

FOR 2nd CYCLE OF ACCREDITATION

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

VIDYAVARDHINIS CAMPUS K T MARG 401202 www.vcet.edu.in

Submitted To

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

BANGALORE

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

With the motto "Sa Vidya Ya Vimuktaye," which means "knowledge is one that liberates", Vidyavardhini Trust was established in the year 1970 by the great visionary late Padmashri H. G. alias Bhausaheb Vartak, for the noble cause of education in rural areas of Palghar and Thane districts. It is a public trust governed by eminent philanthropists, business personnel, industrialists, and social workers with an intense yearning to serve society. Vidyavardhini Trust has several institutions catering to streams like arts, commerce, science, technical education, management, and finance.

Vidyavardhini's College of Engineering and Technology (VCET), Vasai, was established in 1994 by the Vidyavardhini Trust. It is located on the sprawling green campus of Vidyavardhini, spread over an area of 12.27 acres. VCET is a self-financed institute approved by the AICTE and DTE of the Government of Maharashtra. It is affiliated with the University of Mumbai for the following programs:

Programme	Year of establishment	Current Intake			
UG Programme					
Mechanical Engineering	1994	60			
Electronics and Telecommunication	1994	60			
Engineering					
Computer Engineering	1999	180			
Information Technology	1999	60			
Civil Engineering	2013	60			
Artificial Intelligence and Data	2020	60			
Science					
Computer Science Engineering	2020	180			
(Data Science)					
Electronics Engineering (VLSI	2023	60			
Design and Technology)					
PG Programme					
Master of Engineering in Structural	2022	24			
Engineering					
Master of Management Studies	2023	120			

The National Board of Accreditation accredited four programs, viz., Mechanical Engineering, Electronics and Telecommunication Engineering, Computer Engineering, and Information Technology for a period of three years w.e.f. July 2022. The NBA SAR for the UG program in Civil Engineering was submitted in September 2023.

Vision

To be a premier institution of technical education, aiming at becoming a valuable resource for industry and

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society.

Mission

- To provide technologically inspiring environment for learning.
- To promote creativity, innovation and professional activities.
- To inculcate ethical and moral values.
- To cater personal, professional and societal needs through quality education.

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

- 1. Excellent physical and IT infrastructure and support facilities.
- 2. Highly qualified, experienced, and dedicated faculty with a good retention ratio.
- 3. Student-centric approach facilitated by ICT-enabled teaching-learning methodologies.
- 4. Centre of Excellence of Siemens, Texas Instruments, and e-Yantra-IIT Bombay.
- 5. Library with an extensive collection of physical and e-resources.
- 6. Emphasis on capacity building of the students, with a focus on holistic development.

Institutional Weakness

- 1. Less sponsored research projects and consultancy.
- 2. Limited number of publications in peer-reviewed journals.
- 3. Faculty cadre ratio.
- 4. Fewer incubation and start-up initiatives.

Institutional Opportunity

- 1. Student/faculty exchange with reputed organization/industries.
- 2. Transform innovative ideas into established startups and patent/copyrights.
- 3. Increase the involvement of industry in the design, development, and delivery of curriculum.
- 4. Collaboration with Indian and foreign universities.
- 5. Improving the self-learning capabilities of students.

Institutional Challenge

- 1. Placement opportunities for higher packages.
- 2. Integrate longer-duration industrial internships into the curriculum.
- 3. Prevent the negative impact of social media on academic performance.

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

Vidyavardhini's College of Engineering and Technology is affiliated with the University of Mumbai. Curriculum planning activities such as preparing academic and activity calendars, distributing teaching loads, preparing timetables, etc. are done meticulously and timely.

Effective curriculum delivery is ensured through:

- the use of innovative teaching-learning practices and pedagogies.
- well-documented processes, which include lesson plans, course files, course booklets, etc.
- continuous assessment of student performance.
- monitoring of academic progress and regular reviews.

Academic flexibility is offered to the students in terms of their choice of departmental or institute-level electives and honors or minor degree programs. The curriculum is augmented by student development programs, value-added courses, and online MOOC courses.

In pursuit of curriculum enrichment, cross-cutting issues relevant to professional ethics, gender, human values, environment, and sustainability are integrated into the curriculum through various courses and a diverse range of activities organized by the student chapters of professional bodies, NSS, and student clubs. In addition, internships and projects are cohesive to enhance the curriculum.

To have progressive improvement, feedback on various processes is obtained to gauge their effectiveness and implement corrective measures.

Teaching-learning and Evaluation

VCET attracts good-quality students from different regions of Maharashtra and other states. The seats are filled through the entrance examination conducted by the state and central government of India, and the average enrolment is 84.84%. The reserved category seats filled during the assessment period are 65.53%, based on the number of seats designated under the reserved categories by the rules and regulations made by the Government of Maharashtra.

VCET has well-qualified, experienced, and dedicated faculty with a good retention ratio. The student-to-faculty ratio for the latest completed year is 20.2:1. There are 100% full-time teachers against sanctioned posts for the last five years; 16.88% of the faculty members have a Ph.D. or are NET/SET qualified; and 41 faculty members are pursuing PhDs. The faculty members continuously upgrade their skills by undergoing training programs on teaching-learning, outcome-based education, innovation, and pedagogy. A blend of student-centric methods, innovative practices, and ICT tools are used to enhance the learning experience of students. Besides this, there is a focus on the projects and activities of professional student chapters and the entrepreneurship cell to provide experiential and collaborative learning opportunities.

Conduction of internal assessments and semester examinations is systematically done, ensuring transparency. The grievance redressal mechanism is stringently followed as per the guidelines of the University of Mumbai. The process of forming course outcomes and their evaluation is done using a well-defined, documented process. The program outcomes, program educational objectives, program-specific outcomes, and course outcomes are disseminated through various mediums. The attainment of the outcome levels is reviewed for

further improvement. The pass percentage of the final-year students during the latest completed academic year is 98.71%.

Research, Innovations and Extension

VCET promotes research, innovation, and technological development by creating an ecosystem through:

- Institute Innovation Council
- Intellectual Property Rights Cell
- Entrepreneurship Cell
- Center of Excellence
- Research and industry-institute interaction activities
- A well-defined research policy
- MoU with the Tarapur Management Association, Vasai Industries Association, Navyuvak Entrepreneurs Pvt. Ltd. (Startup Hub), and Saturday Club Global Trust

VCET has received a research fund of Rs. 21.64 lakhs from AICTE, RGSTC, the University of Mumbai, etc. There have been 48 workshops, seminars, etc. organized on research methodology, intellectual property rights (IPR), and entrepreneurship during the last five years. The research output has been published by faculty in SCI/Scopus/Web of Science-indexed research journals as well as renowned international conference proceedings. There are 56 publications in journals and 267 conference/books/book chapter publications. There are 8 patents published and 13 copyrights registered by the faculty and students. There are 106 MoUs signed with industries, 38 industrial projects undertaken, and consultancy revenue of Rs. 5.57 lakhs generated during the last 5 years.

Activities are organized to promote Indian culture, literature, and yoga by the Literati Club and NSS unit. VCET prioritizes student awareness of social issues and holistic development through numerous extension and outreach activities led by NSS and student chapters. There have been about 104 activities, such as mega donation camps, cleanliness campaigns, blood donation drives, health awareness programs, teaching campaigns, etc., conducted during the last 5 years. The impact of these activities is acknowledged by the government and community in the form of 25 awards, appreciations, and media coverage.

Infrastructure and Learning Resources

VCET has 25 well-furnished classrooms with multimedia projectors and internet connectivity. Eight classrooms are equipped with smart boards, and 19 are air-conditioned as well. There are 54 laboratories with state-of-the-art experimental set-ups and software, and 2 workshops. There are six tutorial rooms and two seminar halls. VCET also has a centralized Enterprise Resource and Planning (ERP) system that effectively handles course materials, monitors learner progress, facilitates assessments, and provides a digital learning environment. The cultural and sports facility includes an open-air stage, an air-conditioned auditorium, a playground, a volleyball court, a gymnasium, sports equipment, and accessories for both indoor and outdoor activities.

"Shri Uddhav Dada Gharat Central Library" of VCET is a G+2 independent structure including a large, well-furnished reading room, open access, and a digital library. Its vast and varied collection of resources includes 12,348 titles and 33,979 volumes of books, 63 national and international journals and magazines, Elsevier Science Direct, the Institute of Engineers, IETE, J-Gate journals, 97 e-books from the Pearson Online Library,

Turnitin plagiarism detection software, etc. The Central Library of VCET is automated using Integrated Library Management System (ILMS) software and 'E-Granthalaya', integrated into the ERP system. The library facilities are extensively used by students and faculty.

The IT infrastructure features the latest high-performance 800 PCs, 4 servers, a 1224 Mbps internet leased line, Wi-Fi routers installed on every floor, Sequite 7.4 E.P.S. protection suite, advanced network switches, and upgraded servers, all aimed at enhancing efficiency and security. The student-computer ratio for the latest completed year is 2.72.

Student Support and Progression

VCET offers comprehensive support and infrastructure to ensure the overall development of students. Financial assistance is provided to eligible students through government scholarships and freeship schemes. More than 50% of students benefit from various scholarships every year.

About 250 programs for capacity and skills enhancement, including soft skills, language and communication skills, life skills, and awareness of trends and technology, were organized to give students an opportunity for corporate interaction. The initiatives taken for career guidance and competitive examinations have benefited approximately 72% of students, which has resulted in an average of 61.54% placements and higher studies.

VCET has a grievance redressal system as per the directives of statutory bodies. Students' Council, sports committee, NSS, literati, and professional chapters, managed by students under the guidance of the Dean Students' Affairs, provide opportunities for participation in cultural, sports, social, and technical events. Students have won laurels in co- and extra-curricular activities at the University, State and National levels. VCET has a registered alumni association (registration number: MAH/2133/2018/Thane) established on September 11, 2003. Alumni contribute to student development through various means, including expert sessions, mentoring, project guidance, placements, etc.

Governance, Leadership and Management

VCET boasts a transparent, decentralized, and participatory governance structure, supported by various statutory and non-statutory committees overseeing both technical and non-technical operations. The management mobilizes funds for the enhancement of academic and administrative functions. VCET prioritizes stakeholder inputs in its perspective plan. The effectiveness of the deployment of the perspective plan is evident through the addition of new programs, the promotion of testing and consulting activities, infrastructure development, modernization of laboratories, etc.

To streamline various operations, VCET has embraced e-governance. VCET has a well-defined appraisal system. There are several welfare measures and avenues for career development and progression available for employees. A finance manual provides clear guidelines on budgeting, expenditures, and financial authority for Principal and Department heads. To ensure the optimal utilization and mobilization of available financial resources, VCET adopts strategies like regular internal as well as external audits by certified auditors.

The Internal Quality Assurance Cell (IQAC) is responsible for ensuring the preferred level of quality at the institute. Quality parameters are set up at every point to ensure continuous improvement. IQAC plays an important role at VCET in imparting quality assurance in terms of academics, administration, etc. The

observations from the academic audit, quality initiatives, and feedback are reviewed in the IQAC meeting. IQAC is instrumental in monitoring and initiating timely actions to ensure the attainment of set objectives of accreditation, enhancement of teaching-learning facilities, IT infrastructure, and research outcomes.

Institutional Values and Best Practices

VCET prioritizes gender equity through initiatives like gender audits, awareness sessions, co-curricular and extra-curricular activities, and extension activities. Additional facilities are provided for women on the campus. VCET demonstrates commitment to environmental sustainability through various measures. These include promoting alternate energy sources, water conservation, green campus initiatives, and ensuring a disabled-friendly environment. Regular quality audits on environment and energy reaffirm VCET's dedication to environment friendly campus initiatives. Moreover, VCET actively cultivates inclusivity through cultural festivals, sports events, and entrepreneurial programs, fostering unity amidst diversity. The curriculum instills values of ethics and citizenship, while induction programs educate on rights and duties, fostering respect and inclusion.

