SELF STUDY REPORT

FOR

2nd CYCLE OF ACCREDITATION

VEL TECH RANGARAJAN DR. SAGUNTHALA R&D INSTITUTE OF SCIENCE AND TECHNOLOGY

NO. 42, AVADI - VEL TECH ROAD, AVADI
600062
www.veltech.edu.in

Submitted To

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

BANGALORE

March 2022

1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

Vel Tech, **"A Place to Progress and Prosper"**, was started as an Engineering college in 1997, under the Trust founded by the Educational-Philanthropic Personalities - Dr.R.Rangarajan, Chancellor and Founder President and Dr.Sagunthala Rangarajan, Foundress President. The college was initially affiliated to the University of Madras and then affiliated to Anna University, Chennai in 2001. Later, the institution was granted the 'Deemed to be University' status by the University Grants Commission (UGC) in 2008. The institution is affiliated to AICTE and accredited by NAAC (first cycle) in 2015 with 'A' Grade (CGPA 3.17 / 4.0). Six B.Tech. programmes have been accredited by NBA.

Presently, the Institution with its slogan **"Passionate-Doers"** has been marching towards its goal by achieving all-around excellence with the highly professional services and the able administration of Mrs.Rangarajan Mahalakshmi Kishore, Chairperson and Management Trustee, Prof.S.Salivahanan, Vice Chancellor and Prof.E.Kannan,Registrar .

The institution offers 18 UG, 19 PG and 15 Ph.D. programmes. It has 10434 students (UG-9330, PG-523, Ph.D.-581) and 743 faculty members with 326 doctorates. Further, to enhance the students' regional diversity, the institution provides Mahatma Gandhi National Merit Scholarships ranging from 25% to 100% of the Tuition fee to the students.

The institution stands in the top hundred positions in 'NIRF India Ranking' under the engineering category in a row of five years. In ARIIA Ranking (Innovation and Entrepreneurship), the institution bagged the Fifth position out of 800 institutions in 2019 and ranked in Excellent Band where 36 universities are listed out of 2400 institutions in 2021.

The institution has created a conducive physical ambience with four Centres of Excellence and 20 laboratories to carry out research activities in emerging areas. A Technology Business Incubator, with a grant of INR 23 Crore from DST, has been established to promote technology-driven entrepreneurs. The institution has interaction with 3800 industries and signed 342 MoUs with government organizations, industries/ MNCs, international universities, public sector units and R&D labs.

The institution is equipped with a Computerized central library, 24x7 Wi-Fi & internet facility, Health Center, Seminar Halls, Sports facilities, Knowledge Resource Centre, Campus to Corporate, Entrepreneur Development Cell and Nurturing 360-degree development of students, Hostels for about 8000 students and Excellent transport facility.

Vision

Vel Tech institution with its slogan "Passionate-Doers" has grown steadily over the years by the uncompromising vision, leadership and guidance of the Founder couple with the Vision,

To create, translate and share frontiers of knowledge embedded with wisdom and innovation for a positive transformation of emerging society.

The institution seeks to nurture the inquisitive minds of the students and to develop their knowledge and critical thinking. It strives to develop the personal, social, and professional values of the students.

The vision enables to re-engineer and reinvent so as to create and embrace a model of sustainable growth. The primary intent is to delineate all the vital efforts and constituents that can together create an eco-system that resonate with the academic leadership needs of the country.

Mission

To nurture excellence in teaching and learning, incubate enquiry driven creativity, foster multidisciplinary research, instill integrity and honour; inculcate scholarly leadership towards global competence and growth beyond self in a serene, inclusive and free academic environment.

Adhering to the mission statement, the institution has taken the following initiatives:

- All the academic programmes have been following Outcome Based Education (OBE), which primarily focuses on knowledge, skill and attitude of the graduates through Active Learning Strategies.
- Centres of Excellence Such as Manufacturing CoE, printed Circuit Board Design and Fabrication, Additive Manufacturing, Artificial Intelligence & Deep Learning engaged with Various industries for consultancy and Industry Sponsored Research
- International Relations Connected with Many Top Universities from USA, France, Singapore, Germany and Taiwan for Students exchange and various collaborative programmes.
- Research Labs and Conceive-Design-Implement-Operate (CDIO) workspaces provide hands-on learning experience and undoubtedly produce knowledgeable up-skilled graduates with professional attitude.
- The institution encourages multidisciplinary research through funding projects.
- Technology Business Incubator (TBI) has various Ministry Supported Programmes such as NIDHI CoE, NIDHI PRAYAS, Meity TIDE 2.0 and Startup India Seed Fund (SISFS) to promote innovation driven Start-ups, Entrepreneurship, and Venture development.
- Students are motivated to participate in social activities through National Cadet Corps (NCC), National Service Scheme (NSS), Unnat Bharat Abhiyan (UBA), and Swachh Bharat Abhiyan (SBA).

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

- Green Campus with state-of-the-art infrastructure facilities and hygiene amenities
- Good student diversity
- Student-centric Teaching-Learning pedagogy
- CDIO framework to enable Project-Based learning skills
- CBCS in accordance with Outcome-Based Education
- Mahatma Gandhi National Merit Scholarship scheme for meritorious students
- Periodic collection and analysis of feedback from stakeholders
- Culture of all-round development in Academics, Sports, Arts, and Music
- Alumni chapters in India and Abroad to support the alma mater
- Dedicated Industry Institution Cell to promote industry engagements for curriculum enhancement,

course delivery, partnership, and skill programme to meet the fast-growing technology advancements.

- Vel Tech Technology Business Incubator supports innovations, entrepreneurship, and technology-driven startups with various Government supported schemes such as TBI, NIDHI Prayas, Meity TIDE 2.0, and Startup India Seed Fund.
- MOUs with Abroad Universities from the US, Canada, Australia, the UK, Singapore, Taiwan, Malaysia, etc.
- Vel Tech Research park promotes research and innovation.
- Four Industry-supported Centres of Excellence to promote Industry Sponsored Research and Consultancy & quality publications.
- Locational advantage surrounded with many industry clusters such as SIDCO, TIDCO, AIEMA, ACMA & IT Parks.
- Foreign Collaborative funding Indo Korea, Indo Taiwan, Indo Canada, and Indo France.

Institutional Weakness

- Locational disadvantage to attract faculty from Eminent institutions such as IIT and NITs.
- To meet the increasing demands with limited financial resources
- Placements in the core engineering company
- Limited International students & faculty

Institutional Opportunity

- Introduction of new programs in emerging areas
- Design-Implement projects to promote research and patents filing culture
- Internship and Placement with Industry-Institute Interaction
- Student entrepreneurs with Vel Tech TBI
- Solving of community/societal problems and issues
- Alumni engagement

Institutional Challenge

- Commercialization of the research outcomes
- Becoming a benchmark for other institutions
- Maintenance of expensive software and equipment with extended AMC
- Students from rural backgrounds to raise to the corporate culture
- Resource mobilization for sustained growth

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

The institution has been taking continuous measures for improvement in designing its curriculum and developing academic programmes based on OBE since 2012-13 to develop more employable and innovative graduates with professional and soft skills, social responsibility and ethics.

Significances during the last five years

- CBCS curriculum to explore more transformational approaches
- Design of curriculum and development of academic programmes based on OBE
- Collaborative programmes, core and elective courses, enrichment courses, innovative programmes and online courses
- Provision for migration of students to other programmes and institutions
- Inputs from industry, employer, research & academic experts and alumni to attain attributes of employability, innovation and research
- Regular revision of curriculum and syllabi for UG and PG programmes
- Departmental Advisory Committee (DAC) consisting of Dean of the School, Head of the Department and Internal members of Board of Studies for curriculum design
- Revision and update of PEOs for all the programmes offered by the institute
- Theory/Laboratory dominated integrated courses
- Credit courses offered by international professors from top ranked Universities in the emerging global trends
- Credits for independent learning courses through MOOC/NPTEL/Coursera platforms
- CDIO framework initiative to solve real world problems
- Internship, Capstone projects in industry/ research laboratory both in India and Abroad
- Courses with focus on employability/ entrepreneurship/ skill development
- Induction cum Acquaintance Program for fresh engineers with courses related to ethics, gender equality, environment, human values & sustainability
- Value-added courses for imparting transferable and life skills
- Evaluation of Course Outcomes with structured direct and indirect assessment tools
- Analysis of regular feedback from stakeholders for continuous improvement

Teaching-learning and Evaluation

The institute believes in effective and interactive teaching to pave the way for efficient learning for the students and it is committed in providing with the finest higher education through thought-provoking programs and innovative learning experiences. It actively promotes lectures and seminars from industry and academic experts to educate the students on various aspects of professional growth.

Significances during the last five years

- Centralized system with transparent policy for student admission through common entrance test by information dissemination through print and electronic media and robust two-way communication system to enable every applicant to make an informed choice
- Merit scholarship for deserving students
- 69% of the total number of seats allotted for reserved categories
- Well qualified faculty members with diverse specialization
- Orientation programs on OBE, Teaching Learning methods, assessment and evaluation for new faculty members
- Faculty members with PG Qualification are encouraged to pursue their Ph.D.
- Motivating the faculty members to submit research project proposals
- Teaching Developers Initiative (TDI) paves a platform for the teachers with innovative ideas and to share their classroom teaching practices among the peers

- Question papers are set based on Revised Bloom's Taxonomy with appropriate knowledge levels
- Proper rubrics are in force for reliable evaluation of students' laboratory/project work
- Transfer of additional credits earned for the courses undergone in Universities abroad
- Computerized examination management system
- Publication of end semester results within 15 days
- To maintain transparency in the evaluation process, photocopy of the answer booklet/ re-evaluation/ challenge evaluation is made available to the students
- Member of the DigiLocker
- Scope for enhancing student learning capabilities through experiential learning, participative learning and problem solving methodology
- Bridge courses, remedial and tutorial classes to motivate the slow learners to utilize the leisure time in learning the course effectively
- Mentoring and counseling facilities available for students
- Students are motivated to opt industry oriented courses in elective category, to involve in interdisciplinary projects and project competitions
- Students with Higher Order Thinking (HOT) skills are facilitated with nine month internship in industry, opportunity for internship to placement and undergo project-cum-internship abroad
- Active Learning Methods (ALM) are adopted to promote collaborative and cooperative learning

Research, Innovations and Extension

With an objective of facilitating inter-disciplinary and innovative research activities, the institute has developed a suitable framework and integrated into the system. All the departments have dedicated laboratories and amenities to handle high impact research. Research activities include academic research and applied research projects in the fields of Engineering & Technology, Science and Management Studies. The key initiative taken towards promoting the interdisciplinary research is the establishment of Research Park which enables the faculty members and students to involve in research projects.

