselves in the research and innovation field. The institution encourages the students to undergo Internships and In-plant Training to get conversant with the workplace environment and also to gain hands-on experience in their field. The institution motivates students for their outreach activities and appropriately recognises them.

The staff members are highly motivated and recognised as per their academic performance (also NPTEL chapter) and research activities every year. They are encouraged to pursue their higher studies and develop their technical and subject skill as and when required.

Resource centre equipped with Digital library to imbibe the reading habit of students updated globally through online with vast learning resources like NPTEL, NDL etc. The office and library activities are governed by the automated ERPs

Training and Placement Cell works continuously to improve life skills and employability to face the challenges in the global arena. The students' average salary of minimum 3LPA placement opportunities in the past 5 years is a remarkable feature of the institution to get goodwill in this area.

## 6.ANNEXURE

### 1.Metrics Level Deviations

Metric ID	Sub Questions and Answers before and after DVV Verification																				
1.2.1	<p><b>Number of Certificate/Value added courses offered and online courses of MOOCs, SWAYAM, NPTEL etc. (where the students of the institution have enrolled and successfully completed during the last five years)</b></p> <p>Answer before DVV Verification :</p> <p>Answer After DVV Verification :39</p> <p>Remark : DVV has made the changes basis the supporting's shared by the HEI</p>																				
1.2.2	<p><b><i>Percentage of students enrolled in Certificate/ Value added courses and also completed online courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years</i></b></p> <p>1.2.2.1. Number of students enrolled in Certificate/ Value added courses and also completed online courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years</p> <p>Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2022-23</th> <th>2021-22</th> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> </tr> </thead> <tbody> <tr> <td>978</td> <td>874</td> <td>765</td> <td>676</td> <td>715</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1"> <thead> <tr> <th>2022-23</th> <th>2021-22</th> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> </tr> </thead> <tbody> <tr> <td>612</td> <td>449</td> <td>492</td> <td>444</td> <td>393</td> </tr> </tbody> </table> <p>Remark : DVV has made the changes basis the supporting shared by the HEI</p>	2022-23	2021-22	2020-21	2019-20	2018-19	978	874	765	676	715	2022-23	2021-22	2020-21	2019-20	2018-19	612	449	492	444	393
2022-23	2021-22	2020-21	2019-20	2018-19																	
978	874	765	676	715																	
2022-23	2021-22	2020-21	2019-20	2018-19																	
612	449	492	444	393																	
1.4.1	<p><b><i>Institution obtains feedback on the academic performance and ambience of the institution from various stakeholders, such as Students, Teachers, Employers, Alumni etc. and action taken report on the feedback is made available on institutional website</i></b></p> <p>Answer before DVV Verification : A. Feedback collected, analysed, action taken&amp; communicated to the relevant bodies and feedback hosted on the institutional website</p> <p>Answer After DVV Verification: C. Feedback collected and analysed</p> <p>Remark : DVV has made the chnages basis the supporting shared by the HEI</p>																				
2.1.2	<p><b><i>Percentage of seats filled against reserved categories (SC, ST, OBC etc.) as per applicable reservation policy for the first year admission during the last five years</i></b></p> <p>2.1.2.1. Number of actual students admitted from the reserved categories year wise during last five years (Exclusive of supernumerary seats)</p> <p>Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2022-23</th> <th>2021-22</th> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	2022-23	2021-22	2020-21	2019-20	2018-19															
2022-23	2021-22	2020-21	2019-20	2018-19																	

217	262	204	144	182
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Answer After DVV Verification :

2022-23	2021-22	2020-21	2019-20	2018-19
199	234	199	135	132

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

Answer before DVV Verification:

2022-23	2021-22	2020-21	2019-20	2018-19
273	273	273	273	273

Answer After DVV Verification :

2022-23	2021-22	2020-21	2019-20	2018-19
273	273	273	273	273

Remark : DVV has made the changes basis the Institutional data shared by the HEI

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

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

Answer before DVV Verification:

2022-23	2021-22	2020-21	2019-20	2018-19
5.75	3.75	5.25	1	4.25

Answer After DVV Verification :

2022-23	2021-22	2020-21	2019-20	2018-19
0	0	0	0	0

Remark : DVV has made the changes basis the supporting shared by HEI, Since the documents cant be considered

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

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

Answer before DVV Verification:

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2022-23	2021-22	2020-21	2019-20	2018-19
20	13	9	8	12

Answer After DVV Verification :