Aligned with the mission, the best practices of "Transforming Students into Technically Competent Professionals" and "Soft Skill Development" are nurtured diligently. These initiatives are prominently featured on the institutional website, illustrating their effectiveness and influence. VCET's thrust toward capacity-building is evident in its comprehensive approach to empowering the growth of students and faculty. Through dedicated programs, mentorship initiatives, and industry partnerships, VCET equips students with skills, fostering entrepreneurship and innovation.

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the College			
Name	VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY		
Address	Vidyavardhinis Campus K T Marg		
City	Vasai Road west		
State	Maharashtra		
Pin	401202		
Website	www.vcet.edu.in		

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal	Dr. Harish Vankudre	0250-2338234	8788661691	0250-233948 6	vcet_inbox@vcet.e du.in
Professor	Uday Aswalekar	0250-2338235	9822684138	0250-233948 6	uday.aswalekar@v cet.edu.in

Status of the Institution	
Institution Status	Private and Self Financing

Type of Institution		
By Gender	Co-education	
By Shift	Regular	

Recognized Minority institution		
If it is a recognized minroity institution	No	

Establishment Details		

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State	University name	Document
Maharashtra	University of Mumbai	<u>View Document</u>

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

Details of recognition/approval by stationary/regulatory bodies like AICTE,NCTE,MCI,DCI,PCI,RCI etc(other than UGC)					
Statutory Regulatory Authority	Recognition/Appr oval details Instit ution/Department programme	Day,Month and year(dd-mm- yyyy)	Validity in months	Remarks	
AICTE	View Document	04-04-2019	12	AICTE Extension of Approval	
AICTE	View Document	04-04-2019	12	AICTE Extension of Approval	
AICTE	View Document	04-04-2019	12	AICTE Extension of Approval	
AICTE	View Document	04-04-2019	12	AICTE Extension of Approval	
AICTE	View Document	04-04-2019	12	AICTE Extension of Approval	

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	Vidyavardhinis Campus K T Marg	Urban	5	14193

2.2 ACADEMIC INFORMATION

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Details of Pro	Details of Programmes Offered by the College (Give Data for Current Academic year)							
Programme Level	Name of Pro gramme/Co urse	Duration in Months	Entry Qualificatio n	Medium of Instruction	Sanctioned Strength	No.of Students Admitted		
UG	BE,Mechanic al Engineering,	48	HSC or Diploma	English	60	39		
UG	BE,Electroni cs And Telec ommunicatio n Engineering,	48	HSC or Diploma	English	60	45		
UG	BE,Compute r Engineering,	48	HSC or Diploma	English	180	178		
UG	BE,Informati on Technology,	48	HSC or Diploma	English	60	59		
UG	BE,Civil Engineering,	48	HSC or Diploma	English	60	22		
UG	BE,Compute r Science Engineering Data Science,	48	HSC or Diploma	English	180	174		
UG	BE,Artificial Intelligence And Data Science,	48	HSC or Diploma	English	60	58		
UG	BE,Electroni cs Vlsi Design And Technology,	48	HSC or Diploma	English	60	27		
PG	MMS,Master Of Management Studies,	48	Graduation	English	120	25		
PG	ME,Structure Engineering,	24	Graduation	English	24	15		

Position Details of Faculty & Staff in the College

	Teaching Faculty											
	Profe	Professor			Assoc	Associate Professor			Assis	Assistant Professor		
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government	3				4				45			
Recruited	3	0	0	3	2	2	0	4	22	23	0	45
Yet to Recruit	0			0			0					
Sanctioned by the Management/Soci ety or Other Authorized Bodies	2		3				44					
Recruited	2	0	0	2	3	0	0	3	13	31	0	44
Yet to Recruit	0	,		1	0	1		1	0	'	-	-

	Non-Teaching Staff							
	Male	Female	Others	Total				
Sanctioned by the UGC /University State Government				0				
Recruited	0	0	0	0				
Yet to Recruit				0				
Sanctioned by the Management/Society or Other Authorized Bodies				40				
Recruited	34	6	0	40				
Yet to Recruit				0				

Technical Staff						
	Male	Female	Others	Total		
Sanctioned by the UGC /University State Government				0		
Recruited	0	0	0	0		
Yet to Recruit				0		
Sanctioned by the Management/Society or Other Authorized Bodies				24		
Recruited	13	11	0	24		
Yet to Recruit				0		

Qualification Details of the Teaching Staff

	Permanent Teachers									
Highest Qualificatio n	Professor		Associate Professor			Assistant Professor				
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/ LLD/DM/M CH	0	0	0	0	0	0	0	0	0	0
Ph.D.	5	0	0	3	2	0	1	3	0	14
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	22	20	0	42
UG	0	0	0	0	0	0	0	0	0	0

	Temporary Teachers									
Highest Qualificatio n	Professor		Associate Professor			Assistant Professor				
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/ LLD/DM/M CH	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	2	0	0	2	0	0	4
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	10	31	0	41
UG	0	0	0	0	0	0	0	0	0	0

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

Details of Visting/Guest Faculties						
Number of Visiting/Guest Faculty	Male	Female	Others	Total		
engaged with the college?	0	1	0	1		

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

Programme		From the State Where College is Located	From Other States of India	NRI Students	Foreign Students	Total
UG	Male	1519	54	0	0	1573
	Female	459	5	0	0	464
	Others	0	0	0	0	0
PG	Male	17	0	0	0	17
	Female	6	0	0	0	6
	Others	0	0	0	0	0

Provide the Following Details of Students admitted to the College During the last four Academic Years							
Category		Year 1	Year 2	Year 3	Year 4		
SC	Male	115	113	96	113		
	Female	44	49	47	46		
	Others	0	0	0	0		
ST	Male	27	30	29	36		
	Female	10	10	6	10		
	Others	0	0	0	0		
OBC	Male	242	243	229	252		
	Female	86	92	114	119		
	Others	0	0	0	0		
General	Male	745	820	779	792		
	Female	222	226	232	243		
	Others	0	0	0	0		
Others	Male	233	178	128	139		
	Female	72	59	58	59		
	Others	0	0	0	0		
Total	·	1796	1820	1718	1809		

Institutional preparedness for NEP

1. Multidisciplinary/interdisciplinary:

Vidyavardhini's College of Engineering and Technology (VCET) proactively embraces the principles outlined in the National Education Policy (NEP) 2020, which is being implemented phase-wise by the University of Mumbai. Regarding multidisciplinary and interdisciplinary learning experiences, some key initiatives and activities that demonstrate our preparedness for the implementation of NEP 2020 are: • Expert Talks and Technical Events: Expert talks, workshops, technical competitions, and hackathons on inter- and multidisciplinary topics are regularly organized to provide students with opportunities to engage in hands-on learning and innovation. • Multidisciplinary Courses: The curriculum includes a wide range of multidisciplinary open elective courses called Institute Level Optional Courses (ILOC) for finalyear students, covering areas such as product lifecycle management, management information systems, cyber security and laws, disaster management and mitigation measures, and more, which are available to all students. • Elective Courses: For the third and final year students, the curriculum includes Department Level Optional Courses (DLOC), where the students have the opportunity to take up interdisciplinary courses. • Honors and Minor Programs: In addition to the degree program, VCET offers honors and minor programs in emerging fields like artificial intelligence and machine learning, cybersecurity, smart cities, etc. • Clubs and Teams: VCET hosts various clubs and teams such as 'Solecthon' (an autonomous car team and solar-powered car team), Team Centurion (an all-terrain vehicle), and 'EMechto' (a self-balancing bike team), where students from different disciplines collaborate in developing these interdisciplinary projects and engage in hands-on learning experiences. • Projects: Students undertake interdisciplinary mini- and major projects relevant to industry and society. Students are encouraged to undertake training through MOOC platforms like NPTEL and Infosys SpringBoard. In our journey towards aligning with the NEP, 2020, we remain committed to promoting a culture of multidisciplinary learning, innovation, and excellence within our institution.

2. Academic bank of credits (ABC):

VCET recognizes the importance of implementing

the Academic Bank of Credits (ABC) to enhance the academic flexibility and mobility of the students. Some key initiatives in this direction are: • Preparation for Implementation: VCET is actively engaged in the process of implementing the Academic Bank of Credits (ABC) as per the guidelines issued by the University of Mumbai. Faculty members and administrative staff are working diligently to ensure the smooth transition to the ABC system. • Student Registration on ABC Portal: All students have been registered on the ABC portal, and the necessary information has been updated to the University of Mumbai's database. • Pedagogical Approaches: Faculty members implement their course plans by employing various pedagogical approaches, including inquiry-based, collaborative, and integrative methods, during course delivery. • Development of Study Material: Faculty members actively contribute to the development of study materials, which are made available in the public domain. • Assessment Practices: VCET utilizes a combination of summative and formative assessments, as well as assignments, to evaluate students' learning outcomes effectively. The assessment practices are designed to provide meaningful feedback to students and support their continuous growth and development. • Involvement in AICTE's Parakh Assessment: VCET is actively involved in providing students with AICTE's Parakh assessment, which serves as a benchmark for assessing the quality of technical education imparted by our institution.

3. Skill development:

VCET is committed to fostering a culture of continuous learning and skill development among students and faculty members with infrastructural and financial assistance. Some key initiatives are: • Skill-Based Labs: The curriculum includes skill-based lab courses for all the programs like object-oriented programming, Python, CAD/CAM, AI and automation, etc. • Skill Development Programs: VCET organizes a wide range of expert lectures, workshops, and student development programs (SDPs) focused on the latest technologies and industry trends. These programs cover diverse areas such as Android development, machine learning, chatbot development, robotics, and the Internet of Things (IoT). VCET also conducts SDPs in

collaboration with Infosys Springboard LMS, resulting in certifications for the students. • Industry Partnerships and Collaborations: VCET has established the Industry Institute Interaction Cell to promote partnerships with the industry for facilitating skill development workshops and training programs on emerging technologies. VCET has three centers of excellence through which training programs are organized for the students. • Faculty Development Programs: VCET regularly conducts faculty development programs covering a wide spectrum of emerging technologies and skills. Faculty also undergo training programs on universal human values, stress management, etc.

4. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course):

VCET is committed to the integration and promotion of Indian language and culture through various activities, such as: • Indian Festivals: VCET celebrates Indian festivals like Dussehra, Diwali, Pongal, and Makar Sankranti, where students and teachers participate in large numbers. VCET also organizes a grand Garba Night, a traditional day where the students come traditionally dressed. Chatrapati Shivaji Maharaj Jayanti Utsav for the promotion of culture is also celebrated. • Induction Program: Students undergo an induction program in the first year aimed at introducing skills such as time management and stress management through yoga, language sessions, and other similar sessions. • Language Promotion: VCET's Literati cell organizes events such as Marathi Bhasha Diwas celebrations and publishes an annual magazine 'Vista', in which students contribute articles in Hindi, Marathi, and English.

5. Focus on Outcome based education (OBE):

VCET takes several initiatives to align the curriculum with outcome-based education (OBE) principles: • Outcomes: Each course undergoes a rigorous process of defining course outcomes (COs) that align with program outcomes (POs) and program-specific outcomes (PSOs). Faculty members collaborate to map these outcomes and determine the cognitive levels required for achieving them, ensuring that the curriculum is structured to meet the desired educational objectives. • Stakeholder Engagement: VCET actively engages with stakeholders, including employers, alumni, and regulatory bodies, to obtain feedback on the relevance and effectiveness of the curriculum. This helps in identifying and bridging the

gaps. • Pedagogical Innovation: Faculty members employ diverse teaching methodologies, including experiential learning, project-based learning, case studies, and collaborative activities, to facilitate active engagement and skill development and align with the defined course outcomes. Faculty seamlessly integrate ICT tools to make their content delivery more effective. • Assessment Strategies: VCET has developed robust assessment strategies. Assessment methods include internal assessment tests, quizzes, assignments, projects, etc., allowing students to demonstrate their attainment of learning outcomes through diverse means. Well-defined rubrics are utilized to ensure consistency and transparency in assessment and evaluation.