Significances during the last five years

- Well defined Research Policy to promote multi-disciplinary research and Consultancy Policy to undertake industry consultancy activities
- Knowledge Resource Centre (KRC) – a library to exhibit the students' project
- Research Park with dedicated laboratories in emerging areas
- Centres of Excellence (CoE) for multi-disciplinary research such as E-Waste Management, Autonomous System Research, Additive manufacturing, Virtual Instrumentation, Design, Engineering & Manufacturing, Air Brake and High Speed Bearing Testing
- Intellectual Property Rights (IPR) cell for organizing seminars and awareness programmes to encourage filing of patents, trademarks and designs
- Incentives for publications, funded R&D projects and consultancy to promote research activities
- Internal seed support for faculty members
- Financial support for students to participate in global competitions to showcase their talents and gain international exposure
- Technology Business Incubator (TBI) funded by DST, NIDHI, MeitY and MSME for promoting startups through grants and seed support. Startup India seed fund to support early stage start-ups.
- Students are encouraged to take part in extension activities and outreach programs through NCC/NSS/student clubs

- Conduct of annual international project competition & exhibition in line with the Sustainable Development Goals of United Nations Development Programme for transforming India
- Active participation of faculty members in academic/ industrial research shows the vibrant research environment of the institution which leads to sustainable development of the society at large
- Industry-Institute Interaction cell for industry linkages
- Strong international linkages for faculty & student mobility and collaborative research

Infrastructure and Learning Resources

The institute is sufficiently well-endowed in terms of physical infrastructure and an area of 66.75 acres of lush green land with 1.5 Lakh sq.m. of built-up area.

Significances during the last five years

- More than adequate lecture halls, smart classrooms, discussion rooms and examination halls
- Air-Conditioned auditoriums and conference halls, and faculty cabins
- Well-equipped laboratories for academics and 20 research laboratories funded by various agencies
- EDUSAT hall, videoconference facilities, 24x7 Wi-Fi and internet facility, CCTV camera monitoring
- Audio-Video recording facility
- Well defined IT policy
- 100% Power Back-up to meet load shedding and uninterrupted power supply for laboratories and administrative blocks
- Canteen, cafeteria, post office, nationalized bank branch, ATM and transport facility
- Staff quarters for faculty and supporting staff
- Guest house with 30 air-conditioned rooms
- Medical centres with three ambulances
- Sports facilities with 17 playfields (indoor and outdoor)
- Separate hostels (AC and Non-AC rooms) for boys and girls with dining halls and gymnasium
- Multipurpose open-air auditorium and yoga halls
- Central library with over one lakh volumes
- Remote access for e-books, e-journals, e-ShodhSindhu, Shodhganga and databases (Scopus & Web of Science)
- Integrated Library Management Systems (ILMS)-Library Software for all its housekeeping operations
- Availability of department library
- Necessary books and materials for competitive examinations
- Separate waiting rooms for boys and girls
- Separate restroom facility for physically challenged
- Fire extinguishers are in place in case of emergency

Student Support and Progression

Apart from the excellent curricular knowledge provided to the students, the institute ensures distinctive attention to overall development of individual student through providing favourable learning atmosphere and surroundings. It actively supports their co-curricular and extracurricular activities and demonstration of their apparent and hidden talents.

Significances during the last five years

- The institute provides the Mahatma Gandhi National Merit Scholarship (MGNMS), Founders' Foreign Scholarship and Sports Scholarship to eligible students
- Career guidance and counselling
- Faculty mentor and professional counsellor
- Capacity development and skill enhancement initiatives
- Non-statutory committees including anti-ragging committee, Apex Committee of Sensitization, Prevention and Redressal of Sexual Harassment (SPARSH) and University Complaint Committee will assist the students at different aspects
- Linkages with international universities for students' higher education
- Effort to groom the students with the aid of multiple training programs to make them industry ready
- Focuses on curriculum that consciously integrates skills and ideas such as Career counseling, Career path sessions, Hackathons and Workshop on trending technologies
- Encouraging students to participate in sports/cultural activities at state/ national level events
- Organizing sports and cultural events/competitions to bring hidden talents of students
- Registered Alumni Chapter with more than 11,000 members to maintain relationship with current students and authorities

Governance, Leadership and Management

Able governance has been achieved by having a strong foundation of Vision and Mission. The institute endures complete transparency and nurture leadership at all levels by facilitating an environment with freedom of thinking and focused action.

Significances during the last five years

- Organization structure and mechanism in place
- The Board of Management owns the responsibility with regard to the academic, financial, physical resources and the overall well-being
- Each school, headed by Dean, has different academic departments which are headed by Head of the Department
- The functional areas such as Academics, Research and Development, Industry Relations, Quality Assurance and International Relations are headed by Dean concerned
- Statutory bodies
- Non- Statutory bodies
- All statutory and non-statutory bodies meet regularly and minutes of meetings are recorded
- The stakeholders are involved in every process and their inputs are taken into consideration for developmental activities
- Interaction with parents is enhanced through a program, "Dial your University" where they can get direct access to the administration authorities at one call
- E-Governance implemented in planning and development, administration, finance and accounts, examination, student admission and support
- Institute supports the faculty with academic and administrative freedom, sponsored projects and infrastructural facilities
- Best research and consultancy award is given to the faculty members as a sign of encouragement with incentives on their publication and funded project

- Welfare measures for teaching and non-teaching staff with Provident Fund, Mother Fund, Staff Welfare Fund, in order to enhance their commitment and affinity
- Faculty Recreation Club
- Financial support for faculty members and supporting staff to attend Conferences/ Workshops/ FDPs/ Administrative Programme/ Orientation Programme etc.,
- Regular audit of finance
- Audited budget utilized statements are available in institution website
- Major resources for finance include trust contribution, student fee, earnings through consultancy and training programs
- Structured and established procedure for purchase of equipment and software
- Budget review meetings
- Coordination of Academic and Administrative planning, and implementation have been established through IQAC guidelines
- Planning and implementation of all Academic and Administrative activities of IQAC are discussed in IQAC meetings and minutes are recorded
- Innovations in the Academics and Administration have been done through recommendations of IQAC
- Periodic conduct of quality initiative programs

Institutional Values and Best Practices

The institution has established the "Institute Innovation Cell", an initiative of Ministry of Education (MoE), Government of India to inspire, engage and involve the students and faculty members in various innovation activities. The in-house Technology Business Incubator (TBI) provides prototype development support; mentoring and industry connect which leads to experiment with the innovative ideas.

The TBI has various programs such as NIDHI PRAYAS, Seed Support System, NIDHI CoE and MeitY TIDE 2.0 supported by the National Science & Technology Entrepreneurship Development Board (NSTEBD) Division of DST created a big ecosystem to promote innovation driven Start-ups, Entrepreneurship, and Venture development.

The best innovative practices which vitally contributes towards the quality by way of introducing new interdisciplinary courses, Guest Lectures, Industrial Visits, Industry Collaborative Programmes, Joint Laboratories, IPR Cell, Fund to the students, Faculty Development Program, Centre for Women Empowerment, Stakeholder feedback system, Founders Scholarship scheme, Orientation program, CBCS, Mentoring System, Value added courses and soft skill training.

Significances during the last five years

- Availability of rainwater harvesting, sewage treatment plant and RO plants
- Solar water heaters and street lights using solar panels
- Dealing with bio waste (solid and liquid) and arriving at safe methods of treatment, disposal and converting into useful products
- Usage of waste cooking oil from cafeteria for useful purpose such as lubrication and lighting etc.
- Waste water has been recycled and used for gardening
- Channelization of rain water towards bore wells to raise the ground water level
- Promoting gender equity among men and women to access the opportunities and institution resources
- Delegation of powers in decision making and administrative roles to women

- Exclusive sensitization programs for girl students and woman employees
- Six to Nine Month Industry Internship Culminating Future Ready Engineers
- Implementation of CDIO Curricular framework for Engineering Programmes
- Problem-Based Learning for Project Work

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the University	
Name	VEL TECH RANGARAJAN DR. SAGUNTHALA R&D INSTITUTE OF SCIENCE AND TECHNOLOGY
Address	No. 42, Avadi - Vel Tech Road, Avadi
City	Chennai
State	Tamil Nadu
Pin	600062
Website	www.veltech.edu.in

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Vice Chancellor	S. Salivahanan	044-26841348	9940226524	044-2684026 2	diaq@veltech.edu.i n
IQAC / CIQA coordinator	Valarmathi R S	044-26840099	7338746697	044-2684060 5	diaq@veltech.edu.i n

Nature of University	
Nature of University	Deemed University

Type of University	
Type of University	Unitary

Establishment Details	
Establishment Date of the University	06-06-1997
Status Prior to Establishment,If applicable	Affiliated College
Establishment Date	05-06-1997

Recognition Details		
Date of Recognition as a University by UGC or Any Other National Agency :		
Under Section	**Date**	**View Document**
2f of UGC		
12B of UGC		

University with Potential for Excellence	
Is the University Recognised as a University with Potential for Excellence (UPE) by the UGC?	No

Location, Area and Activity of Campus							
Campus Type	**Address**	**Location***	**Campus Area in Acres**	**Built up Area in sq.mts.**	**Programmes Offered**	**Date of Establishment**	**Date of Recognition by UGC/MHRD**
Main campus	No. 42, Avadi - Vel Tech Road, Avadi	Rural	66.75	149713	Engineering, Management Studies, Media Technology and Communication, Arts, Science, Law		

2.2 ACADEMIC INFORMATION

Furnish the Details of Colleges of University

Type Of Colleges	Numbers
Constituent Colleges	0
Affiliated Colleges	0
Colleges Under 2(f)	0
Colleges Under 2(f) and 12B	0
NAAC Accredited Colleges	0
Colleges with Potential for Excellence(UGC)	0
Autonomous Colleges	0
Colleges with Postgraduate Departments	0
Colleges with Research Departments	0
University Recognized Research Institutes/Centers	0

Is the University Offering any Programmes Recognised by any Statutory Regulatory Authority (SRA)		: Yes
SRA program	Document	
AICTE	[101374_6093_1_1640772340.PDF](101374_6093_1_1640772340.PDF)	
AICTE	[101374_6093_1_1640772340.PDF](101374_6093_1_1640772340.PDF)	
BCI	[101374_6093_8_1640772626.pdf](101374_6093_8_1640772626.pdf)	
AICTE	[101374_1638_1.PDF](101374_1638_1.PDF)	
BCI	[101374_1638_8_1531735290.pdf](101374_1638_8_1531735290.pdf)	

Details Of Teaching & Non-Teaching Staff Of University

Teaching Faculty												
	Professor				Associate Professor				Assistant Professor			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned				87				141				515
Recruited	59	28	0	87	107	34	0	141	315	200	0	515
Yet to Recruit				0				0				0
On Contract	0	0	0	0	0	0	0	0	0	0	0	0

Non-Teaching Staff				
	Male	Female	Others	Total
Sanctioned				109
Recruited	80	29	0	109
Yet to Recruit				0
On Contract	321	504	0	825

Technical Staff				
	Male	Female	Others	Total
Sanctioned				109
Recruited	80	29	0	109
Yet to Recruit				0
On Contract	112	0	0	112

Qualification Details of the Teaching Staff

Permanent Teachers									
Highest Qualification	**Professor**			**Associate Professor**			**Assistant Professor**		
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/LLD/DM/MCH	0	0	0	0	0	0	0	0	0	0
Ph.D.	59	28	0	100	33	0	74	32	0	326
M.Phil.	0	0	0	0	0	0	16	21	0	37
PG	0	0	0	7	1	0	225	147	0	380
UG	0	0	0	0	0	0	0	0	0	0

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

14-07-2022 10:26:06

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

Distinguished Academicians Appointed As

	Male	**Female**	**Others**	**Total**
Emeritus Professor	3	0	0	3
Adjunct Professor	0	0	0	0
Visiting Professor	0	0	0	0