2022-23	2021-22	2020-21	2019-20	2018-19
15	10	7	7	10

Remark : DVV has made the changes basis the supporting shared by HEI

**3.3.1 Number of research papers published per teacher in the Journals notified on UGC care list during the last five years**

**3.3.1.1. Number of research papers in the Journals notified on UGC CARE list year wise during the last five years**

Answer before DVV Verification:

2022-23	2021-22	2020-21	2019-20	2018-19
19	3	3	3	1

Answer After DVV Verification :

2022-23	2021-22	2020-21	2019-20	2018-19
5	0	1	0	0

Remark : DVV has made the changes basis the supporting shared by the HEI, DVV has removed all the duplications

**3.4.3 Number of extension and outreach programs conducted by the institution through organized forums including NSS/NCC with involvement of community during the last five years.**

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

Answer before DVV Verification:

2022-23	2021-22	2020-21	2019-20	2018-19
21	15	10	8	11

Answer After DVV Verification :

2022-23	2021-22	2020-21	2019-20	2018-19
14	10	8	6	7

Remark : DVV has made the chnages basis the supporting shared by the HEI

3.5.1	<p><b><i>Number of functional MoUs/linkages with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research during the last five years.</i></b></p> <p>Answer before DVV Verification :          Answer After DVV Verification :33          Remark : DVV has made the changes basis the supporting shared by the HEI</p>																				
4.1.2	<p><b><i>Percentage of expenditure for infrastructure development and augmentation excluding salary during the last five years</i></b></p> <p><b>4.1.2.1. Expenditure for infrastructure development and augmentation, excluding salary year wise during last five years (INR in lakhs)</b></p> <p>Answer before DVV Verification:</p> <table border="1" data-bbox="308 712 1046 844"> <thead> <tr> <th>2022-23</th> <th>2021-22</th> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> </tr> </thead> <tbody> <tr> <td>129.03</td> <td>98.02</td> <td>75.99</td> <td>86.79</td> <td>102.87</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1" data-bbox="308 925 1046 1057"> <thead> <tr> <th>2022-23</th> <th>2021-22</th> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> </tr> </thead> <tbody> <tr> <td>33.58</td> <td>22.04</td> <td>7.77</td> <td>11.45</td> <td>33.64</td> </tr> </tbody> </table> <p>Remark : DVV has made the changes basis the supporting shared by the HEI</p>	2022-23	2021-22	2020-21	2019-20	2018-19	129.03	98.02	75.99	86.79	102.87	2022-23	2021-22	2020-21	2019-20	2018-19	33.58	22.04	7.77	11.45	33.64
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2022-23	2021-22	2020-21	2019-20	2018-19																	
33.58	22.04	7.77	11.45	33.64																	
4.4.1	<p><b><i>Percentage expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component, during the last five years (INR in Lakhs)</i></b></p> <p><b>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)</b></p> <p>Answer before DVV Verification:</p> <table border="1" data-bbox="308 1458 1046 1590"> <thead> <tr> <th>2022-23</th> <th>2021-22</th> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> </tr> </thead> <tbody> <tr> <td>128.37</td> <td>100.26</td> <td>62.07</td> <td>82.00</td> <td>89.09</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1" data-bbox="308 1671 1046 1803"> <thead> <tr> <th>2022-23</th> <th>2021-22</th> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> </tr> </thead> <tbody> <tr> <td>54.20</td> <td>45.36</td> <td>31.18</td> <td>45.7</td> <td>40.57</td> </tr> </tbody> </table> <p>Remark : DVV has made the changes basis the supporting shared by the HEI</p>	2022-23	2021-22	2020-21	2019-20	2018-19	128.37	100.26	62.07	82.00	89.09	2022-23	2021-22	2020-21	2019-20	2018-19	54.20	45.36	31.18	45.7	40.57
2022-23	2021-22	2020-21	2019-20	2018-19																	
128.37	100.26	62.07	82.00	89.09																	
2022-23	2021-22	2020-21	2019-20	2018-19																	
54.20	45.36	31.18	45.7	40.57																	
5.3.1	<p><b><i>Number of awards/medals for outstanding performance in sports/ cultural activities at University / state/ national / international level (award for a team event should be counted as one) during the last five years</i></b></p>																				

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

Answer before DVV Verification:

2022-23	2021-22	2020-21	2019-20	2018-19
11	7	0	0	0

Answer After DVV Verification :

2022-23	2021-22	2020-21	2019-20	2018-19
8	5	0	0	0

Remark : DVV has made the changes basis the supporting shared by the HEI, Participation certificates has not been considered

**2.Extended Profile Deviations**

Extended Profile Deviations
No Deviations