6. Distance education/online education:

VCET recognizes the importance of embracing online education platforms to enhance student learning experiences and facilitate continuous professional development for faculty members. • Expert Sessions Conducted Online: Expert sessions are conducted online to facilitate interactions with industry experts, researchers, and thought leaders from around the globe. These sessions provide students and faculty members with opportunities to gain insights into cutting-edge technologies, industry trends, and best practices directly from experts who may be geographically distant. • Massive Open Online Courses (MOOCs): VCET promotes a culture of lifelong learning by actively encouraging students to explore courses offered on platforms like NPTEL, Coursera, Infosys SpringBoard, and other MOOCs. These platforms provide access to a wide range of courses covering diverse topics and disciplines, allowing students to supplement their classroom learning with self-paced online modules. • Virtual Labs and Simulation Tools: Practical sessions are also conducted using virtual labs and simulation tools to provide students with hands-on experience. This facilitates experimentation and exploration across various domains of engineering and technology. • G Suite for Teaching-Learning Activities: G Suite tools such as Google Classroom, Google Drive, and Google Meet are utilized for sharing resources, assignments, conducting online discussions, and organizing virtual lectures and tutorials. • Faculty Development Programs (FDPs) and Online Workshops: Faculty members are encouraged to

enroll in online webinars, workshops, short-term training programs (STTPs), and faculty development programs (FDPs) conducted by reputed institutions and organizations. These programs provide opportunities to update their knowledge and skills, explore emerging trends in pedagogy and technology-enhanced learning, and exchange best practices with peers from academia and industry.

Institutional Initiatives for Electoral Literacy

1. Whether Electoral Literacy Club (ELC) has been set up in the College?	VCET Electoral Literacy Club (ELC), was formed on January 17, 2022. The objectives of the ELC are as follows: • To create awareness among the new voters to enroll their names in the voter list. • To create awareness among the voters about their rights and the importance of casting their votes.
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?	Student and Faculty coordinators are appointed by the college. Student coordinator: 2021-22: Ms. Ragini Nair 2022-24: Mr. Hrushikesh Shetty Ms. Deeksha Shetty Faculty coordinator: Mr. Dipak J Choudhari ELCs are functional and representative in character.
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	• An awareness campaign was conducted for the tribal community in the nearby areas. • A session regarding voting as a fundamental right and duty was conducted for senior citizens at Jesth Nagrik Virungula Kendra, Vasai.

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.

ethical voting, enhancing participation of the under privileged sections of society especially transgender, commercial sex workers, disabled persons, senior

citizens, etc.

• A survey was conducted for 694 students to collect their data related to voting, like students who completed 18 years of age but were not enrolled in the voter list and students who were enrolled but did not have a voter ID. • Essay writing competitions on topics like "Should Voting Be Compulsory?", "I Will Not Sell My Vote", "Urban Society and Their Responsibilities in Voting", etc. are organized to create awareness among the students. • A tagline-

and an enrollment drive is conducted for them.

	writing competition on the importance of voting was organized. • Meme and reel-making competitions were conducted, and publicity of the same was done on the social media handles of the students and NSS unit. • POWADA, a traditional Marathi ballad to create awareness for voting, was performed by students.
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.	• Pledges and oaths are taken on voter day every year. • A speech by an expert on the importance of elections, casting a vote, and the right of the voter is conducted during the induction program every year. • A survey is conducted for the students who have completed 18 years and are eligible for enrollment,

Extended Profile

1 Students

1.1

Number of students year wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
2060	1796	1820	1718	1809

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

2 Teachers

2.1

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

Response: 155

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

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
81	74	73	81	81

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
987.83	551.71	514.47	425.03	749.67

File Description	Document
Upload Supporting Document	<u>View Document</u>

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:

Vidyavardhini's College of Engineering and Technology (VCET) is affiliated with the University of Mumbai. Effective curriculum planning and delivery is ensured through an outcome-based, systematic, and student-centric approach, placing a strong emphasis on continuous assessment.

The academic calendar is prepared semester-wise in line with the University calendar and is disseminated on the Institute website and ERP. It is prepared through meetings involving the deans, heads of departments (HODs), and section heads and is approved by the dean academics and Principal. It includes the commencement and end dates of the semester, dates of internal assessment, oral and practical exams, and co-curricular and extracurricular activities planned at the Institute level. Every department prepares its activity calendar, which includes events such as the orientation of electives, projects, activities of professional chapters, etc.

The allocation of subjects to the faculty is done by the HOD based on their subject preferences and expertise. Course Outcomes (COs) of each course are carefully drafted and mapped to the Program Outcomes (POs) and Program Specific Outcomes (PSOs). The centralized timetable committee prepares the academic schedule for each semester by considering the requirements of departments and coordinating the scheduling of the open electives and honors degree courses.

The faculty prepares a lesson plan focusing on effective delivery of the course content using various modes, assessment methods, innovative practices, delivery of content beyond the syllabus, etc. The list of experiments to be conducted is prepared, including new and virtual lab experiments. Course material is made accessible to students through ERP or Google Classroom. Various assessment methods, such as internal assessments, quizzes, assignments, mini-projects, industrial visits, etc., are used for evaluation. Faculty members maintain a course file that includes the syllabus, lesson plan, execution report, lecture notes, question papers with solutions, etc., and is validated by the HOD.

Continuous assessment is done throughout the semester to evaluate the performance of students based on rubrics. Furthermore, the quality of internal assessment question papers is verified by the Internal Assessment Monitoring Committee to ensure alignment of questions with Bloom's taxonomy levels.

Regular course feedback and academic monitoring contribute to continuous improvement, with result analysis informing targeted interventions. Based on observations of course and program attainment, an action plan is prepared and implemented for improvement. Academic audits provide a holistic evaluation of curriculum implementation, reinforcing VCET's commitment to excellence in education and enhanced learning outcomes.

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File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	<u>View Document</u>

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: 134

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

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: 42.89

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
1224	967	662	453	641

File Description	Document
Upload supporting document	<u>View Document</u>
Institutional data in the prescribed format	View Document

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:

VCET addresses cross-cutting problems such as gender, environmental sustainability, human values, and professional ethics through the courses/electives in the curriculum and honors/minor degree programs. Apart from the curriculum, the NSS unit and various other student chapters conduct activities to address the above issues.

VCET prioritizes equality for all individuals, ensuring that gender-based discrimination is strictly prohibited. Gender audits are conducted to evaluate the degree of gender equality institutionalization. VCET organizes a range of events, such as National Girl Child Day, Extempore, and Raise Your Voice, and leadership events to foster awareness and sensitivity among staff and students. Additionally, participation of mixed-gender groups in various committees, projects, and technical activities is encouraged. These efforts have cultivated a harmonious environment characterized by mutual respect, cooperation, and dignity.

Courses and open electives such as Internet of Things, environmental management, energy audit and management, disaster management, renewable energy systems, etc. enable students to embrace sustainable practices and reduce energy consumption. Honors/minor degree programs are offered to leverage technology for sustainable development. Complementing these courses are various environmental protection activities like beach clean-ups, plastic reduction initiatives, and tree plantation drives, which foster awareness about energy conservation and natural resource preservation. VCET implements sustainable practices like rainwater harvesting, waste recycling, and administrative digitization to minimize paper usage.

A strong emphasis is placed on fostering human values among students and faculty. The student induction program includes sessions dedicated to nurturing values such as gratitude, justice, trust, and care, while faculty members participate in development programs focused on Universal Human Values. Additionally, various activities like cleanliness drives, blood donation camps, organ donation awareness drive, and health awareness campaigns in the local community to promote inclusivity and diversity are organized. National festivals serve as platforms to reinforce patriotic and moral values. These collective efforts empower students to embrace their values and aspirations, guiding them in their personal and professional accomplishments with a deeper sense of purpose and fulfillment.

There is a diverse array of courses, including business communication and ethics, professional ethics and corporate social responsibility, cryptography and system security, and cyber security and laws, aimed at

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ingraining students with professional integrity and ethical values. Through active involvement in activities organized by professional bodies like IEEE, IETE, CSI, IGBC, ISHRAE, and VMEA, students integrate environmental awareness and professional ethics into their learning journey. The Entrepreneurship Cell further fosters entrepreneurship skills and business development competencies through curated events. VCET emphasizes academic integrity by employing plagiarism detection software. These concerted efforts cultivate well-rounded, ethical engineering professionals ready to confront modern challenges.

File Description	Document
Upload Additional information	<u>View Document</u>
Provide Link for Additional information	<u>View Document</u>

1.3.2

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

Response: 98.64

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

Response: 2032

File Description	Document
Upload supporting document	<u>View Document</u>
Institutional data in the prescribed format	View Document

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: B. Feedback collected, analysed and action has been taken and communicated to the relevant bodies

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

Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1

Enrolment percentage

Response: 84.84

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
495	330	359	334	335

2.1.1.2 Number of sanctioned seats year wise during last five years

2022-23	2021-22	2020-21	2019-20	2018-19
564	420	420	420	360

File Description	Document
Institutional data in the prescribed format	<u>View Document</u>
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: 65.53

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
147	81	92	85	95

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
209	154	140	140	120

File Description	Document
Institutional data in the prescribed format	<u>View Document</u>
Final admission list indicating the category as published by the HEI and endorsed by the competent authority.	View Document
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)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

2.2 Student Teacher Ratio

2.2.1

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

Response: 25.43

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 curriculum includes mini and major projects every semester, which gives an opportunity to carry out extensive experimentation for project implementation. VCET organizes a nation-level project competition, Vidyavardhini's National-Level Project Showcase (VNPS), which is a forum for students to present their project work. One of the best practices initiated by the VCET is the "Product Showcase", where students present different products to fellow students and other visitors. The learning process is further enhanced by workshops to get hands-on experience, activities of centers of excellence, case studies, presentations, elocutions, debates, role-plays, quizzes, etc.

Students are encouraged to participate in project contests, paper presentations, and conferences. National and international professional associations, including IEEE, ISA, CSI, IETE, VMEA, ISHRAE, and IGBC, have student chapters at VCET. These student chapters host technical events, industry expert sessions, workshops, seminars, alumni interactions in emerging fields, etc. VCET also hosts a technical paper presentation event called Oscillation. The Entrepreneurship Cell organizes events like Start-up Fest, Biz-Talks, Biz-Master, and other events that focus on business, management, and entrepreneurship.

In addition to internships, major/mini projects, and industrial projects, other useful resources for fostering problem-solving skills among students include coding competitions, national hackathons, and so forth.

VCET promotes the formation of peer groups such as Team Solecthon, Team Ethan, Quad Bike, Arinova, and Yantrika (a robotics club). Students use their technical skills to create working models, which include design and development activities. Course projects, presentations, practical sessions, and subject-specific assignments are other means of fostering collaborative learning.

Faculty members employ a variety of ICT tools to deliver lectures, which include software simulations, PowerPoint presentations, video lectures, etc. Students are advised to use Coursera, Udemy, and the National Program on Technology-Enhanced Learning (NPTEL) as curricular supplements. Use of digital libraries and e-resources (e-books) is also encouraged. The virtual laboratory platform is used to enhance the lab experience. Academic processes are managed using the enterprise resource planning (ERP) platform.

VCET has Microsoft Campus Licenses MS Office 365 A3 under which 1Tb storage on OneDrive is available to faculty and students. G Suite Domain for Education enables faculty to use the Google Classroom and Google Meet Tool while teaching or conducting online guest lectures. Faculty members have developed e-content and videos and published them on websites and YouTube channels.

Different instructional techniques, tools for assessment and evaluation, and activities that extend the boundaries of classroom learning are implemented by faculty. Pedagogical tools like group problem-solving, mind maps, quizzes, online compilations, audio-video assignments, think-pair-share, flipped classrooms, games, and more are included in these activities.