Chairs Instituted by the University

Sl.No	Name of the Department	Name of the Chair	Name of the Sponsor Organisation/Agency
1	Aeronautical Engineering	Dr. B. L. Jaiswal	Dynaspeed India Pvt. Ltd. Hydrabad
2	Mechanical Engineering	Dr. S. L. Mannan	AICTE INAE Distinguished Visiting Professorship

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

Programme		From the State Where University is Located	From Other States of India	NRI Students	Foreign Students	Total
UG	Male	1232	5837	414	191	7674
	Female	460	1077	98	21	1656
	Others	0	0	0	0	0
PG	Male	311	52	0	5	368
	Female	140	15	0	0	155
	Others	0	0	0	0	0
Doctoral (Ph.D)	Male	200	160	0	20	380
	Female	144	54	0	3	201
	Others	0	0	0	0	0

Does the University offer any Integrated Programmes?	No

Details of UGC Human Resource Development Centre, If applicable

Year of Establishment	Nill
Number of UGC Orientation Programmes	0
Number of UGC Refresher Course	0
Number of University's own Programmes	0
Total Number of Programmes Conducted (last five years)	0

Accreditation Details

Cycle Info	Accreditation	Grade	CGPA	Upload Peer Team Report
Cycle 1	Accreditation	A	3.17	U-0489 Cycle 1 Report.pdf

2.3 EVALUATIVE REPORT OF THE DEPARTMENTS

Department Name	Upload Report
Aeronautical Engineering	[View Document](#)
Artificial Intelligence And Data Science	[View Document](#)
Artificial Intelligence And Machine Learning	[View Document](#)
Biomedical Engineering	[View Document](#)
Biotechnology	[View Document](#)
Chemistry	[View Document](#)
Civil Engineering	[View Document](#)
Computer Science And Design	[View Document](#)
Computer Science And Engineering	[View Document](#)
Electrical And Electronics Engineering	[View Document](#)
Electronics And Communication Engineering	[View Document](#)
English	[View Document](#)
Information Technology	[View Document](#)
Law	[View Document](#)
Management Studies	[View Document](#)
Mathematics	[View Document](#)
Mechanical Engineering	[View Document](#)
Media Technology And Communication	[View Document](#)
Physics	[View Document](#)

Institutional preparedness for NEP

1. Multidisciplinary/interdisciplinary:	Vel Tech has a conducive and committed educational work-environment for teaching, learning, innovation and research. The new regulation VTR-UGE2021 in line with NEP2020 provides an opportunity for the students to enrich their knowledge in multidisciplinary/interdisciplinary areas. VTR-UGE2021 offers • Minor Degree for all B.Tech. Programmes: The objective is to provide additional learning opportunities for advanced learners across the breadth of engineering and to provide interdisciplinary knowledge. • Open Electives: The

courses under this category cover interdisciplinary/trans-disciplinary knowledge. Students shall register for appropriate electives offered in other schools. The foundation courses in the first year of study integrates the humanities and arts with STEM which leads to the increase in critical thinking abilities, higher-order thinking and deeper learning, etc. The Conceive-Design-Implement-Operate (CDIO) practice in the first-year curricula is a cutting-edge educational framework designed to develop the next generation of engineering leaders. The B.Tech programmes provide specialization courses to meet the latest innovative development towards multidisciplinary perspectives. VTR-UGE2021 offers a Community Service Project under independent learning. Students will work on projects in the areas of community participation and service, environmental education, and other related fields. It assists students to develop value-based solutions to real-world social challenges. A student can transfer credits from one school to another and from one institution to another through credit transfer. This allows a student to transfer from another university to this institute in the middle of their studies with the option of transferring credits earned at the university from where they are migrating. The student applies for transfer from one branch of the school to another branch in a different school, the Migration Committee determines the courses that the student must complete to qualify for a degree from the transferee department, subject to the condition that the student meets the requirements of the transferee department. VTR-UGE2021 encourages project-based learning comprising community service projects and capstone projects addressing holistic societal based issues. It inculcates soft, communication and managerial skills in addition to Science and Engineering. Students are encouraged to undergo projects in the multidisciplinary mode by formulating teams for participating in various contests. Students are motivated with awards and incentives to recognize substantial research contributions. Students' publications in Scopus indexed/SCI journals/filed IPR, are exempted two credits in any course categories. They are given special attention towards innovation and entrepreneurship training related activities to meet the standards specified by NEP. Students with innovation-

	driven prototype/business models are used to find solutions to society related challenges. They are supported by the Vel Tech Technology Business Incubator (TBI) in order to engage them in more multidisciplinary research endeavours and come-up with a start-up. Both activities will be awarded credit from the respective department and BoS based on the recommendation under independent learning. Through the initiation of new multidisciplinary centres, the faculty members get autonomy to choose curriculum, methodology, pedagogy and evaluation models within the given policy framework. CBCS offers flexibility towards students' multidisciplinary learning. International internships, industrial collaborative projects and students' start-ups also enrich the students' skills in a wider space.
2. Academic bank of credits (ABC):	a) Vel Tech Rangarajan Dr.Sagunthala R&D Institute of Science and Technology has already taken all the necessary initiatives to fulfill the requirements for adopting the Academic Bank of Credits (ABC) as proposed by the National Educational Policy 2020. A well-structured curriculum supporting Choice Based Credit System is in force since 2015 and the associated academic regulations support credit transfer facilities among the partnering institutions. Our existing pedagogy is based on flexible learning wherein the student can choose courses at his/her own pace by registering for a minimum of 18 credits to a maximum of 28 credits every semester. Similarly, credits for courses completed through NPTEL, Coursera etc., can also be absorbed and accumulated towards the qualifying credits for the award of degree. b) The institution is already registered under the ABC and is presently in the process of uploading the curriculum and credit details for all the students. This enables student mobility and academic flexibility to pursue courses at his/ her own learning path and seamless acceptance of learning achievements across all the institutions. c) The institution possesses a dedicated Office of International Relations headed by a Dean to look after the international collaborations with leading Universities and presently we have MoUs with Yunnan University of Finance & Economics in China, Tamkang University, National Ilan University, National Tsing Hua University and Ming Chi University of Technology in Taiwan, University

	of Michigan – Dearborn, University of Detroit Mercy and University of Wisconsin-La Crosse in the USA for offering credit transfers. d) The institution has a unique approach of encouraging the faculty members to design and develop new courses based on their research specializations. This has paved the way for creating courses on recent trends, through which the students are able to get detailed insights on cutting edge technologies. e) ABC being an online centralized system paves way for credit accumulation and redemption along with credit audit trail management for the benefit of students. Our existing regulations involving Choice Based Credit System supports multiple entry and multiple exits as well as anytime anywhere learning by virtue of introducing courses under the independent learning category. So the implementation of ABC in our institution will be hassle-free and seamless.
3. Skill development:	The institution makes consistent efforts to strengthen the vocational education and soft skills of students in alignment with National Skills Qualifications Framework. The institution has established many Centres of Excellence (CoE) supported by Government of India namely, Manufacturing CoE, Printed Circuit Board Design and Fabrication CoE, E-waste and Plastic waste recycling Centre, Additive Manufacturing Facility, Dassault Systems Supported Centre for Design and Manufacturing facility, NVIDIA DGX – 1 Server for AI and Machine Learning. These centres offer various consultancy services and skill training to in-house and external users. The list of programmes offered to train the students on Skill Developments is mentioned below: • CNC Programming & Operational techniques (150 students were trained) • Specialized Course on Welding Techniques (30 students were trained) • Specialized course on PCB Design and Assembly (200 students were trained) • Skill Development Courses on various 3D Printing Techniques (500 students were trained) • Value Added Courses on Design tools (500 students were trained) • Foundation/ Intermediate/ Advanced level courses on Artificial Intelligence and Machine Learning (50 students were trained) So far, the institution has trained more than 1500 students on the above Skill Development courses. The institution has also offered skill development courses under Industry Supported

	Labs such as WABCO Centre of Excellence on Vehicle Control Systems such as Braking Systems, Antilock Braking systems and ECAS. In line with the NEP 2020, the institution has established dedicated Industry Institution Cell to bring the industry experts and research scientists to offer advanced level courses (one or two credits) to students in the category of "Industry and higher learning courses" which is allocated in the regulations to enable the students to get the industry exposure. Two faculty members were sent to Aurangabad to get three-month extensive training on CNC operations and Advanced Welding techniques under the ToT CNC Programming & Operations and advanced welding techniques under Sankalp at Marathwada Auto Cluster, Aurangabad, Maharashtra. Regulations are in place to ensure all the students must mandatorily get two credits under the industry and higher learning courses and this enables active participation of students in Skill Development courses. The institution regularly sends the students to industry for short training and major projects to get them exposed into industry practice. To train soft skills required by industry, the institute has active placement and training cell, which offers various soft skill courses such as resume building, communication, HR interview practice etc.
4. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course):	NEP 2020 was implemented with a view to bring changes in the existing educational practices which are confined to certain limitations. The new policy introduced by our Honorable Prime Minister, Narendra Modi is made to cater to the needs of students from different echelons of the society. The previous education system had Linguistic and Cultural barriers. To overcome such hurdles, NEP 2020 offers scope to the students to study anywhere in India with confidence. This policy also helps to learn all ancient Indian languages. The students will be able to learn the different cultures of India when they have bilingual or multilingual usage in their learning places. In this connection Vel Tech Rangarajan Dr.Sagunthala R&D Institute of Science and Technology proposes the following: 1. To integrate Indian Knowledge system and preserve Indian Language, Culture and Tradition, the institution gives utmost importance to celebrating traditional Indian festivals namely Holi, Krishna

	Jayanti, Navaratri, Ugadi, Pongal, Mahaveer Jayanti, Saraswathi & Ayudha Pooja, Onam, Christmas, Ramzan and Miladi Nabi. 2. To comply with the main points in NEP 2020 pertaining to the usage of vernacular language in classroom delivery, our Institution aims at conducting Orientation cum FDP on basic conversational Telugu to its non-Telugu faculty in the near future. 3. The Institution toils to preserve and promote ancient Indian classical languages and cultural practices. At present, the institution offers two courses that aim at inculcating classical Tamil in young minds, namely Thirukkural and Aathichudi. To provide basic knowledge of the Indian classical language, Tamil, an elective course titled 'Basic Tamil' is being offered. Further, the institution plans to introduce programmes such as M.A.-Telugu, M.A.-Sanskrit, M.A.-Tamil, M.A.-Folklore Studies and M.A.-Martial Arts with a view to creating an awareness of the Ancient Indian traditional values. 4. Students are encouraged to learn and practice ancient Indian Parai Isai, a music which has been played in our country since Sangam age. Programmes to save and promote traditional arts like Indian shadow puppetry and Kattaikoothu will be given more importance and online lectures regarding the same will be arranged. Experts of the ancient Arts will be invited to give lectures on the importance of the traditional arts which have almost become extinct. 5. Online classes will be arranged in the future to learn how to read classical stone inscriptions, palm inscriptions and other manuscripts and steps will be taken to have a nexus with other governmental institutions which teach Archeology. Research will be made to promote the ancient values of Tamil classical language in the near future. 6. Indian Epics like Ramayana and Mahabaratha are taken for research by the research scholars of the English department. In future, the ancient Indian classical works will be promoted by the scholars of the English department to speak about the importance of the Indian Epics. Experts will be invited to deliver a talk to bring awareness to our immortal Indian Epics.
5. Focus on Outcome based education (OBE):	a) Institution started to implement Outcome Based Education (OBE) in Teaching-Learning process from the Academic Year 2013-14. As per OBE, the curriculum has been refined by considering the

knowledge, skills and attitude of the graduates after graduation. To inculcate the OBE practices, various training programmes are conducted for the faculty. In addition the National Board of Accreditation has accredited six engineering programmes under Tier-I. The Institution is well expertise in implementing the process of OBE as per the National Educational Policy (NEP). In this regard, the programmes in the institution are defined with Mission, Program Educational Objectives (PEOs), Program Outcomes (POs) and Program Specific Outcomes (PSOs). All efforts are taken by the institution to disseminate OBE parameters, PEOs, POs, PSOs to all the stakeholders. Frequent feedback is collected from the stakeholders at regular intervals of time to meet the POs and PSOs in the programme. As per LOCF (Learning Outcomes-based Curriculum Framework), the curriculum is designed based on the graduate attributes for the attainment of PEOs, POs and PSOs for measuring learning outcomes of the student. Course Outcomes (COs) are well framed for every course in the curriculum and correlated with the set of POs and PSOs. For ensuring the learning levels with COs, POs and PSOs, the COs are assessed as per Bloom's Taxonomy level and then, POs and PSOs are evaluated. Based on the attainment of POs and PSOs, there will be a continuous improvement in the courses of the curriculum in the programme. This ensures regular monitoring and evaluating the extent to which learning outcomes are being attained. The learning outcomes are analysed to make in line with the UGC learning outcomes. b) The institution revamped the process of teaching-learning from a teacher centric approach to a learning centric approach to improve its effectiveness in teaching-learning practices. Pedagogical tools are defined for each course as per the COs. Appropriate tools are identified for assessing each CO. The rubrics are framed for each activity to measure the learning level of the students. Based on the assessment, the remedial measures are taken to improve the learning abilities of each student. c) Good practices of the institution pertaining to the OBE in view of NEP: • Choice Based Credit System creates flexibility to choose their learning trajectories based on their talents and interests. • Students are exposed to multidisciplinary areas through the courses offered by other schools in the institution. • The curriculum has

	flexibility for student mobility, allowing them to accumulate the credits in order to continue their education. • Students' holistic development in academic and nonacademic sphere through student centric approach, clubs and extra-curricular activities. • Value Education for attaining a high degree of professional competence and ethical values. • Involving the students in internship programmes and other skill-based activities to make them industry ready/ societal contributions. • Extensive use of technologies in teaching learning for effective content delivery pertaining to the OBE. • Emphasis on continuous professional development of the faculty
6. Distance education/online education:	a) The University provides flexible courses to enhance the curriculum with world-class content and hands-on experiences. In the recently followed academic regulations i.e., in academic regulations, 2015 and 2021 provisions have been made in the curriculum framework to include Skill based Vocational Courses. This has been mentioned in the academic regulation under section 7.2.10.4 which states that "The student accomplishment in a skill based vocational course in level 5 and above courses framed under National Skill Qualification Framework (NSQF), by National Skill Development Agency (NSDA), may be given three credits and grade points by BoS in the appropriate course category mentioned in Section 7.2 of the regulation. As a result, students are encouraged to do such skill based vocational courses from the list of NSQF aligned courses. In addition, to improve students career readiness and to prepare them for job-based learning, the institution has tie-up with online course providers like Coursera and NPTEL. Moreover, the institution also motivates and trains faculty to develop and offer the institution's skill based vocational training courses in all major fields of engineering through ODL mode for the benefit of students. There are plans to provide opportunities for public particularly for disadvantaged and underprivileged students too. For this, the institution is constantly improving its IT infrastructure and e-learning facilities to transfer teaching and learning from traditional classroom knowledge transfer to an open online environment. b) The institution allows access to Wikipedia and other online education resources. Faculty members and students can have access to a wide range of

educational materials from video lectures to virtual laboratories. Internet and Wi-Fi connectivity, LED projectors, LED TV, camera, podium stands, audio and video systems with the latest technology are some of the other facilities. All the departments are equipped with modern teaching aids like LEDs, smart boards, advanced software and laboratories with the most modern technologies. The institution facilitates blended learning using e-learning resources. Considerable investment in Information and Learning Technology (ILT) equipment and software, coupled with an extensive training programme for faculty, have led to the increasingly effective and creative use of e-learning in the course delivery. The initiatives include: a. Institution's learning management system called 'V-Learn' b. Massive Open Online Courses (MOOCs) c. Video conference facility d. Wi-Fi enabled campus/hostels e. NPTEL, Coursera open courseware f. Language-communication lab g. Virtual laboratories In addition, the institution facilitates several virtual seminars and video lectures delivered by international experts in emerging areas for knowledge enrichment. c) The institution has developed a best teaching-learning online platform called 'V-Learn' to deliver and track the teaching and learning of the students. This has been in use since 2015 to plan, implement, facilitate, assess, and monitor student learning. It has been used to support traditional face-to-face instruction, as well as blended and distance learning. This platform enables the faculty members to effectively and efficiently develop courses, deliver instruction, facilitate communication, foster collaboration between students, assess student success, and provide other learning resources for support. This facilitates students, to access the course materials anytime and anywhere which are consolidated in one location thereby it saves their time.

Extended Profile

1 Program

1.1

Number of programs offered year-wise for last five years

2020-21	2019-20	2018-19	2017-18	2016-17
42	41	36	38	34

File Description	Document
Institutional data in prescribed format	View Document

1.2

Number of departments offering academic programmes

Response: 17

2 Students

2.1

Number of students year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
9306	8422	6918	6049	4526

File Description	Document
Institutional data in prescribed format	View Document

2.2

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

2020-21	2019-20	2018-19	2017-18	2016-17
2284	1338	950	1114	940

File Description	Document
Institutional data in prescribed format	View Document

2.3

Number of students appeared in the University examination year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
9214	8143	6755	5780	4397
File Description			Document	
Institutional data in prescribed format			View Document	

2.4

Number of revaluation applications year-wise during the last 5 years

2020-21	2019-20	2018-19	2017-18	2016-17
124	96	199	323	335

3 Teachers

3.1

Number of courses in all programs year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
1135	1074	915	830	654
File Description			Document	
Institutional data in prescribed format			View Document	

3.2

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

2020-21	2019-20	2018-19	2017-18	2016-17
668	560	529	517	349
File Description			Document	
Institutional data in prescribed format			View Document	

3.3

Number of sanctioned posts year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
668	560	529	517	349

File Description	Document
Institutional data in prescribed format	[View Document](#)

4 Institution

4.1

Number of eligible applications received for admissions to all the programs year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
96258	62854	98171	60400	28825

File Description	Document
Institutional data in prescribed format	[View Document](#)

4.2

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

2020-21	2019-20	2018-19	2017-18	2016-17
2289	2394	2289	2111	1518

File Description	Document
Institutional data in prescribed format	[View Document](#)

4.3

Total number of classrooms and seminar halls

Response: 248

4.4

Total number of computers in the campus for academic purpose

Response: 2239

4.5

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

2020-21	2019-20	2018-19	2017-18	2016-17
5058.60	14226.70	10828.07	7260.31	4651.73

4. Quality Indicator Framework(QIF)

Criterion 1 - Curricular Aspects

1.1 Curriculum Design and Development

1.1.1 Curricula developed and implemented have relevance to the local, national, regional and global developmental needs which is reflected in Programme outcomes (POs), Programme Specific Outcomes(PSOs) and Course Outcomes(COs) of the Programmes offered by the Institution.

Response:

Reflections of National & International Needs in Curriculum Design:

Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology has been making continuous progress in designing its curriculum and developing academic programmes based on Outcome Based Education (OBE) since 2012. The institute has adopted the Choice Based Credit System (CBCS) as per the guidelines of UGC from the Academic Year 2015-16, and the curriculum is benchmarked with the AICTE Model Curriculum. The institute is preparing the students to develop the knowledge embedded with creativity and innovation for a positive transformation of the emerging society by considering the needs of local, regional, national & global development. The curriculum design process is also in harmony with the vision & mission of the institute, as shown.

The curriculum development process of the institute involves different stakeholders to identify and implant national and global requirements into the curriculum. The members of statutory bodies include national eminent personalities from IITs, NITs, National School of Law, NSTL, Tech Mahindra, etc. The institute established a sustainable inclusive academic environment by properly integrating the curriculum development, Teaching and Learning Practice (TLP), and establishing cutting-edge technologies. The Programme Outcomes (POs) and Programme Specific Outcomes (PSOs), which are emerged from the above process, reflect the capacity-building requirements of national and international needs. The participation of students in projects of international and national importance like water quality using drones and smart agriculture are notable examples of the tangible outcomes of this process. The institute's flagship Conceive-Design-Implement-Operate (CDIO) lab is established to follow Project-Based Learning (PBL) and TLP and the students in the very first year itself do the real-time projects.
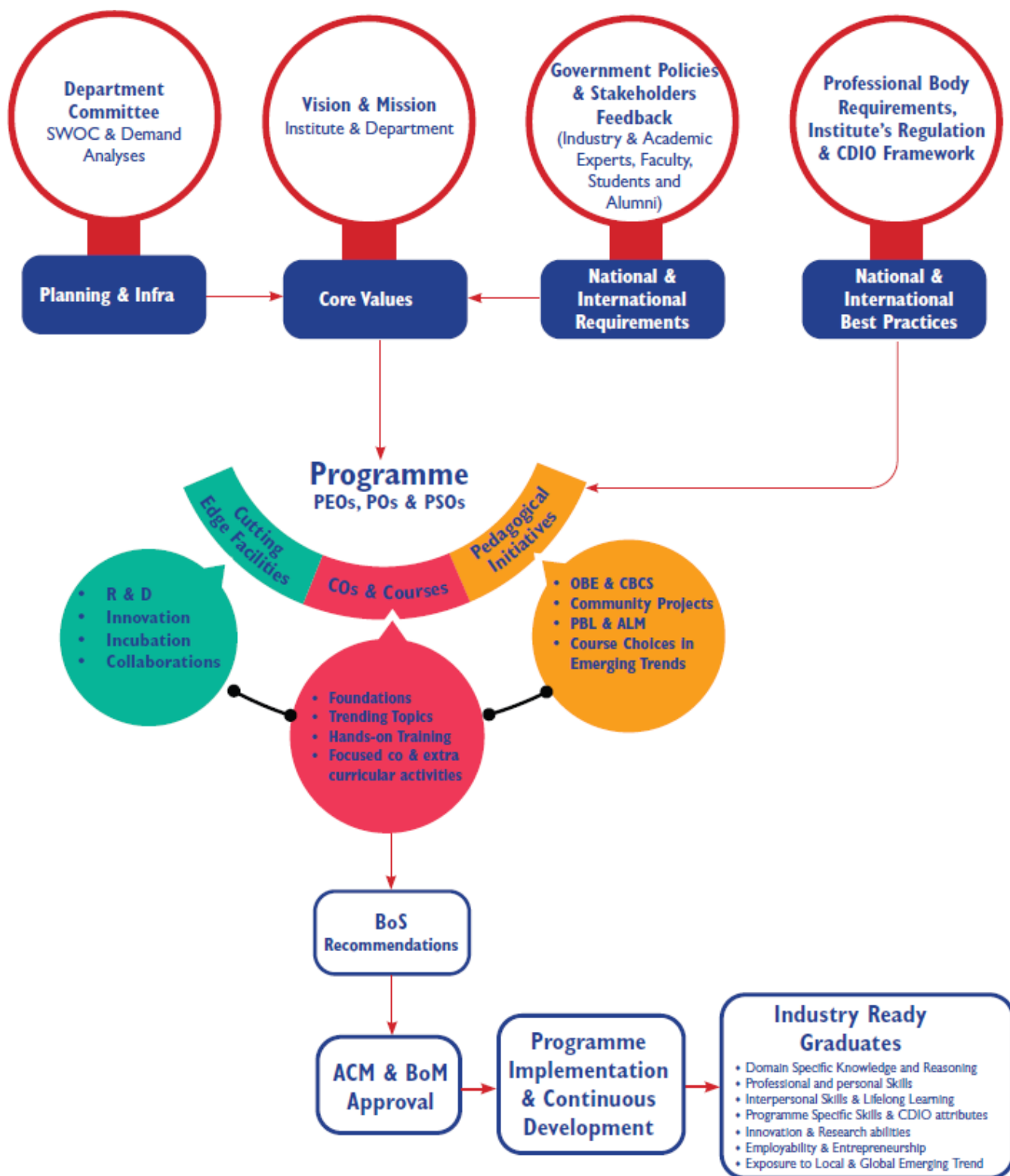
Choices & Opportunities in Curriculum:

The academic regulations of the programmes offered by the institution have been following the CBCS with academic flexibilities by which the students can themselves choose the course and also the faculty. This flexibility brings innovative components and pedagogical initiatives into the curriculum as given below.

Components of Curriculum Structure
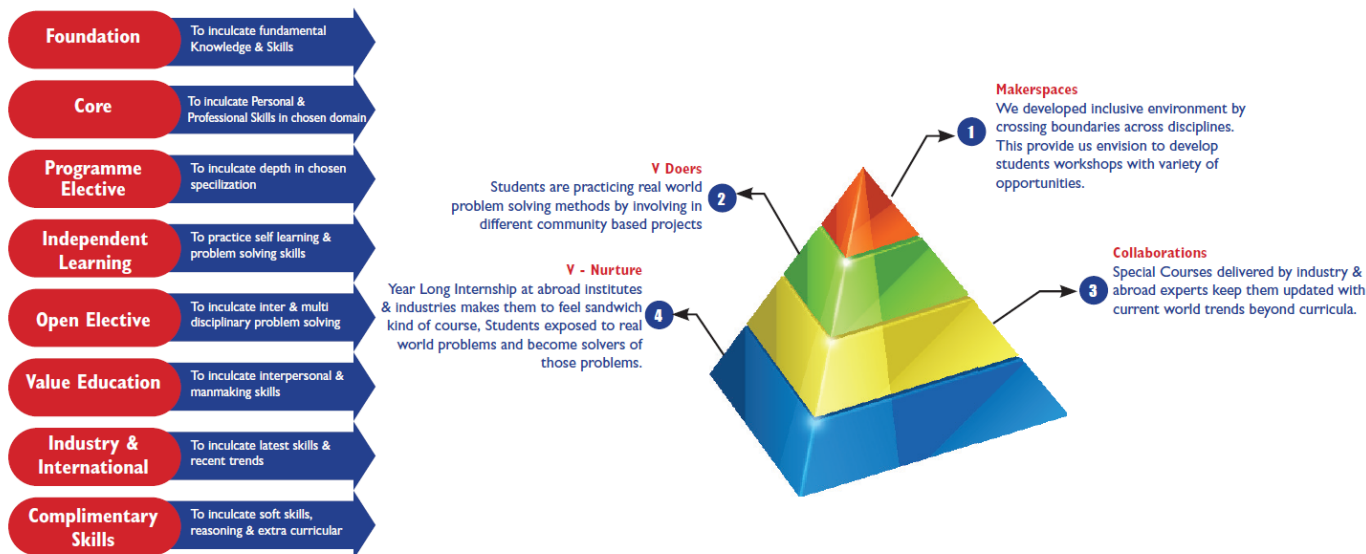
Having understood the importance of quality & requirements in the global & national arena, the philosophy of education at Vel Tech has become "Learning by Doing" to inculcate more practical knowledge in the minds of the students. The courses about the outcomes related to domain-specific knowledge & reasoning and professional & personal skills, help the graduates to practice real-world problem identification in the interdisciplinary areas, interpret and develop solutions.

The academic flexibility helps the students to select mini-projects, activity-based courses like "Vel Tech - SANDHAI", societal activities like V Doers (camping at remote villages and addressing problems), UBA & Swachh Bharat, and in turn, the students can identify and empathize the local and regional problems and develop skills to solve those problems.

The industry-institute interaction focuses on Industry 4.0, which attracts industries to make use of the Centres of Excellence and TBI. The POs are related to Interpersonal Skills & Lifelong Learning. The PSOs allow students to select special credit courses offered by industry & international experts. Industry/ international internships will help the students to solve real-world problems through project-based courses. The collaborations with industries and foreign institutes made significant improvements in students' mobility.

File Description	Document
Upload Additional information	[View Document](#)
Link for Additional information	[View Document](#)

1.1.2 Percentage of Programmes where syllabus revision was carried out during the last five years.

Response: 53.7

1.1.2.1 **How many Programmes were revised out of total number of Programmes offered during the last five years**

Response: 29

1.1.2.2 **Number of all Programmes offered by the institution during the last five years.**

Response: 54

File Description	Document
Minutes of relevant Academic Council/BOS meeting	[View Document](#)
Institutional data in prescribed format	[View Document](#)
Details of Programme syllabus revision in last 5 years	[View Document](#)
Any additional information	[View Document](#)
Link for additional information	[View Document](#)

1.1.3 Average percentage of courses having focus on employability/ entrepreneurship/ skill development offered by the institution during the last five years

Response: 92.33

1.1.3.1 Number of courses having focus on employability/ entrepreneurship/ skill development year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
1070	1006	854	747	591

File Description	Document
Programme/ Curriculum/ Syllabus of the courses	[View Document](#)
MoU's with relevant organizations for these courses, if any	[View Document](#)
Minutes of the Boards of Studies/ Academic Council meetings with approvals for these courses	[View Document](#)
Institutional data in prescribed format	[View Document](#)
Any additional information	[View Document](#)

1.2 Academic Flexibility

1.2.1 Percentage of new courses introduced of the total number of courses across all programs

offered during the last five years.

Response: 51.48

1.2.1.1 **How many new courses were introduced within the last five years.**

Response: 1114

1.2.1.2 **Number of courses offered by the institution across all programmes during the last five years.**

Response: 2164

File Description	Document
Minutes of relevant Academic Council/BOS meeting	View Document
Institutional data in prescribed format	View Document
Any additional information	View Document

1.2.2 Percentage of Programmes in which Choice Based Credit System (CBCS) / elective course system has been implemented (Data for the latest completed academic year).

Response: 100

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

Response: 42

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

1.3 Curriculum Enrichment

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

Response:

Human Values & Ethics:

The institute integrates cross-cutting issues into students' lives through the structured curriculum as well as co-curricular & extracurricular activities. The courses like Universal Human Values and Professional

Ethics will improve the students' attitude and bring constructive behavioural changes to address programme outcomes related to transferable skills. The value-based courses are offered to the students as optional as well as integrated into the curriculum. They are focused on ethics, culture, society, environment, tolerance, human rights, and service. The activities such as blood donation camps, health check-up camps, cleanliness drives, and helping old-age homes and orphanages are carried out for developing human values among students.

Environmental & Sustainability

The institute offers a foundation course in Environmental Studies for all the students. The course outcomes address the issues related to society, environment, ethics, biodiversity, and resource management for sustainable development. The institute practices environmental and sustainability goals as recommended in the SDGs of the UN. With the impact of this practice and the sensitization of SDGs at the institute, Vel Tech had participated in THE Impact Ranking and secured a remarkable place.

In Times Higher Education (THE) published the THE Impact Rankings, Vel Tech is continuously ranked in the best position in 2020 and 2021 in the following SDGs..

THE Impact Rankings 2021	201-300 in SDG 6: Clean Water and Sanitization
	201-300 in SDG 9: Industry, Innovation and Infrastructure
	401-600 in SDG10: Reduced Inequalities
	801-1000 in SDG 17: Partnership for the Goals
	801-1000 in Overall Category in the world

THE takes the pioneering initiative to recognize universities across the world for their social and economic impact based on the SDGs. The first-year students understand sustainability by doing projects in CDIO

laboratory related to solving rural area problems in India with considering resource optimization.

Gender Equality:

The cross-cutting issues relevant to the environment, sustainability, gender equality, human values, and professional ethics have been duly incorporated into the curricula with different types of courses for the holistic development of students.

1. Induction cum Acquaintance Programme: This programme is organized every year for all freshman engineering students as a bridge course. The programme contains the following courses.

- Gender Sensitization & Psychology (offered by SPARSH committee)
- Universal Human Values

2. Sensitization, Prevention and Redressal of Sexual Harassment (SPARSH) Committee: The ratio of male to female is 2:1 for faculty, and 5:1 for students. The SPARSH committee is constituted at the institution level to address the problems and create awareness to the girl students. The Committee Chair is sensitive to women's issues regarding any harassment inside or outside the institution or in public places like transport systems. Also, the Chair invites external experts to discuss various DO's and DON'Ts for the prevention of such malpractices.

Also, each programme offers courses relevant to ethics to all students to understand international and national practices and standards in their field to pursue the successful professional practice. The institute also encourages students to participate in NSS, NCC, TeDx and UBA schemes. These student communities promote societal welfare, cross-culture and gender sensitization to all students. The important days like Women's day, Constitution's day, etc., and religious celebrations are organized to understand the cross-cultural issues among students.

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

1.3.2 Number of value-added courses for imparting transferable and life skills offered during last five years.

Response: 353

1.3.2.1 **How many new value-added courses are added within the last five years.**

Response: 353

File Description	Document
Institutional data in prescribed format	View Document
Brochure or any other document relating to value added courses	View Document
Any additional information	View Document

1.3.3 Average Percentage of students enrolled in the courses under 1.3.2 above.

Response: 51.79

1.3.3.1 **Number of students enrolled in value-added courses imparting transferable and life skills offered year-wise during the last five years.**

2020-21	2019-20	2018-19	2017-18	2016-17
5057	4505	3765	2710	2349

1.3.4 Percentage of students undertaking field projects / research projects / internships (Data for

the latest completed academic year).