File Description	Document
Upload Additional information	<u>View Document</u>
Provide Link for Additional information	View Document

2.4 Teacher Profile and Quality

2.4.1

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

Response: 83.69

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
102	98	93	83	90

File Description	Document
Sanction letters indicating number of posts sanctioned by the competent authority (including Management sanctioned posts)	View Document

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: 20.26

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
22	19	15	13	10

File Description	Document
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.	View Document
Institution data in the prescribed format	<u>View Document</u>
Copies of Ph.D./D.Sc / D.Litt./ L.L.D awareded by UGC recognized universities	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

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:

Internal assessments and end-semester exams are conducted as per university guidelines. Two internal assessment exams per semester are conducted, with their average determining the final assessment. Students receive the dates at the start of the semester via the Academic Calendar. These exams are overseen by a central committee led by the HOD and department exam in-charges. The quality of the internal assessment question paper is ensured by the Internal Assessment Monitoring Committee (IAMC). Assessment of internal exam papers is done centrally, and results are declared within a week. Furthermore, model answers and evaluation schemes are submitted beforehand.

Internal assessment question papers, answers, and evaluation schemes are discussed with students. Assessed papers are then shared, and grievances, if any, are addressed by faculty. Students are made aware of rubrics for grading assignments, tutorials, practical write-ups, etc. The evaluation of major and mini projects is based on a well-defined process and performance criteria.

The end-semester examination is administered by the University of Mumbai. Question papers are provided through the Digital Exam Paper Delivery System. Timely assessment of answer papers is done by the faculty in the central assessment room. Masking and coding are utilized for second- and third-year paper assessment and moderation. On-screen marking (OSM) is employed for first- and final-year exams. Mark sheets are compiled and sent to the university for approval.

The mechanism for redressing grievances is transparent, time-bound, and efficient. It includes providing photocopies and revaluation of answer books as per the University guidelines.

File Description	Document	
Upload Additional information	<u>View Document</u>	
Provide Link for Additional information	View Document	

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:

Vidyavardhini's College of Engineering and Technology adheres to the Programme Outcomes (POs) as specified in the Washington Accord adopted by the National Board of Accreditation (NBA).

The Program Educational Objectives (PEOs) and Program Specific Outcomes (PSOs) are framed following a thorough evaluation of input from internal and external stakeholders and are approved by the Department Advisory Board (DAB). It is ensured that PEOs and PSOs are in line with the vision and mission of the Department.

The POs, PEOs, and PSOs are displayed on:

Disseminated tool	COs	POs	PSOs	PEOs
Institute website	Yes	Yes	Yes	Yes
Library	-	Yes	-	-
Classrooms	-	Yes	-	-
Laboratories	-	Yes	Yes	Yes
Department TV	-	Yes	Yes	Yes
display in the				
corridor				
Department	-	Yes	Yes	Yes
noticeboard				
Display boards in	-	Yes	Yes	Yes
HOD office				
Course booklets	Yes	Yes	Yes	Yes
Practical booklets	Yes	Yes	Yes	Yes
Project handbooks	Yes	Yes	Yes	Yes

They are also discussed during:

- Department Advisory Board meetings
- Alumni interactions
- Industry-Institute interaction activities

- Parents meeting
- Student induction program

The University of Mumbai has adopted the Choice Based Credit Grading System (CBCGS) with effect from the academic year 2016–17, which was further revised from 2019–20.

The course outcomes and objectives are structured in compliance with the University of Mumbai syllabus. A team of domain experts among the faculty members from the Department prepares the course objectives and course outcomes (COs) of each course through multiple meetings. Based on the curriculum, the course outcomes are designed to address the expected cognitive level. Students are briefed about the COs by the respective faculty during the lectures. The assessment tools are also devised in accordance with the cognitive level of the COs.

File Description	Document	
Upload Additional information	<u>View Document</u>	
Provide Link for Additional information	View Document	

2.6.2

Attainment of POs and COs are evaluated.

Explain with evidence in a maximum of 500 words

Response:

The course outcomes (COs) of each course are defined and mapped with the program outcomes (POs) and program-specific outcomes (PSOs). The COs are evaluated using assessment tools like internal assessments, quizzes, assignments, tutorials, experiments, seminars, projects, case studies, course exit surveys, etc., as part of the in-semester evaluation. All COs are assessed collectively using tools like end-semester exams, term work, oral, and/or practical examinations.

Process for measuring the attainment of COs

Step 1: Setting targets for CO attainment

To begin with, a target is set to a minimum value of 1.8 for each CO and is increased by 0.2 if the CO target is attained in the previous year. If the CO target is not attained, the previous year's target is carried forward into the next year.

Step 2: Qualifier Level for CO attainment

The qualifier level defines the minimum proficiency level expected from the student for the mode of evaluation. The minimum qualifier level is set at 50%, whereas the maximum is 80%. The average percentage value of the previous university end-of-semester semester exam is considered in deciding the qualification level. For other types of evaluation tools, the qualifier level is increased by 5%.

For courses in which two or more COs reach the target level of 2.8, the qualifier level is further increased, and the target value of COs is reset to 1.8.

Step 3: Student progression and attainment level

The student progression determines the value of the attainment level for the assessment tool.

Step 4: Evaluation of Internal attainment

Average internal attainment is calculated using student performance in internal assessments and feedback obtained in the course exit survey.

Step 5: Evaluation of External Attainment

For external attainment, the end semester exam and oral/practical exam are used as evaluation tools. If both are used, the weightage will be based on their total marks.

Step 6: Overall CO attainment

Internal attainment is given 20% weightage, and external attainment is given 80% weightage while calculating overall CO attainment.

After calculating the overall CO attainment, it is compared with the target value to check if the target is achieved or not. As per the observations, action plan is prepared.

Processes used for measuring the attainment of POs and PSOs

Attainment of COs through in-semester and end-semester assessment contributes towards the direct attainment of POs and PSOs. Program exit surveys, alumni feedback, employer feedback, and parent feedback contribute towards the indirect attainment of POs and PSOs.

At the end of the program, the attainment through all the courses is averaged and given a weightage of 80% to obtain direct attainment in the final calculation for the attainment of POs and PSOs. The Program Exit Survey and feedback from the stakeholders obtained through the survey are given a weightage of 20% in the final calculation to obtain indirect attainment of POs and PSOs.

File Description	Document	
Upload Additional information	<u>View Document</u>	
Provide Link for Additional information	View Document	

2.6.3

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

Response: 98.71

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
465	441	477	482	501

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
482	443	477	482	513

File Description	Document
Institutional data in the prescribed format	<u>View Document</u>
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.	View Document
Annual report of controller of Examinations(COE) highlighting the pass percentage of final year students	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

2.7 Student Satisfaction Survey

2.7.1

Online student satisfaction survey regarding teaching learning process

Response: 3.45

File Description	Document
Upload database of all students on roll as per data template	<u>View Document</u>

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: 21.59

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	
4.01	13.845	0	2.1	1.63	

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	<u>View Document</u>

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:

- **Institute Innovation Council:** was established in 2020 and has 10 faculty as innovation ambassadors. The innovations developed by the students are nurtured by domain experts and entrepreneurs. The council implements activities such as:
 - Workshops and sessions on innovation and creativity, design thinking, prototyping, writing research, and funded project proposals.
 - It also supports the participation of students in various innovative idea/project competitions.
- Intellectual Property Rights Cell: of the VCET was established in 2018. It organizes IPR awareness programs for patenting and copyrighting. This has resulted in the publication of 8 patents and 13 copyrights.
- Entrepreneurship Cell: of VCET provides platforms for students to present their ideas and

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business plans during events like the e-summit and biz-master. VCET has a MoU with the Tarapur Management Association, Vasai Industries Association, Navyuvak Entrepreneurs Pvt. Ltd. (Startup Hub), and Saturday Club Global Trust to help in networking with start-ups.

- Centre of Excellence (CoE): Six faculty members are expert trainers for Siemens CoE and Seven for the Texas Innovation Laboratory. Two batches of industry professionals and 919 students, including those from other colleges, have benefited from it.
- Innovations activities: Students develop innovative solutions for their project problem statements, which are presented at the e-Yantra robotics competition (eYRC), the e-Yantra innovation challenge (eYIC) at IIT Bombay, the University's Avishkar Research Convention, the Yukti Innovation Challenge, the Maharashtra Student Innovation Challenge, hackathons, etc. One team stood among the top 10 teams out of 492 in eYIC, and 15 teams participated in eYRC at IIT Bombay. One team has been qualified for state-level and one team for university-level competition among 80 teams that have been selected for presentations at the zonal level of the Avishkar Research Convention. A National Conference on Technology Advancement in Social Upliftment was also organized at VCET. There is a continuous interaction with the Incubation Cell of the University of Mumbai, Sardar Patel Business Incubator, Mumbai, for the incubation of student innovations.
- **Promotion of Indian Knowledge System:** To promote Indian culture, tradition, and history among the students, various events like quizzes, poster competitions, skits, etc. are carried out. The Literati Club and NSS unit also conduct various activities on literature and yoga.
- Research and Industry-Institute interaction activities: VCET has a policy to depute faculty for industry training, take on consultancy projects, sign an MoU with the industry, and monitor student progress during industry internships. The faculty members are encouraged to submit research proposals. Faculty members have undertaken a project on a sewage cleaning robot with Janyu Tech Robotics, Vasai. The outcome of research activities has led to receiving a total research grant of Rs. 21.04 lakhs from funding agencies like AICTE, RGSTC, the University of Mumbai, etc. There have been more than 300 research publications in conferences and journals during the last five years. The student teams have also received research sponsorship from industries for project development, and more than 100 MoUs have been signed with industries.

File Description	Document
Upload Additional information	<u>View Document</u>
Provide Link for Additional information	View Document

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: 48

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
24	13	4	4	3

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: 0.35

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
6	16	9	3	20

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	<u>View Document</u>
Provide Links for any other relevant document to support the claim (if any)	View Document

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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: 1.65

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
70	34	19	121	12

File Description	Document
List of chapter/book along with the links redirecting to the source website	View Document
Institutional data in the prescribed format	View Document
Copy of the Cover page, content page and first page of the publication indicating ISBN number and year of publication for books/chapters	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

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:

VCET realizes its role in working for the betterment of society and believes in returning what we get from it. VCET has a National Service Scheme (NSS) unit that conducts various activities with an emphasis on community development and outreach. The summary of activities carried out in the neighborhood is as follows:

VCET students and faculty enthusiastically take part in mega donation camps by donating clothes, stationery, groceries, toys, etc., which lends a helping hand to unprivileged people in the community. Webinars such as Leave No One Behind on World Tribal Day are organized to foster awareness about neighboring Adivasi communities and spread the message of dignity for all. Street plays on socially

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relevant topics such as social equality, standing up against social injustice for the community, waste management, road safety, etc. have been a means to awaken society. Students have developed projects such as crop health analysis for higher crop production in farming, IoT-based smart farming, etc. Through these events, the students gain empathy and a sense of responsibility, in addition to helping with immediate community needs.

Events such as beach cleaning, plastic waste collection, and tree plantations have supported the local community in carrying on the legacy of "Our Vasai Green Vasai". Rainwater harvesting programs, weed cleaning campaigns, bund construction, water quality surveys, etc. have been means for environmental conservation. Students have explored methods of reducing environmental pollution by working on projects like biogas generation using animal/vegetable waste, aquaponics, and hydroponics. Through these events, students have gained sensitivity towards the protection of natural resources.

Events such as Say No to Drug Activities, Yoga Day, and Dos and Don'ts for COVID-19 have helped to create awareness about healthy living. Blood donation drives, organ donation awareness campaigns, and other initiatives have raised awareness of the need to save lives. Students have explored ways to help the community with technology by undertaking projects such as hands-free sanitizer dispensers, the development of low-cost natural material sanitary pads, etc.

Women's Day celebration, Rally to Save the Girl Child, etc. events have been effective in kindling respect for women in society. These events have raised awareness about women empowerment, gender equity, and the realization of human rights for all among students.

Teaching campaigns and book donations have been done in the neighboring community. Sessions on STEM awareness and career guidance have been conducted for school children. Students have developed products like communication for the differently abled, augmented reality in education, etc. as educational support for the community. These school outreach programs have helped school students connect with technology.