Response: 84.61

1.3.4.1 **Number of students undertaking field projects or research projects or internships.**

Response: 7874

File Description	Document
List of Programmes and number of students undertaking field projects research projects/ / internships (Data Template)	View Document
Any additional information	View Document
Link for additional information	View Document

1.4 Feedback System

1.4.1 Structured feedback for design and review of syllabus – semester-wise / year-wise is received from 1) Students, 2) Teachers, 3) Employers, 4) Alumni

Response: A. All 4 of the above

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

1.4.2 Feedback processes of the institution may be classified as follows:

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

File Description	Document
URL for feedback report	View Document
Upload any additional information	View Document
Institutional data in prescribed format	View Document

Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1 Demand Ratio (Average of last five years)

Response: 22.07

2.1.1.1 **Number of seats available year wise during the last five years**

2020-21	2019-20	2018-19	2017-18	2016-17
3294	3444	3294	3037	2184

File Description	Document
Demand Ratio (Average of Last five years) based on Data Template upload the document	[View Document](#)
• Any additional information	[View Document](#)

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

Response: 76.47

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

2020-21	2019-20	2018-19	2017-18	2016-17
1645	1775	1739	1758	1170

| File Description	Document
Average percentage of seats filled against seats reserved (Data Template)	[View Document](#)
Any additional information	[View Document](#)

2.2 Catering to Student Diversity

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

Response:

Student learning levels are regularly monitored and assessed through the Continuous Internal Assessments (CIA) such as Assignments, Unit Tests and Mid Tests. All the students are assessed in CIA, where few students are identified as slow learners and fast learners based on their performance in CIA and End Semester Examinations.

Vel Tech Remedial Class
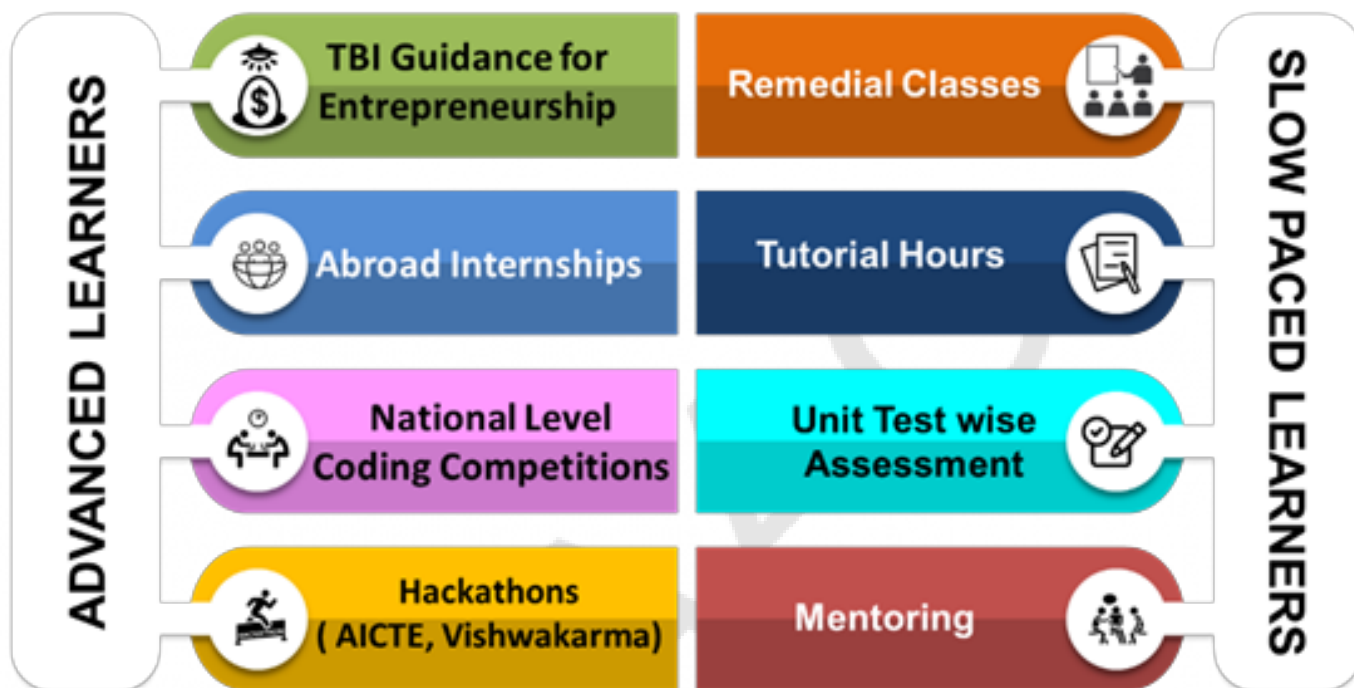
Identification of Slow Learners and Fast Learners:

Slow Learners Identification: Students who secured minimum marks in CIA, absentees in CIA with less attendance and backlogs are treated as slow learners. Faculty of the class also identifies the students who are unable to follow the lectures.

Slow Learners Follow up and Flexibilities: To support slow learners and to improve their competence, remedial classes are conducted after the class hours with minimum number of students. It provides extra guidance to the students to utilize the leisure time in learning the course effectively.

From time to time, slow learners are monitored based on their performances in successive CIA. Along with remedial classes, respective mentor also counsels the student by suggesting the various learning resources relevant to topic. With the continuous student monitoring, slow learners progress gradually in their studies, ultimately they will be graduated and able to get the placement, higher studies opportunities along with other students.

Curriculum has flexibility for slow Learners to register a minimum of 18 credits, based on the learning levels of the students to adopt better learning platform. The Curriculum provides flexibility for the learners to avail flexible timings to attend the classes as per the student interest.

Fast Learners Identification:

Fast learners are identified based on the performance of CIA and CGPA (above 8.5) secured in the semesters. The students' active participation in the classrooms is treated as one of the parameters of fast learning.

Fast Learners Follow up and Flexibilities:

Curriculum: It has flexibility for fast learners to register maximum of 28 credits, also they can register short semester in final year which facilitates to do full time internship in Industry/Abroad. The fast learners are encouraged to register advanced courses offered under electives category.

Project Competitions: Fast learners are encouraged to participate in Project Competitions to showcase their innovations in some of the competitions like AICTE Vishwakarma awards, Smart India Hackathon and other important events mentored by the innovation cell of the VelTech TBI.

Coding Competitions: Fast learners are also encouraged to participate in National and International coding competitions such as ACM-ICPC and coding contest conducted by online platforms for getting higher salary packages.

Research: Fast Learners interested in research are encouraged to do research by involving them in various faculty funded research projects. For such students Dean R&D relations will allot the mentors and provide the required facilities.

Entrepreneurship: Fast Learners who are interested to do entrepreneurship are allowed to utilize Technology Business Incubator (TBI) for supporting start-ups. VelTech TBI mentors and supports the students to become successful entrepreneurs.

Higher Studies: Students who aspire for higher studies are encouraged to prepare for GATE, GRE etc.

File Description	Document
Paste link for additional information	[View Document](#)

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

Response: 14:1

File Description	Document
Any additional information	[View Document](#)

2.3 Teaching- Learning Process

2.3.1 Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

Response:

There is a transformation in the Institute in Teaching Learning process from traditional teaching to the student centric learning from the academic year 2012-13 with the initiation of Outcome Based Education. The curriculum is designed to facilitate the student-centric learning. Student-centric methods adopted in Vel Tech in the teaching-learning process are given below.
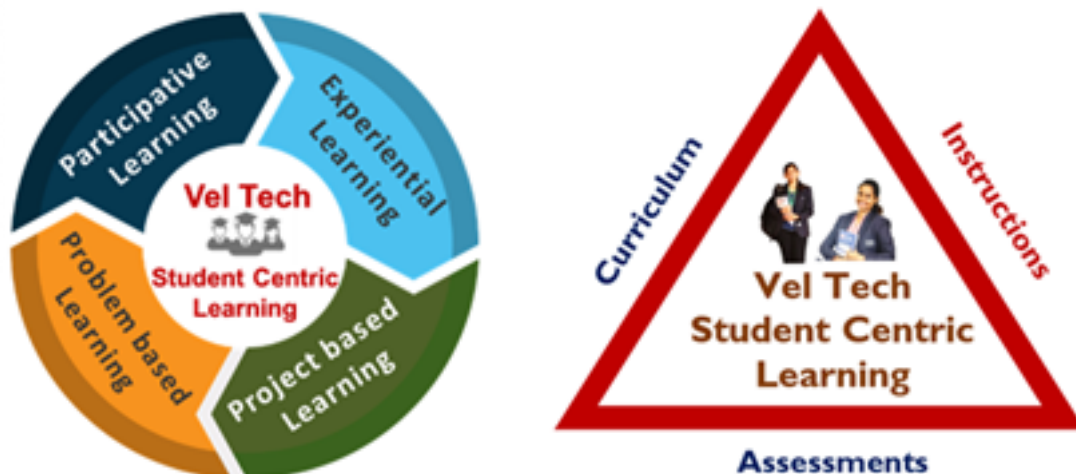
I. Experiential Learning: The students of all the programmes are involved in experiential learning through various activities, which is one of the missions of Vel Tech.

Experiential Learning activities like laboratory experiments, internships, Inplant training, fieldwork, research, team project, hackathons, study abroad, studio work, Moot Court, project competitions(AICTE Viswakarma Award, Smart India Hackathon, VISAI conducted by VelTech), etc.

Facilities for Experiential Learning:

- Automotive Engine Test Facility

- Center for FEM and CFD Simulations

- Centre for autonomous system research

- IoT and Edge Analytics Laboratory

- Telecom Centre of Excellence

- Conceive-Design-Implement-Operate Laboratory

- Manufacturing Innovation Learning Laboratory

- Research Laboratories

- Studio Work, Media Laboratory

- Moot Court

- Apple Mac OS Laboratory

- Service/Unnat Bharat Abhiyan

- NVIDIA Laboratory

- Printed Circuit Board Design

II. Participative Learning

All the programmes in the institution have implemented participative learning approaches in their Teaching-Learning process relevant to the courses.
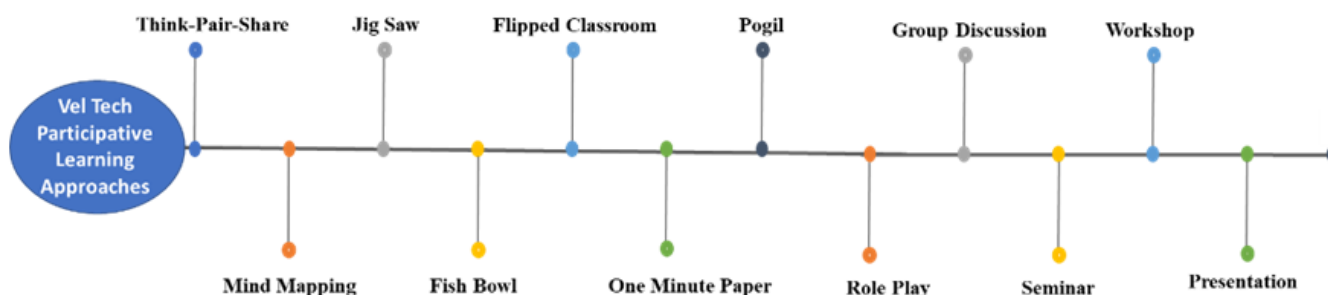
Infrastructure for Participative Learning

The Infrastructure facilities like Learning by doing Workspace, Project Workspace, furniture like round, curved tables with moveable seating, whiteboards, clickers, etc., are available to conduct participative learning.

Trained Faculty

Faculty members are trained in Active Learning methodologies by inviting external experts from Industries like Infosys and other reputed Institutions like Singapore polytechnic.

Classroom Activities

Faculty members deliver the course using appropriate active learning methods like Case study, Jig-saw, Think-Pair-Share, Role Play, Brainstorming, peer-to-peer learning, etc., for their courses.

Outside the Classroom Activities

Students participate in various activities like seminars, peer training, events coordination (teamwork and managerial skills), film making, field trips, communicative services (collaborative skills), event participation, Vel Tech SANDHAI (student event for developing and marketting the product) and Clubs in the Institution also reflect the student involvement in participative learning.

III. Problem Based Learning

Students learn a course through the experience of solving an open-ended problem. The courses that have a higher correlation with critical thinking, problem-solving that focus on applying mathematical concepts and solving complex problems are practiced.

Problem: Routing Delivery Vehicles on the Shortest route
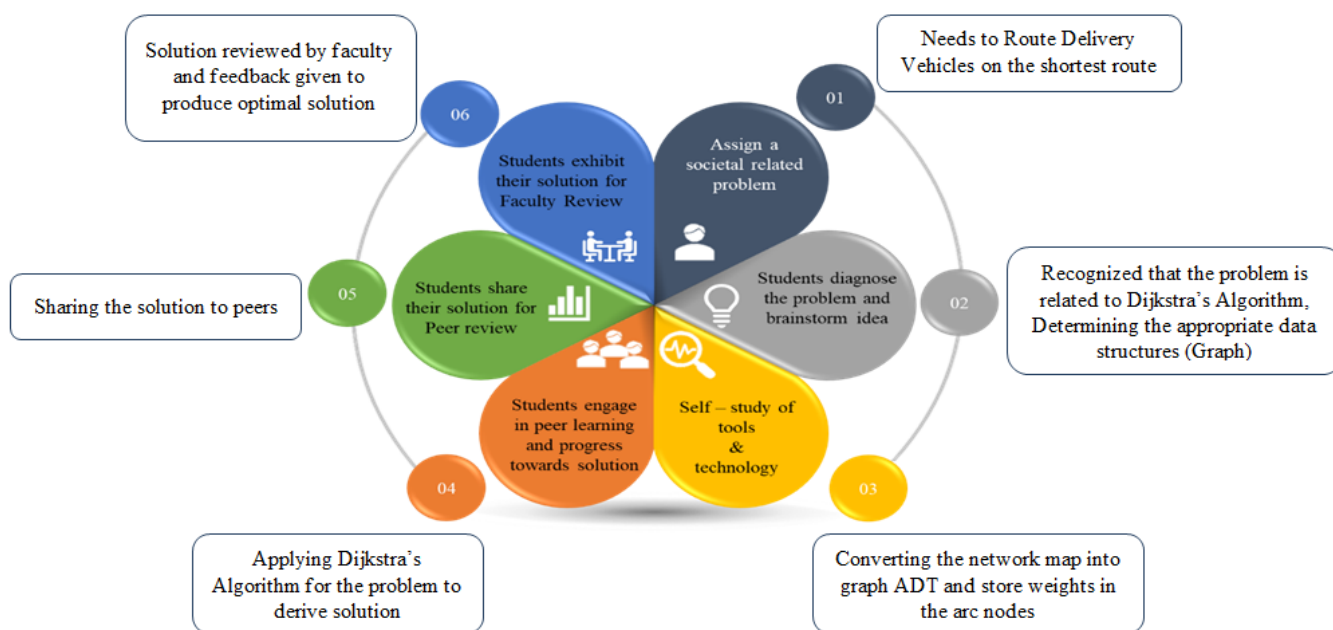
IV. Project-Based Learning (PBL)

The institution has imparted PBL in the Teaching Learning Process. Students are given the opportunity to develop knowledge and skills by engaging themselves with the projects by choosing the real-world challenges relevant to the course.

Trained faculty for PBL

The Institution conducted various workshops to train the faculty in PBL by inviting experts from National and International Organizations like the University of Twente, Netherlands.

File Description	Document
Link for Additional Information	View Document

2.3.2 Teachers use ICT enabled tools including online resources for effective teaching and learning process.

Response:

Information and Communication Technology (ICT) tools

Vel Tech Rangarajan Dr.Sagunthala R&D Institute of Science and Technology encourages extensive use of ICT-enabled tools such as Power Point Presentation, Video Clippings, e-learning resources such as NPTEL videos, MIT open courseware, and e-learning tools available in the Internet for effective teaching and learning process.

Technology available to support ICT-enabled tools and online resources: All the classrooms and Seminar Halls in all departments are equipped with LCD projectors and screens. Proper Internet facilities with LAN and WI-FI are available in all learning spaces. Interactive smart-boards are also available in the required learning spaces with sufficient internet bandwidth.

Microsoft Team Classroom facility is used to deliver online lectures, sharing of e-content, and other important interactive features for e-learning. Digital library is equipped with computers and internet facility for the purpose of e-learning.

V-Learn:

V-Learn is a Learning Management System (LMS) created using Moodle Platform that serves as a bridge between faculty and student to share the lecture, course materials, Home Assignment Task and relevant course material including video lectures created by the faculty. Also, this platform facilitates student management systems (SMS) such as course registration, Daily Attendance, Continuous Internal Assessment Marks, Surveys, Quizzes, student e-notice boards, parent communication, etc.

EDUSAT- Live broadcast facility:

EDUSAT live broadcast facility is available with the latest equipment, live transmission of lectures delivered by various technical experts for the purpose of faculty and students. A fully furnished dedicated room with an acoustic facility is also available

Digital Library:

The institution has a Digital Library with repository of NPTEL, MIT Open-courseware video lectures, e-books, e-journals (online, offline) to facilitate for student learning.

Usage of e-resources in teaching Learning:

Faculty members use online resources related to active learning methods, simulation software, course-related demonstration tools, course-related video clippings and animation clippings, NPTEL virtual labs to deliver the lectures. Faculty may use relevant online tools related to the topic for their course in teaching-learning, which helps the students for better understanding.

File Description	Document
Upload any additional information	[View Document](#)
Provide link for webpage describing the " LMS/ Academic management system"	[View Document](#)

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

Response: 16:1

2.3.3.1 **Number of mentors**

Response: 567

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

2.4 Teacher Profile and Quality

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

Response: 100

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

2.4.2 Average percentage of full time teachers with Ph.D./D.M/M.Ch./D.N.B Superspeciality/D.Sc./D'Lit. year-wise during the last five years

Response: 35.48

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

2020-21	2019-20	2018-19	2017-18	2016-17
271	234	193	159	97

File Description	Document
List of number of full time teachers with Ph D/D M/M Ch/D N B Superspeciality/DSc/D Lit and number of full time teachers for 5 years	View Document
Any additional information	View Document

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

Response: 4.24

2.4.3.1 **Total experience of full-time teachers**

Response: 2830.08

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

2.4.4 Average percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government/Govt. recognised bodies during the last five years

Response: 14.3

2.4.4.1 **Number of full time teachers receiving awards from state /national /international level from Government/Govt. recognized bodies year wise during the last five years**

2020-21	2019-20	2018-19	2017-18	2016-17
19	23	19	6	8

File Description	Document
Institutional data in prescribed format	View Document
e-copies of award letters (scanned or soft copy)	View Document
Any additional information	View Document

2.5 Evaluation Process and Reforms

2.5.1 Average number of days from the date of last semester-end/ year- end examination till the declaration of results year-wise during the last five years

Response: 14.8

2.5.1.1 **Number of days from the date of last semester-end/ year- end examination till the declaration of results year wise during the last five years**

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

File Description	Document
List of Programmes and date of last semester and date of declaration of results	[View Document](#)
Any additional information	[View Document](#)

2.5.2 Average percentage of student complaints/grievances about evaluation against total number appeared in the examinations during the last five years

Response: 0.23

2.5.2.1 **Number of complaints/grievances about evaluation year wise during the last five years**

2020-21	2019-20	2018-19	2017-18	2016-17
48	2	5	10	16

File Description	Document
Number of complaints and total number of students appeared year wise	[View Document](#)
Any additional information	[View Document](#)

2.5.3 IT integration and reforms in the examination procedures and processes (continuous internal assessment and end-semester assessment) have brought in considerable improvement in examination management system of the institution

Response:

Introduction

A fully computerized Examination Management System (EMS) is available in the institution. Various processes like generation of seat numbers, hall ticket printing, students' performance tracking, results declaration, etc., are done through state-of-the-art computer software systems.

The end-semester examination schedule is published in the academic calendar and is followed strictly. The results are published within 15 days for the UG examinations and 21 days for the PG examinations. The services of external examiners from reputed institutions are utilized for question paper setting, evaluation in addition to the internal teaching faculty. To increase the transparency in the evaluation process, a photocopy of the answer booklet is also given to the students and the option to re-evaluate / challenge evaluation is also provided. The institution is also a member of the National Academic Depository.

Question Paper Design

Around 50% of the question papers are sourced from external experts from high-ranking institutions. Utmost care is taken to design effective question papers using the action words pertaining to the appropriate levels of Bloom's Taxonomy and course outcomes mentioned against each question with cognition levels. Periodic audit/scrutiny of question papers is also conducted by external as well as internal experts to ensure the correctness and relevance to the syllabus.

Credit Transfer

The institution permits the transfer of credits for the courses undergone by our students in Universities abroad as well as the credits earned through SWAYAM - NPTEL courses.

The institution possesses a dedicated Office of International Relations headed by a Dean to look after the international collaborations with leading Universities and presently we have MoUs with Yunnan University of Finance & Economics in China, Tamkang University, National Ilan University, National Tsing Hua University, and Ming Chi University of Technology in Taiwan, University of Michigan – Dearborn, University of Detroit Mercy and the University of Wisconsin-La Crosse in USA for offering credit transfers.

On-Demand Examination

A one-time on-demand exam is permitted for the student who has successfully completed all the courses mandated for the degree programme, except only one arrear course, upon clearing which he/she is eligible to earn a degree. The student will be allowed to take the exam only after the production of a valid appointment order for his/her job.

Evaluation Procedure

An automatic dummy number allotment and scanning machine are used for the secure management of the dummy numbering process and also to scan the evaluated marks Examiners with suitable experience are called for evaluation duty, with the ratio of internal to external being 60:40. A double-check system to verify the awarded marks is practiced by verifying the marks entered by the examiner in software with that of the scanned marks using the OCR. All UG papers are subjected to a single evaluation, whereas PG and Ph.D. papers are doubly evaluated to ensure correctness. The answer booklets/grade cards have inbuilt security features including watermarks, MICR coding, Microline printing, guilloche pattern, photochromatic ink, etc.

File Description	Document
Year wise number of applications, students and revaluation cases	[View Document](#)
Any additional information	[View Document](#)
Link for additional information	[View Document](#)

2.5.4 Status of automation of Examination division along with approved Examination Manual

Response: 100% automation of entire division & implementation of Examination Management System (EMS)

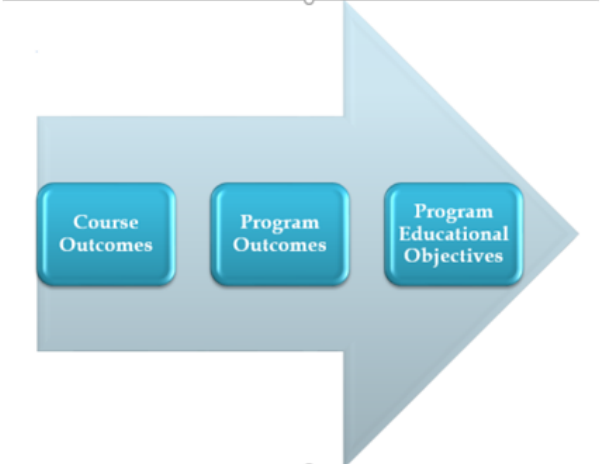| File Description	Document
Current manual of examination automation system and Annual reports of examination including the present status of automation	[View Document](#)
Current Manual of examination automation system	[View Document](#)
Any additional information	[View Document](#)
Annual reports of examination including the present status of automation	[View Document](#)

2.6 Student Performance and Learning Outcomes

2.6.1 The institution has stated learning outcomes (generic and programme specific)/graduate attributes which are integrated into the assessment process and widely publicized through the website and other documents

Response:

Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology is committed to improve the quality of educational programs by following a systematic process of Outcome Based Education (OBE) by defining and implementing Program Outcomes (POs) and Program Specific Outcomes (PSOs) as graduate attributes by considering the Program Educational Objectives (PEOs), and the Mission of the Institute. The stakeholder needs are also taken into consideration in this process.