These outreach activities have a profound effect on students in terms of improvements in their ability to collaborate with others, leading to their holistic development.

File Description	Document
Upload Additional information	<u>View Document</u>
Provide Link for Additional information	View Document

3.4.2

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

Response:

VCET has been actively engaged in a multitude of social and community-oriented activities, earning

widespread recognition and appreciation from various organizations and institutions. The various awards and recognitions received for extension activities include:

- Third prize, Certificate of Appreciation, and Memento by the University of Mumbai for the efforts of the NSS VCET Unit for Blood Donation Drive-District-wise in 2022–23.
- Certificate of felicitation by Jagjivan Ram Hospital (Western Railway) blood center in 2022–23.
- Memento and thank-you letter for successfully orchestrating blood donation camps by the Sir J.J. Mahanagar Raktakendra Maharashtra Government, Mumbai, for the years 2019–20 and 2022–23.
- Best NSS Camp appreciation Gram panchayat of Makunsar Village, Saphale, Dist. Palghar during 2022–23.
- Letter of gratitude for event organization and career guidance from S. K. Patil Vidyamandir, Makunsar, Saphale District, Palghar, during 2022–23.
- Letter of appreciation for organizing a seminar on "Energy Conservation for Sustainable Lifestyle" from Smt. Taramai Vartak Memorial Academy, Virar, during 2022–23.
- Certificate of participation from #Beat Plastic Pollution, Mission Green Mumbai, for contribution in water conservation and tree plantation during 2022–23.
- Appreciation from Jeevan Sahara Charitable Trust Old Age Home, Vasai West, for Mega Donation during 2022–23.
- Letter of gratitude from Prajapita Brahmakumari Ishwariya Vishwavidyalaya, Vasai, for the contribution to the event Walkathon- "Sadak Suraksha Jeevan Raksha" during 2022–23.
- Letter of appreciation from the N. H. English Academy for conducting a robotics workshop in 2022–23.
- Letter of appreciation by the IEEE Bombay Section for taking part in the STEM Education workshops during 2021–22.
- Letter of gratitude from Prajapita Brahmakumari Ishwariya Vishwavidyalaya, Vasai, for the contribution to the event "Surakshit Bharat-Sadak Suraksha Motorcycle Rally" in 2021–22.
- Letter of appreciation by Zilla Parishad, Kelthan, Vajreshwari, and Tal. Vasai for organizing a basic computer seminar in the year 2019-20.
- Acknowledgement from Shradhhanand Mahilashram, Matunga, for the mega donation during 2019–20.

Various events that have received appreciation and coverage in newspaper media include:

Year	Event	News	Paper	featuring	the
		covera	ge		
2022-23	The Har Ghar Tiranga Initiative	Dainik	Narveer C	Chimaji	
2020-21	Vasai Traffic Safety seminar in	Dainik	Caufer	Sangharsh	and
	association with the United Way	Mahara	shtra Tim	ies	
	Society				
2020-21	Beach cleaning at Navapur Beach	Dainik	Narveer C	Chimaji	
2019-20	Rajodi Beach cleaning campaign	Mahara	shtra Tim	ies	
2019–20	Adivasi Diwas celebration	Mahara	shtra Tim	ies	

In summary, these accolades stand as a testament to the VCET's multifaceted contributions, ranging from health initiatives and educational programs to community service and environmental awareness, and unwavering commitment to fostering positive change and contributing meaningfully to society.

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

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: 103

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
32	24	27	16	04

File Description	Document
Photographs and any other supporting document of relevance should have proper captions and dates.	View Document
Institutional data in the prescribed format	View Document
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	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

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: 101

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

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:

VCET is located on a sprawling 5-acre Vidyavardhini's campus. It houses a five-storey building that comprises an instructional area, an administrative block, amenities, and an area for access and circulation.

VCET has 25 well-furnished classrooms with multimedia projectors and internet connectivity. Eight classrooms are equipped with smart boards, and 19 are air-conditioned as well. There are 54 laboratories with state-of-the-art experimental set-ups and software, and 2 workshops. The IT infrastructure features the latest high-performance 800 PCs, 4 servers, a 1224 Mbps internet leased line, and Wi-Fi routers installed on every floor. The central library is housed in a two-story standalone building with a well-furnished, spacious reading hall, book section, and digital library. There are six tutorial rooms and two seminar halls with ICT facilities, each with a seating capacity of 150. One of the seminar halls is equipped with a digital podium. There are 2 conference rooms, a placement office, a counseling room, and a stationary shop cum photocopy center.

ICT-enabled facilities also include language lab and virtual lab accessibility. VCET also has a centralized Enterprise Resource and Planning (ERP) system that effectively handles course materials, monitors learner progress, facilitates assessments, and provides a digital learning environment.

The Student Council and the NSS unit are provided with an activity room. There is an open-air stage, an air-conditioned auditorium with a capacity of 600, a playground, and a volleyball court. Sports equipment and accessories for both indoor and outdoor activities such as table tennis, carrom, chess, cricket, volleyball, throw ball, football, badminton, etc. are available. The gymnasium is equipped with exercise and fitness equipment like a treadmill and an anaerobic station. A well-furnished canteen and common rooms for boys and girls are also available.

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File Description	Document
Upload Additional information	<u>View Document</u>
Provide Link for Additional information	View Document

4.1.2

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

Response: 52.25

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
551.60	298.78	274.73	133.81	428.18

File Description	Document
Institutional data in the prescribed format	View Document
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)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

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:

"Shri Uddhav Dada Gharat Central Library" of VCET is a G+2 standalone building with a well-furnished, spacious reading hall, open access, a digital library, and qualified and experienced staff. It stands out for its extensive and diverse range of resources, which include:

- 12,348 titles and 33,979 volumes of books.
- 63 national and international journals and magazines.
- Elsevier Science Direct, Institute of Engineers, IETE, and J-Gate journals
- 97 e-books from the Pearson Online Library, accessible through a mobile application.
- A digital library with 20 desktop PCs
- Subscription to 14 publications such as India Today, Time, Economics and Political Weekly, etc.
- 993 multi-lingual books on literature.
- 7 English and 5 Marathi newspapers.
- Turnitin plagiarism software.

The Central Library of VCET is automated using Integrated Library Management System (ILMS) software and 'E-Granthalaya' and is integrated into the ERP system. Additionally, the ILMS provides features like book reservations and notifications for home lending transactions via email. The process of issuing and returning books is facilitated by the inclusion of barcode scanning capabilities.

VCET has a membership to:

- DELNET Library Network.
- National Digital Library, supported by MHRD
- Library services of IIT Bombay.

Books can be issued between 9 a.m. to 5.30 p.m., and access to the reading room is from 8 a.m. to 8 p.m. On average, 150 to 160 students and 15 to 17 faculty visit the library per day, and 2183 users take advantage of the journals and e-book facilities. Approximately 200 students take advantage of the book bank facility every year.

File Description	Document	
Upload Additional information	<u>View Document</u>	
Provide Link for Additional information	View Document	

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:

VCET has a systematized IT infrastructure that is regularly upgraded. The advancements in the IT infrastructure are:

- There are more than 800 computers and laptops, including those available for student, faculty, and administrative use. Computer systems have been enhanced, replacing old desktops with configurations featuring *i*3 processors ranging from 1 GHz to 3 GHz and increased memory capacity, extending from 1 GB to 4 GB, 8 GB, and even 16 GB. This significantly improves the performance and capabilities of the computers. Desktop PCs with *i*5 or *i*7 10th Generation 8GB DDR4, SSD, and NVIDIA graphic cards are available to fulfill course and project requirements.
- Computer systems are protected against cyberattacks from public networks using Seqrite 7.4 E.P.S. antivirus protection.
- 10/100 D-Link switches have been replaced with 100/1000 Cisco switches, including SG-200, SG-300, and SG-350 gigabit switches, for enhancing network performance and reliability.
- All computers are networked through LAN and VPN to segment network traffic using structured CAT-6 cable. This enables system upgrades, moving from 10/100 Mbps to 100/1000 Mbps network speeds. The present network backbone supports up to 10 gigabits of traffic.
- The Sophos firewall has been upgraded from the Cyberoam 100iNG PDU to the Sophos XG 330 to ensure improved network security and the efficient allocation of internet bandwidth.
- Two high-performance HP servers, each equipped with 16 GB of memory, expandable to 128 GB, have been procured. Additionally, two more servers, a Dell Server Tower model (Power Edge T440) with an Intel Xeon Silver 4210 processor and an HP ProLiant DL 380 Gen 10 with 32 GB of RAM, have been purchased to enhance the capacity to handle complex computing tasks and applications.
- The internet bandwidth has been substantially upgraded to 1224 Mbps. The premise is Wi-Fi-enabled.

The upgrade and update encompass both hardware and software, contributing to a more efficient and productive educational and administrative environment.

File Description	Document	
Upload Additional information	<u>View Document</u>	
Provide Link for Additional information	View Document	

4.3.2

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

Response: 2.72

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

Response: 758

File Description	Document
Purchased Bills/Copies highlighting the number of computers purchased	View Document
Extracts stock register/ highlighting the computers issued to respective departments for student's usage.	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

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: 18.57

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
185.93	80.16	78.84	129.36	125.33

File Description	Document
Institutional data in the prescribed format	View Document
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)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

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: 51.71

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
1207	965	869	833	885

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.	<u>View Document</u>
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: C. 2 of the above

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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)	View Document
Report with photographs on ICT/computing skills enhancement programs	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

5.1.3

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

Response: 72.18

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
1857	1521	1575	724	966

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

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	View Document
Proof related to Mechanisms for submission of online/offline students' grievances	View Document
Proof for Implementation of guidelines of statutory/regulatory bodies	View Document
Details of statutory/regulatory Committees (to be notified in institutional website also)	View Document
Annual report of the committee motioning the activities and number of grievances redressed to prove timely redressal of the grievances	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

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: 61.54

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
269	306	300	285	315

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
482	443	477	482	513

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)	View Document
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)	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

5.2.2

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

Response: 25.81

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
60	41	52	45	40

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

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: 31

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
19	03	03	0	06

File Description	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: 35

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	36	13	42	43

File Description	Document
Upload supporting document	<u>View Document</u>
Institutional data in the prescribed format	<u>View Document</u>

5.4 Alumni Engagement

5.4.1

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

Response:

The VCET Alumni Association was formed in 2003 to facilitate regular engagement and collaboration with alumni. It is registered with the Assistant Registrar of Societies, Thane Region (Registration Number: MAH/2133/2018/Thane).

Graduate students are encouraged to register for the Alumni Association through the registration form available on the website. The association has about 7,400 registered members.

Alumni have significantly contributed to the development of VCET in the following ways:

- 1. Being significant stakeholders, they offer input on the vision and mission, PEOs, PSOs, and the curriculum.
- 2. Mentors to students by providing career counseling, placement, and internship opportunities.
- 3. Deliver expert sessions and conduct workshops.
- 4. They are involved in collaborative student projects.
- 5. They are members of the Governing Council, the Internal Quality Assurance Cell, the department advisory board, etc.
- 6. They contribute to the activities of various student clubs in the form of technical and financial assistance.

The following table enlists the number of seminars, workshops, projects supervised, and internships provided by alumni:

Year	No. meetings conducted	No. of	No. of project guided/
		Seminars/Workshops	internships offered
		conducted	
2022-23	6	32	36
2021-22	4	35	18
2020-21	8	36	4
2019-20	8	17	-
2018-19	10	17	-

Thus, VCET's alumni stand by their testaments as ambassadors of VCET, highlighting its accomplishments and enhancing its favorable public perception.

File Description	Document
Upload Additional information	<u>View Document</u>
Provide Link for Additional information	View Document

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 vision and mission of VCET are framed and appraised as per the skilled man-power needs of the industry and to explore the potential of youth in the rural areas of Palghar.

The governance is effectively designed as per the guidelines given by apex bodies, statutory and regulatory authorities. To achieve the vision and mission, leadership is ensured through a well-defined organizational structure. The governance and management of the VCET are transparent, hierarchical, decentralized, and participatory. The management has delegated the power and authority to the Principal to take decisions and execute them. The governing body and the Principal jointly work towards designing and implementing quality policies.

The Principal is supported by the Deans, HODs, and sectional heads to achieve the set goals and objectives of becoming a valuable resource for industry and society. There are various statutory and non-statutory committees that assist in ensuring effective governance. The Principal forms the committees for the overall management of the various operations under the convenorship of faculty. These committees include non-teaching staff, students, industry representatives, and subject experts.

VCET strives to address the needs of society through innovative practices and policies. In addition, there are several technical and non-technical clubs that inculcate and strengthen the potential of the students through various extracurricular and co-curricular activities that enable them to contribute to society as responsible citizens. The management mobilizes funds for the enhancement of infrastructure, laboratories, library, administrative requirements, co-curricular and extracurricular activities, and creating an environment-friendly campus.

VCET aligns with the National Education Policy (NEP), employing a choice-based credit system and utilizing the PARAKH portal to test the academic and aptitude skills of students. Students benefit from registration with the Academic Bank of Credit, ensuring transparency and flexibility in their educational pursuits.

Vision

To be a premier Institute of technical education, aiming and becoming a valuable resource for Industry and Society.

Mission

- To provide a technologically inspiring environment for learning
- To promote creativity, innovation, and professional activities
- To inculcate ethical and moral values
- To cater to personal, professional, and societal needs through quality education.

VCET's perspective plan, collaboratively crafted with stakeholders, strategically aligns academic, administrative, research, and development operations to fulfill its central vision and purpose.

- Academic Autonomy
- Accreditation and re-accreditation of all programs
- Augmenting faculty expertise with a focus on increasing PhD holders.
- Constitute a Research Center
- Industry-sponsored lab and center of excellence
- UG and PG programs in emerging areas
- To establish skill-based training centers
- Implementation of NEP

This plan sets the strategy and targets for all functions and sections of VCET.

Thus, the governance of the VCET achieves the defined vision and mission through effective leadership that is implemented using a decentralized and participatory method.

File Description	Document
Upload Additional information	<u>View Document</u>
Provide Link for Additional information	View Document

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:

VCET's vision and mission drive perspective plans across academic, administrative, research, and development domains. The Principal and section heads lead strategy implementation. Periodic evaluations by committees, including the IQAC, ensure alignment with objectives. This cohesive approach fosters accountability and adaptability, nurturing a dynamic environment conducive to realizing the institute's goals.

Perspective plans are deployed in various ways:

- 1. Facilities such as classrooms, laboratories, and library are modernized for the promotion of ICT tools.
- 2. Outreach activities and the organization of numerous seminars and workshops on emerging technologies are the two ways that students' capacities are built.
- 3. Industry institute interaction is increased through the activities of the industry institute interaction cell, internships, refresher programs, Udyam Saman, industrial visits, and E-cell activities. This is further leveraged through the MoU with Tarapur Management Association, Vasai Industries Association, and Saturday Club Global Trust.
- 4. Four UG programs, namely, Mechanical Engineering, Electronics and Telecommunication Engineering, Computer Engineering, and, Information Technology, have been accredited by NBA, and SAR is submitted for the UG program in Civil Engineering.
- 5. Postgraduate program, M.E. in Civil Engineering (Structural Engineering) and the postgraduate course in Master of Management Studies (MMS) are commenced.
- 6. Implementation of an ERP system has been done.
- 7. Texas Instruments and Siemens have helped VCET to establish center of excellence laboratories for imparting hands-on training and internships.

In addition to the governing body, there are several statutory and other committees (such as the Institute Academic Council, Academic Administrative Committee, Department Advisory Boards, Purchase Scrutiny Committee, Internal Complaint Committee, Anti-ragging Committee, Internal Quality Assurance Committee, etc.) assigned to administer various academic and administrative activities.

Heads of the departments decentralize the responsibilities for the implementation of the curriculum, conduct DAB meetings, planning of semesters, preparation of academic and activity calendars, conduct of theory lectures and practical, faculty and student development programs, co-curricular and extracurricular activities for students, conduct of feedback from all stakeholders, and take corrective and preventive actions for continual improvement.

The HR policy, accessible on the VCET website, delineates procedures for recruitment, selection, induction, code of conduct, and internal promotion policies, fostering coherence and clarity in administrative processes.

The effectiveness of the functioning of the institutional bodies can be observed through the addition of new programs, increase in student intake, the promotion of testing and consulting activities, infrastructure development, and modernization of laboratories, etc.

File Description	Document
Upload Additional information	<u>View Document</u>
Institutional perspective Plan and deployment documents on the website	View Document
Provide Link for Additional information	View Document

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

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

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:

Response:

VCET has a well-defined procedure for yearly faculty performance appraisal based on the

Academic Performance Index.

Academic performance for faculty is evaluated using criteria like student results, innovative teaching-learning approaches, course feedback, student mentorship, etc. The research component focuses on faculty development programs, training program engagement, research and publications, consultancy, and so on. Also, administrative and other duties performed at the departmental and institutional levels are accounted for.

Appraisals for non-teaching staff are based on job competency, general intelligence,

discipline, and timeliness, as well as participation in non-routine tasks.

The HOD evaluates the appraisal forms and forwards them to Principal office for the final assessment. The HOD and Principal conduct one-on-one discussions with the faculty, and observations are communicated for further improvement. The evaluation is considered for increment, promotion, and regularization of employee.

The Institute has implemented welfare measures for all VCET employees. The major welfare measures are:

- 1. Group insurance scheme
- 2. Payment of gratuity
- 3. Employees provident fund
- 4. Maternity leave
- 5. Special medical leave
- 6. Funding for staff get-togethers
- 7. Counselor facility
- 8. Doctor on call
- 9. Advance against salary for employees
- 10. Concession in tuition fees for the wards of employees
- 11. Uniforms for Class IV employees

There are several avenues for career development and progression, which include:

- 1. Career Advancement Scheme
- 2. Study leave for Ph.D.
- 3. Financial assistance for research and publication activities
- 4. Funding for organizing and attending seminars, workshops, and faculty development

programmes

5. On-duty leave for industry-institute interaction and industry training.

File Description	Document
Upload Additional information	<u>View Document</u>
Provide Link for Additional information	<u>View Document</u>

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: 61.03

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
84	36	19	27	72

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

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: 50.3

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
79	54	64	65	75

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
58	56	55	55	56

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

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:

Vidyavardhini's College of Engineering and Technology is a self-financed college. The major source of income is student fees (tuition and development) regulated by the Government of Maharashtra. The other sources of income include registration fees and sponsorships for conducting seminars and workshops, financial assistance from the University of Mumbai for minor research, NSS activities, etc., and revenue generated from renting infrastructure to conduct various examinations such as NEET, GATE, JEE, CAT, MH-CET, etc.

A finance manual provides clear guidelines on budgeting, expenditures, and financial authority for Principal and Department heads. Department heads submit budget proposals to the Principal with justifications. These are consolidated by the Principal, department heads, registrar, and accountant, aligning them with VCET's strategic plan. The accounts department then synthesizes these inputs and prepares the budget for each financial year, accounting for both recurring and non-recurring expenses. This collaborative process ensures fiscal responsibility and strategic alignment in resource allocation.

The budget undergoes approval by the College Development Committee (CDC) and Governing Council (GC), incorporating any additional provisions. The purchase scrutiny committee, led by the Dean and HODs, adheres to a systematic process for acquiring laboratory equipment, ensuring optimal financial utilization.

The GC, along with the Principal and the CDC, diligently supervises fund mobilization and resource allocation. This coordinated approach ensures efficient financial management, fostering progress and alignment with the VCET's goals.

The funds allotted are utilized for infrastructure development, salary, grants for promoting research, student technical activities, placement and training activities, procuring ICT tools, green campus initiatives, extension activities, transport, maintenance, welfare measures, and the purchase of library resources, sports and cultural activities, etc. Financial support is also provided for seminars, workshops, faculty development programs, and conferences. Scholarships and Aid are provided to economically challenged students.

VCET has appointed M/S R G Divekar & Co. as an internal auditor and M/S M R Padhye & Co. as an external auditor.

Process of the internal audit:

- Qualified and certified internal auditors are appointed to conduct the audit regularly.
- The auditors perform the audit on:
 - All payments, receipts, and journal vouchers of the transactions, cash book, ledger account, and all bank accounts
 - The income and expenditure statement, balance sheet, and depreciation statement are prepared by the accounts department and verified by the internal and external auditors.

Process of the external audit:

- The accounts of VCET are audited by a chartered accountant regularly.
- The auditor ensures that all payments are duly authorized after the audit, and the report is sent to the management for review.
- Any queries in the process of auditing are addressed immediately, along with the supporting

documents, within the prescribed time limits.

- As an act of transparency, the audited financial statements are published on VCET website and also sent to the statutory and regulatory bodies.
- VCET did not come across any major audit objections during the preceding years.

All these mechanisms show that transparency and adherence to financial discipline are maintained in financial matters.

File Description	Document
Upload Additional information	<u>View Document</u>
Provide Link for Additional information	View Document

6.5 Internal Quality Assurance System

6.5.1

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

Response:

The Internal Quality Assurance Cell (IQAC) was established on July 10, 2017. IQAC plays an important role at VCET in imparting quality assurance in terms of academics, administration, etc.

IQAC at VCET contributed significantly during last five years in the following ways:

NBA Accreditation:

- The UG program in Mechanical Engineering, Electronics & Telecommunication Engineering, Computer Engineering, and Information Technology got accredited by the NBA in 2022 for the period of 3 years.
- The UG program in Civil Engineering has submitted the self-assessment report for NBA accreditation in September 2023.

NAAC accreditation: VCET got accreditation from NAAC in 2019 with a 'B+' grade with CGPA of 2.69, valid for a period of 5 years.

NIRF Participation: VCET has been participating in the National Institute Ranking Framework since

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2018.

The key contributions of the IQAC to institutionalize quality assurance strategies and processes are:

- Organization of faculty training in various aspects of outcome-based education, including the use of ICT, innovation in teaching and learning practices, pedagogies, mentoring, etc.
- Organization of sessions on preparedness for national education policy, and examination reforms
- Offering of Honors/Minor degree program in emerging areas
- Standardization of various academic processes and documents
- Developing rubrics for various assessment tools, centralized internal assessment evaluation, evaluation of the quality of question papers for internal exams, implementation of exam-related ERP modules, etc.
- Promotion of events encouraging project-based learning, such as project showcases, product showcases, paper presentations, conferences, etc.
- Formation of the Institute Innovation Council, the Swayam-NPTEL local chapter, preparing teacher training policy, etc.
- Enhancement in research publications
- Promotion of various activities through the IPR and Research and Development cell and organization of sessions on fostering research and development, writing research proposals
- Promotion of AMCAT employability assessment, campus recruitment training, intra-institute internships, student development programs, etc. through the industry-institute interaction cell and training and placement cell.
- Starting of practices, such as one faculty—one industry and industry-academia meets

The observations from the academic audit, quality initiatives, and feedback are reviewed in the IQAC meeting. Efforts to bring about improvement by IQAC are reflected through:

- Enhancement of teaching-learning and IT infrastructure
- Increase in the number of MoUs from 25 to 108
- Implementation of an ERP solution
- Increase in extension and outreach activities from 4 to 36
- Increase in the number of publications from 16 to 87
- Increase in the number of IPR activities from 3 to 20
- Registration of 13 copyrights and the publication of 8 patent applications, and
- Development of new facilities and laboratories.

File Description	Document
Upload Additional information	<u>View Document</u>
Provide Link for Additional information	View Document

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

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

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:

Gender Audit and Measures for the Promotion of Gender Equity:

Gender Audit: VCET conducts a gender audit to assess and enhance the academic and social environment for inclusivity and equal opportunities. It reinforces gender equity in all activities, both curricular and co-curricular, improving on-campus facilities for women.

Safety and Security: A professional security service is provided 24x7 on campus. A lady security guard is also available. The entire campus is under the surveillance of CCTV cameras, ensuring a vigilant environment for all. Female staff accompanies the girl students for all the events, including industrial visits, field trips, etc.

Counseling: To support students and faculty in dealing with their emotional issues, a professional counselor is available on campus. A session is conducted by the counselor during the induction program to make the students aware of the counseling facility. Support is also extended through the interactions of the students with their mentor.

Common room: VCET has well-furnished common rooms for boys and girls. A vending machine for sanitary napkins is also available in the girls' common room.

Internal Complaint Committee (ICC): VCET has constituted the ICC with the objective of:

- evolve a mechanism for the prevention and redressal of sexual harassment cases and other acts of gender-based violence at the institute.
- uphold the commitment of the institute to provide an environment free of gender-based discrimination.

Composition of committees and events: Gender equality policies are introduced in all facets of the academic system, including the composition of all statutory, non-statutory, technical, and non-technical committees, project groups, etc. Equal consideration is given to boys and girls in all co- and extracurricular events.

Awareness activities: The ICC and the National Service Scheme unit organize sensitization and awareness events such as:

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- Poster Presentation: "Women Empowerment: Power, Progress, Revamp," covering topics such as education, sports, nutrition, politics, technology, and domestic violence.
- Seminar on topics such as Fundamental Rights and Gender Equity, Women's Legal Rights, Awareness of Sexual Harassment and Assault, Women Leadership and Work-Life Balance, etc.
- Workshops on self-defense
- National Girl Child Day campaign "Beti Bachao, Beti Padhao"
- Elocution Competition: "Raise Your Voice"
- International Women's Day celebrations, etc.

All these measures have been effective in nurturing an environment conducive to individual growth, regardless of gender.

File Description	Document
Upload Additional information	<u>View Document</u>
Provide Link for Additional information	View Document

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.	<u>View Document</u>
Geo-tagged photographs/videos of the facilities.	View Document
Circulars and report of activities for the implementation of the initiatives document	View Document
Bills for the purchase of equipment's for the facilities created under this metric	<u>View Document</u>
Provide Links for any other relevant document to support the claim (if any)	View Document

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	View Document
Policy document on environment and energy usage Certificate from the auditing agency	View Document
Green audit/environmental audit report from recognized bodies	View Document
Certificates of the awards received from recognized agency (if any).	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

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:

VCET recognizes the importance of fostering inclusivity and promoting tolerance among their students and employees. Through various initiatives, VCET aims to create an environment that embraces cultural, regional, linguistic, socioeconomic, and communal diversity while also sensitizing individuals to their constitutional obligations as citizens, encompassing rights, duties, and responsibilities.

VCET has various clubs and committees with members of diverse backgrounds who come together in harmony to organize a diverse range of activities.

Student Council: The Student Council organizes a multitude of activities and events that celebrate cultural and regional diversity, such as

• First Year Orientation

- Fresher's and Farewell Party
- Garba night
- Annual cultural festival
- Teachers' Day Celebration: Birth Anniversary of Dr. Sarvapalli Radhakrishnan

Sports Committee: The events in the sports festival also cultivate tolerance and harmony by exhibiting teamwork and sportsman spirit.

Literati Club: Literati events at VCET serve as pivotal platforms for nurturing regional, linguistic, and socioeconomic diversity.

- Marathi Bhasha Diwas
- Marathi and Hindi Kavi Sammelan
- Literature Ouiz
- Summit on Learning, Leadership, and Life
- International Mother Language Day
- Seminar on Soft Skills
- Unscripted: The Extempore Speech Competition (English, Hindi, and Marathi)
- Debate-Faceoff
- Dialogue writing, etc.

National Service Scheme (NSS): By engaging students and employees in diverse initiatives, NSS promotes understanding and appreciation for cultural, regional, linguistic, socioeconomic, and communal diversity. Furthermore, it serves as a platform for sensitizing participants to their constitutional obligations, instilling values, rights, duties, and responsibilities essential for active citizenship and societal cohesion.

- Days of national significance such as National Unity Day, National Constitution Day, Mahatma Gandhi Jayanti, National Youth Day, Har Ghar Tiranga, etc.
- World Tribal Day and International Women's Day
- Beach Cleaning, Mega-Donation Drive
- Fit India Movement, Vaccination Drive, Yoga Day, Say no to drug activity.
- National Girl Child Day
- Chatrapati Shivaji Jayanti Celebration
- Raise Your Voice: Elocution Competition
- Electoral Literacy Completions

Apart from this, the Ek Bharat Shreshtha Bharat (EBSB) club has organized events such as cultural quiz, Makar Sankranti, poster-making, etc. to promote awareness about culture and tradition. The first-year induction program also orients students about communal socioeconomic diversity.

VCET always encourages the students to organize and participate in different programs organized by other colleges, universities, government, and non-government organizations. Though VCET has students from diverse socio-cultural backgrounds and different linguistics, there is no intolerance towards cultural, regional, linguistic, communal, socio-economic, and other diversities.

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

7.2 Best Practices

7.2.1

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

Response:

Best Practice I

Title of the Practice: Transforming Students into Technically Competent Professionals

Objectives of the Practice:

- To provide a technologically inspiring environment.
- To have strong industry-institute interaction.
- To create learning opportunities in emerging areas.
- To promote competency testing through organizing and participating in technical events and competitions.

Context:

In today's global and competitive environment, the industry needs technically proficient engineering graduates. Having necessary competence by virtue of knowledge and skills in students increases their opportunities of being hired and being successful in their careers.

Practice:

- VCET emphasizes the integration of curriculum with major and minor projects to apply the
 knowledge gained in practical scenarios. This involves multidisciplinary collaboration and
 interaction with industry professionals. Also, VCET has student chapters of professional bodies
 and clubs that organize various technical events. A student activity center has been established to
 carry out various development activities.
- A dedicated Industry Institute Interaction Cell (IIIC) of VCET strives to interact with industry to increase the institute's footprints in the local and adjoining industries and provide internships, industry visits, etc., thus widening the placement opportunities for the students. VCET's alumni association also helps to strengthen industry connections and placements.
- Student development programs, workshops, hands-on training, and expert sessions on emerging technologies are conducted by Departments, professional student chapters, and Centres of Excellence alongside regular course delivery.
- Technical activities like VNPS, Oscillation, Product showcase, and Hackathon are organized in

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VCET. These activities are widely attended by the students. Students are motivated to showcase their technical knowledge by participating in various project/innovative-idea competitions, hackathons, paper presentations, autonomous solar vehicle, and racing car design competitions at national and international levels. These technical events also help the students interact with industry and professionals.

Evidence of Success:

The technical competencies of the students are reflected through their outstanding achievements in various facets listed below:

- Five VCET teams have reached the finals of the Smart India Hackathon. Two teams have won in their respective categories.
- A VCET student was part of the runner-up team at the ASEAN India Hackathon 2021.
- A VCET student was runner-up in HackWithInfy, a national-level competition organized by Infosys.
- The VCET Solecthon Team has consistently won many awards at the national and international level, such as the Innovation Award, the overall championship, Best Design, Best Solar Endurance Award, Future Startup Award, and Light Vehicle BEV Award, among many other accolades.
- The VCET Ethan Team stood 15th out of 75 teams and 13th out of 37 teams across the globe for the years 2020–21 and 2022–23, respectively, at the Formula Bharat competition.
- In the Avishkar Research Conventions, organized by the Government of Maharashtra, 19 student groups have won at the district level, 5 student groups have won at the university level, and 2 student groups have won at the state level.
- 19 student groups have registered copyrights for software applications, and 2 student groups have published their process patents.
- There has been a progressive increase in the number of internships, placements, and packages offered.

Problems encountered and resources required:

- To organize state/national-level technical events, it requires infrastructure, technical support, finance, and the availability of human resources.
- Managing the schedule of the industry expert with the academic schedule is a challenge.
- Keeping students abreast of the rapid advancements in field technology presents a formidable challenge, especially in the presence of a constant influx of new technologies. Efforts are required to identify domain experts from industry and academia.
- Creating awareness among the students regarding the importance of learning and participation in technical events is a challenge.

Best Practice II

Title of the Practice: Soft Skill Development

Objectives of the Practice:

- To foster effective communication skills.
- To enhance leadership capabilities.
- To cultivate teamwork and collaboration skills.

Context:

It is necessary to empower students from diverse backgrounds for a wide range of career opportunities by harnessing soft skills. Soft skills integrate the various aspects of an individual's life and learning experiences, which cater to personal, professional, and societal needs.

Practice:

- VCET has students from diverse socio-economic backgrounds, each with varying levels of soft skills. Students are assessed at the entry level to identify their learning level and plan the training activities.
- The curriculum integrates courses on communication skills, business communication, professional ethics, mini- and major project report writing, and presentations that are diligently conducted, monitored, and assessed to enhance oral and written communication.
- VCET organizes sessions by experts that involve lectures and participatory activities directed at writing skills, teamwork, and leadership development.
- VCET has multidisciplinary and interdisciplinary professional student chapters, clubs, and cultural and sports committees that organize various. These activities result in the imbibing of important soft skills like leadership, communication, presentation, time management, and teamwork, etc.
- VCET has a literati committee that organizes events such as debate competitions, letter writing competitions, extempore, etc., which gives a platform for the students to test their soft-skill competency.
- The VCET training and placement cell organizes Campus Recruitment Training (CRT) to prepare students for aptitude tests, group discussions, and interviews.
- VCET has procured proprietary software and set up a dedicated language lab for the improvement of the students's language and communication skills.

Evidence of Success:

- Improved interpersonal and communication skills among students through various events such as paper presentations, product showcase, paper publication in conferences, and peer-reviewed journals.
- VCET's annual magazine, 'Vista', contains articles in Marathi, English, and Hindi that are written, selected, and edited by the students.
- Newsletters, technical magazines, and technical blogs are published regularly.
- Students demonstrated leadership, teamwork, and time management capabilities by participating and winning prizes in various competitions for business proposals, innovative idea presentations, paper presentations, project competitions, etc.
- The trend of students pursuing higher studies and securing placement opportunities has shown steady growth.

Problems encountered and resources required:

- Students from diverse backgrounds have different learning levels and capabilities.
- Many students are hesitant to express themselves in front of peers and faculty.
- Many students face difficulty articulating their ideas and have stage fright.
- Writing technical papers, reports, or articles of good academic standard is a challenge for students.

File Description	Document
Any other relevant information	View Document
Best practices as hosted on the Institutional website	<u>View Document</u>

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:

VCET offers a plethora of opportunities for students and faculty to enhance their skills, ensuring their relevance to industry and societal needs. VCET has implemented various capacity-building initiatives aimed at nurturing overall personality of the students and enhancing the technical competencies of faculty, supported by the institute's infrastructure and financial resources.

Capacity-building initiatives for students

• Curriculum Enhancement:

At VCET, fostering technical proficiency among students is paramount. In the academic curriculum, students undertake innovative mini- and major projects aimed at addressing industrial and societal challenges while upholding environmental sustainability goals. Well-defined rubrics are used for monitoring and assessing projects and all other curriculum-related evaluations. The outcome of these measures ensures students development in technical proficiency, problem-solving skills, environmental sustainability awareness, and comprehensive learning assessment through a transparent evaluation framework.

• Bridging the Emerging Technology Skill Gap:

Keeping the students abreast of technological advancements and equipping them with relevant technical skills is a continuous endeavor at VCET. VCET offers open elective courses such as Management Information System, Disaster Management & Mitigation Measures, Energy Audit & Management,

Project Management, etc., and honor/minor courses such as Smart Cities, Cyber Security, IoT, Artificial Intelligence and Machine Learning, etc. These courses are introduced to students by subject experts who also highlight their industry relevance.

Beyond academics, VCET organizes numerous student development programs throughout the year to bridge the gap between academia and industry. Furthermore, to keep themselves updated on the recent trends in technology, students pursue online courses on emerging technologies through Learning Management Systems (LMS).

To provide students with invaluable exposure to the professional industrial landscape, VCET's Industry Institute Interaction Cell (IIIC) has dedicated faculty members who actively seek out industry partnerships. These collaborations have resulted in numerous MoUs covering projects, expert sessions, workshops, internships, industrial visits, etc. Additionally, VCET also offers internships and training through the established Centers of Excellence and industry collaborations, including the Siemens Center of Excellence, Texas Innovation Lab, and E-Yantra Robotics laboratory in collaboration with IITB.

To assess technical proficiency, students actively participate in a diverse array of activities such as paper presentations, project competitions, hackathons, product showcases, workshops, etc.

• Research Aptitude:

VCET has taken many measures to inculcate research aptitude among the students through the Research and Development (R&D) cell. The Institute Innovation Council (IIC) organizes workshops on innovative ideas and product development. Students take up innovative and original research-based and industry-sponsored projects. To assess their research aptitude, students participate in state and national-level project competitions like Avishkar and the Smart India Hackathon and present or publish their research findings at national and international conferences. Students also file patents and copyrights to safeguard their research works. VCET provides financial support for all the research activities.

• Competent Professional

To enhance students' employability, VCET's Training and Placement(T&P) cell conducts technical and aptitude training and soft skills training programs through external agencies such as Gyanteerth, Coding Genius, etc. Students' employability is assessed through external agencies like SHL Aspiring Minds, right from the first year. To monitor the progress of the students, training programs are planned based on these assessments. VCET also conducts career guidance sessions to promote higher education. All these activities are provided free of charge to the students. In collaboration with IIIC, the T&P cell maintains strong ties with industries across various sectors, facilitated by the alumni network.

VCET has established E-Cell to promote entrepreneurship. Additionally, events such as Udyam Samman (Industry Institute Meet) and Vasai Virar Startup Fest (VVSF) serve to strengthen the bond between the institute and industry.

• Social Responsibility and Sustainable Development:

Instilling ethical-moral values and a sense of social responsibility is integral to the holistic development of the students. VCET organizes sessions and events promoting sustainable living practices, such as energy conservation week, donations, and clean-up drives. Students also actively participate in various

community service activities under the VCET-National Service Scheme (NSS).

Social Skills

VCET emphasizes the holistic development of students, addressing both soft skills and physical and mental well-being. To enhance students' confidence, language skills, communication skills, time management skills, etc., many initiatives, including an annual literary festival, language software utilization, and soft skills training programs, are conducted regularly. For physical and mental wellbeing, VCET hosts annual sports and cultural festivals and provides counseling services. The financial aspects of all these activities are borne by the institute.

VCET recognizes students' academic achievements, technical proficiency, research, leadership, and contribution to the institute and society through the Best Outgoing Student award.

Capacity-building initiatives for faculty

• Effective teaching-learning skills

For effective teaching and learning practices and to enhance the quality of content delivery, sessions are conducted by the Internal Quality Assurance Cell (IQAC) on outcome-based education (OBE), the National Education Policy (NEP), exam reforms, etc. Faculty undergoes teaching-learning and pedagogical courses conducted by NPTEL, NITTTR, and other MOOC courses.

• Skill Upgradation and Industry Connect:

VCET empowers faculty to enhance their skillsets and stay updated with emerging technologies and academic advancement by taking care of both monitory and non-monitory aspects. To understand the trends in technology used in the industry and skill upgradation, faculty interact with industry professionals, undergo industrial training, and participate in faculty development programs. With the support of the Institute, faculty actively contribute to scholarly discourse through research paper publications, books, book chapters, patent filings, and copyright registrations.

• Holistic faculty empowerment

Emphasizing the importance of holistic growth, VCET organizes expert sessions on mental wellbeing, stress management, finance, investments, etc. Empowerment is showcased through personal and the institute's commitment to community engagement and social responsibility. Faculty engage in outreach activities, raising awareness about basic science and technology and emerging areas among schoolchildren. Furthermore, faculty actively participate in donation drives, cleanliness campaigns, and awareness initiatives.

Self Study Report of VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

File Description	Document
Appropriate web in the Institutional website	<u>View Document</u>
Any other relevant information	View Document

5. CONCLUSION

Additional Information:

- Vidyavardhini's College of Engineering and Technology (VCET) has started new programs in the emerging areas of Artificial Intelligence and Data Science, Computer Science and Engineering (Data Science), and Electronics Engineering (VLSI Design & Technology).
- VCET has also started PG programs in Civil Engineering (Structural Engineering) and Management Studies (MMS).
- VCET was placed in the 'Brand Promising' category in the Atal Ranking of Institutions on Innovation Achievements (ARIIA) ranking for 2021.
- VCET's Institution Innovation Council (IIC) received a 2-star rating by Innovation Cell, Ministry of Education, Govt. of India, for promotion of innovation and start-up activities for the year 2022–23.
- VCET's SPOC received 'Best Faculty Performance' recognition from NPTEL in the year 2023–24.
- VCET has partnered with the Bureau of Indian Standards (BIS) to form the Standards Club.
- VCET has started the 'Astra-Infini' club to create awareness about space technologies. The team won the second prize at the Can Satellite Workshop organized by Blackhole Space Tech.
- VCET has started the National Student Data Corps (NSDC) professional student chapter, an initiative of Columbia University, to provide resources and opportunities for students to learn data science.
- More than 300 students have Infosys Springboard certifications.
- VCET has started a technical blog, 'VCET TechZette—VCET Gyaanapatra'.
- VCET has subscribed to the ICT Academy, an initiative of the Government of India, for skill development.
- VCET has received a MODROB fund of Rs. 12.735 lakhs from AICTE.
- VCET has received an industry sponsorship of Rs. 23.54 lakh from Performance Specialty Products (India) Pvt. Ltd. to set up a robotics and machine diagnostic laboratory.
- Team VCET received a grant of Rs 1 lakh from AICTE under SPICES.
- A Memorandum of Understanding (MoU) has been signed between IITM Pune and VCET for the installation of a short-range X-band polarimetric scanning Doppler weather radar at VCET.
- The efforts of the Institute Innovation Council of VCET in organizing intellectual property rights awareness programs were appreciated by the IP India Office (NIPAM) for the consecutive years 2021–22 and 2022–23.

Concluding Remarks:

VCET has consistently striven to uphold its position as a leading institution in technical education, offering diverse engineering programs. Aligned with the vision and mission, VCET remains steadfast in its commitment to nurturing students from diverse backgrounds into competent professional engineers.

The institution meticulously plans academic and administrative activities through the various academic and administrative bodies. VCET boasts state-of-the-art facilities including laboratories, classrooms, seminar halls, a library, and robust IT infrastructure. Students benefit from excellent indoor and outdoor sports facilities, fostering participation in co-curricular and extra-curricular activities. Since 2016, VCET has embraced outcome-based education, leveraging student-centric methods and ICT tools to enrich the learning experience. Placement and higher-studies records stand as a testament to the institution's dedicated efforts.

Student chapters of professional bodies such as IETE, IEEE, CSI, IGBC, ISHRAE, VMEA and NSDC are established. VCET promotes the formation of peer groups such as Team Solecthon, Team Ethan, Quad Bike, Arinova, and Yantrika (a robotics club). The National Service Scheme (NSS) unit has been established to carry out extension and outreach activities. The Institute envisages the capacity building of the students through skill development and training programs and establishing facilities beyond the syllabus. Students are encouraged to take MOOC courses by providing platforms like NPTEL, Coursera, Infosys Springboard, Udemy, etc. Students are encouraged to participate in inter/intra collegiate and co-curricular /extra-curricular activities and state, university, and national-level sports, cultural, and literary competitions and excel in the competitions.

VCET has well qualified and experienced faculty with good retention. Faculty members contribute to the research community through, publications, copyright, patent publications, etc.

The management prioritizes effective leadership, research promotion, decentralization of authority, financial discipline, and staff development and welfare, ensuring a conducive environment for academic and personal growth. VCET remains committed to environmental sustainability through green initiatives such as solar panel installation and rainwater harvesting.

6.ANNEXURE

1.Metrics Level Deviations

Metric ID Sub Questions and Answers before and after DVV Verification

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)

Answer before DVV Verification: Answer After DVV Verification: 134

Remark: Input is edited from clarification documents.

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

Answer before DVV Verification : A. Feedback collected, analysed, action taken& communicated to the relevant bodies and feedback hosted on the institutional website

Answer After DVV Verification: B. Feedback collected, analysed and action has been taken and communicated to the relevant bodies

Remark: Input is edite dfrom clarification documets.

- 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)
 - 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

Answer before DVV Verification:

2022-23	2021-22	2020-21	2019-20	2018-19
22	19	15	13	10

Answer After DVV Verification:

2022-23	2021-22	2020-21	2019-20	2018-19
22	19	15	13	10

- 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
4.066	13.845	0	2.1	1.63

2022-23	2021-22	2020-21	2019-20	2018-19
4.01	13.845	0	2.1	1.63

- 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
12	16	3	5	20

Answer After DVV Verification:

2022-23	2021-22	2020-21	2019-20	2018-19
6	16	9	3	20

Remark: Input is edited from clarification statement.

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

Answer before DVV Verification:

2022-23	2021-22	2020-21	2019-20	2018-19
81	34	19	121	12

Answer After DVV Verification:

2022-23	2021-22	2020-21	2019-20	2018-19
70	34	19	121	12

Remark: Input is edited excluding inprocess books and papers.

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.

Answer before DVV Verification: 106 Answer After DVV Verification: 101

4.1.2 Percentage of expenditure for infrastructure development and augmentation excluding salary

during the last five years

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

Answer before DVV Verification:

2022-23	2021-22	2020-21	2019-20	2018-19
709.60	400.20	371.47	227.46	536.08

Answer After DVV Verification:

2022-23	2021-22	2020-21	2019-20	2018-19
551.60	298.78	274.73	133.81	428.18

Remark: Input is edited from data templat excluding depreciation.

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

Answer before DVV Verification:

2022-23	2021-22	2020-21	2019-20	2018-19
233.35	113.85	110.98	182.10	188.05

Answer After DVV Verification:

2022-23	2021-22	2020-21	2019-20	2018-19
185.93	80.16	78.84	129.36	125.33

Remark: Input is edited by excluding water and electric expenses.

- 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
 - 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

Answer before DVV Verification:

2022-23	2021-22	2020-21	2019-20	2018-19
1209	968	871	845	924

2022-23	2021-22	2020-21	2019-20	2018-19
1207	965	869	833	885

Remark: Input is edited from clarification documengts.

- 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

Answer before DVV Verification : A. All of the above Answer After DVV Verification: C. 2 of the above

Remark: The programmes should be conducted periodically during the assessment period input is edited according to it.

- 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
 - 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
21	10	11	2	11

Answer After DVV Verification:

2022-23	2021-22	2020-21	2019-20	2018-19
19	03	03	0	06

Remark: input is editied from certificates.

- 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
 - 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

Answer before DVV Verification:

2022-23	2021-22	2020-21	2019-20	2018-19
79	54	64	65	75

2022-23	2021-22	2020-21	2019-20	2018-19
79	54	64	65	75

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

Answer before DVV Verification:

2022-23	2021-22	2020-21	2019-20	2018-19
4	0	0	0	0

Answer After DVV Verification:

2022-23	2021-22	2020-21	2019-20	2018-19
58	56	55	55	56

Remark: Input is edited from supporting documents.

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

Answer before DVV Verification:

- 4. Green campus initiatives
- 5. Disabled-friendly, barrier free environment

Answer before DVV Verification: A. 4 or All of the above Answer After DVV Verification: A. 4 or All of the above Remark: Input is edited from GEO tagged photographs.

2.Extended Profile Deviations

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ID	Extended Questions
1.1	Number of teaching staff / full time teachers during the last five years (Without repeat count):
	Answer before DVV Verification: 149
	Answer after DVV Verification: 155
1.2	Number of teaching staff / full time teachers year wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
102	98	93	83	90

2022-23	2021-22	2020-21	2019-20	2018-19
81	74	73	81	81