For all the programs, Program Outcomes and two or three Program Specific Outcomes are defined. The various courses offered in the curriculum and other ecosystems are expected to address all the POs and PSOs of the concern program. POs and PSOs focus on student learning. They identify the knowledge, skills, and attitudes that students are expected to acquire through their course of study in the program. Course Outcomes are defined as per Bloom's Taxonomy. These Course Outcomes (COs) are ultimately helpful for the attainment of the POs and PSOs. The institution has established the mechanism of mapping COs with POs and PSOs.

Course Code	Course Outcome	Program Outcomes/Program Specific Outcomes														
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	1
CS3004	CO1	1										1				
	CO2	1	2	3								1				
	CO3	1	2	3								1				
	CO4	1	2	3								1				
	CO5	1		3								1				
CS3005	CO1	3	2	2												
	CO2	3	2	2												
	CO3	3	2	2												
	CO4	3	2	2												
1-Low, 2- Medium, 3-High																

The POs and PSOs are published and disseminated via various media to the stakeholders.

Publication of POs and PSOs:

Program Outcomes and Program Specific Outcomes are displayed at

1. Department webpages of https://www.veltech.edu.in/

2. Curriculum books

3. Department Notice Board

4. Additional boards in department corridors

Dissemination of POs and PSOs:

POs and PSOs are disseminated to the stakeholders:

Parents: The POs and PSOs are explained to the parents at the time of admission into the program.

Students: The POs and PSOs are oriented to the students during Induction cum Acquaintance program by emphasizing the curriculum contribution for the POs and PSOs. The correlation between the COs and POs/PSOs are explained to the students by the Course Coordinator and concerned faculty members of the course during the first instructional day of each semester.

Faculty: POs and PSOs are disseminated to the newly joined faculty by the senior faculty of the department and during the faculty orientation program conducted by Human Resource Development Cell.

Alumni and Employers: The POs and PSOs will be provided at the time of conducting the survey.

File Description	Document
Upload COs for all courses (exemplars from Glossary)	[View Document](#)
Paste link for Additional Information	[View Document](#)

2.6.2 Attainment of Programme outcomes, Programme specific outcomes and course outcomes are evaluated by the institution

Response:

The assessments and evaluations of the academic programmes are effectively carried out every semester. The faculty members are responsible for setting Course Outcomes (COs) for their courses, and to calculate the attainment of the course outcomes. Based on the attainment, measures for improvements will be implemented in the course during next semester. The attainment of POs and PSOs are calculated through the CO attainment of courses. The results are used to analyze the learning levels of the students and can help in the continuous improvement of the programme. Apart from this, Indirect surveys are carried out about the POs and PSOs attainment.

Program Outcomes and Program Specific Outcomes Assessment Process

The institution has adopted a system for assessment of Program Outcomes and Program Specific Outcomes that proceed through the following steps.

1. For each PO and PSO, two methods of Assessments (Direct and Indirect) are identified that will be used to measure attainment of the outcome.
2. For each Program Outcomes, attainment level is fixed.
3. The data collected through the assessment process of POs and PSOs will assure the continuous improvement of the programme.
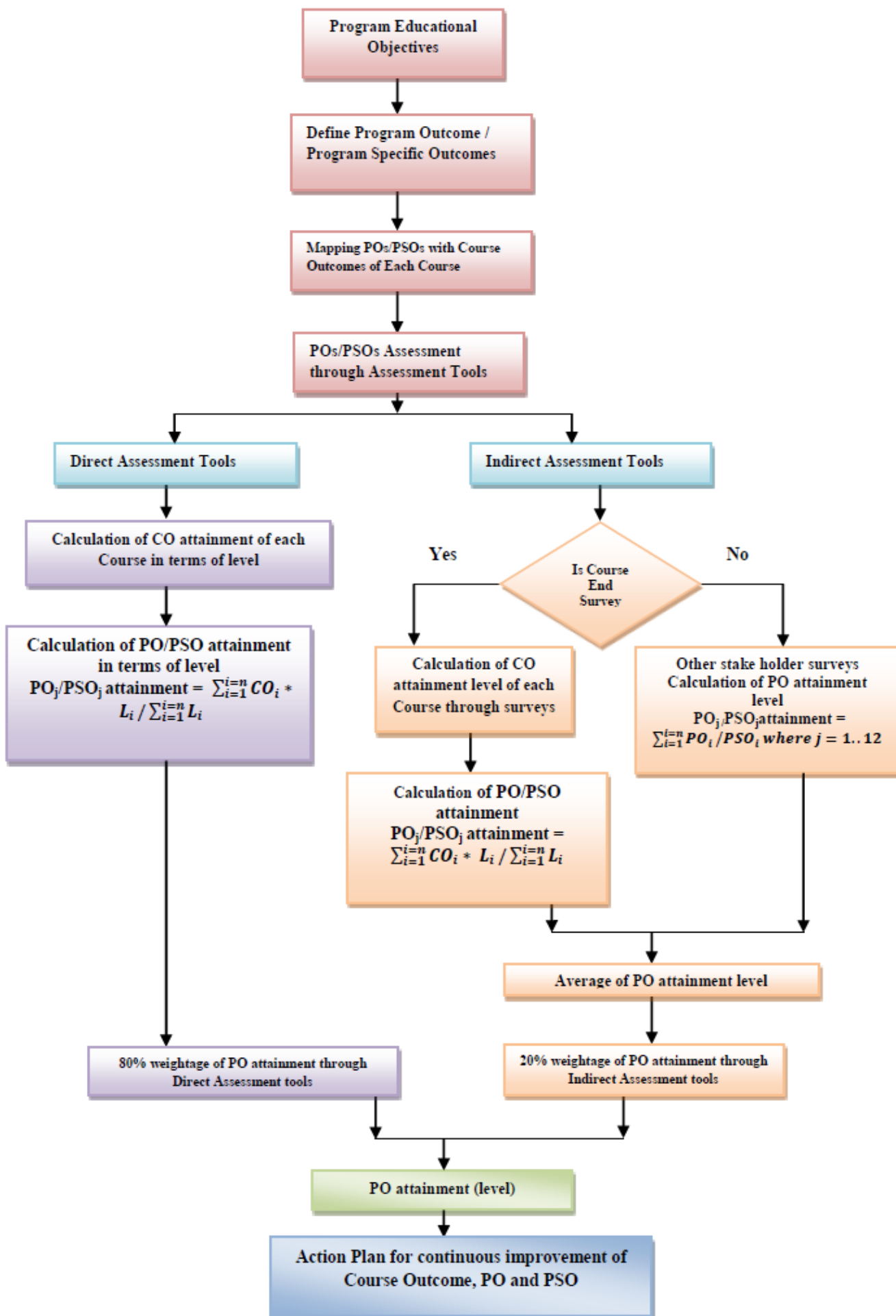
Attainment Calculation for POs and PSOs

The CO attainment is calculated based on the Continuous Internal Assessment and Semester end Examination. Course Coordinator along with the Course handling faculty discusses and makes an analysis on CO attainment levels (1-Low, 2-medium, and 3-High) and verifies whether the attainment is meeting the performance target fixed by the Course Coordinator. The COs attainment levels and recommendations for improvement on CO attainment is recorded in Faculty Course Assessment Report (FCAR) which is prepared by course handling faculty for their respective course. The course coordinator is responsible for consolidating a report on the CO attainment and recommendations given are recorded in Cumulative Course Assessment Report (CCAR). Finally, POs and PSOs attainment are calculated using the following formula as defined by NBA.

$$PO_j/PSO_j \text{ attainment} = \sum_{i=1}^{i=n} CO_i * L_i / \sum_{i=1}^{i=n} L_i$$

where *COi* is the Course Outcome of the course and *Li* is the correlation level of the course outcome with program outcome. Based on attainment levels, the action plan is recommended for course improvement which is incorporated in next time course delivery. In Indirect Assessment, the survey forms are used to collect responses from the stakeholders (Students, Alumni, Graduates and Employers) pertaining to POs and PSOs. The overall POs/PSOs attainment is measured by considering 80% from Direct Assessment and 20% from indirect assessment. The following flow chart gives the attainment calculation of COs, POs and PSOs.

```
┌─────────────────────┐
│ Program Educational │
│     Objectives      │
└─────────────────────┘
          │
┌─────────────────────┐
│ Define Program Outcome / │
│ Program Specific Outcomes │
└─────────────────────┘
          │
┌─────────────────────┐
│ Mapping POs/PSOs with Course │
│ Outcomes of Each Course │
└─────────────────────┘
          │
┌─────────────────────┐
│ POs/PSOs Assessment │
│ through Assessment Tools │
└─────────────────────┘
```

Direct Assessment Tools

Calculation of CO attainment of each Course in terms of level

Calculation of PO/PSO attainment in terms of level
$PO_j/PSO_j \text{ attainment} = \sum_{i=1}^{i=n} CO_i * L_i / \sum_{i=1}^{i=n} L_i$

Indirect Assessment Tools

Is Course End Survey

Yes — Calculation of CO attainment level of each Course through surveys

Calculation of PO/PSO attainment
$PO_j/PSO_j \text{ attainment} = \sum_{i=1}^{i=n} CO_i * L_i / \sum_{i=1}^{i=n} L_i$

No — Other stake holder surveys Calculation of PO attainment level
$PO_j, PSO_j \text{ attainment} = \sum_{i=1}^{i=n} PO_i / PSO_i \text{ where } j = 1..12$

Average of PO attainment level

80% weightage of PO attainment through Direct Assessment tools

20% weightage of PO attainment through Indirect Assessment tools

PO attainment (level)

Action Plan for continuous improvement of Course Outcome, PO and PSO

File Description	Document
Upload any additional information	[View Document](#)
Paste link for Additional Information	[View Document](#)

2.6.3 Pass Percentage of students(Data for the latest completed academic year)

Response: 92.99

2.6.3.1 Total number of final year students who passed the examination conducted by Institution.

Response: 2124

2.6.3.2 **Total number of final year students who appeared for the examination conducted by the Institution.**

Response: 2284

File Description	Document
Upload list of Programmes and number of students passed and appeared in the final year examination	[View Document](#)
Upload any additional information	[View Document](#)

2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process

Response: 3.87

File Description	Document
Upload database of all currently enrolled students	[View Document](#)

Criterion 3 - Research, Innovations and Extension

3.1 Promotion of Research and Facilities

3.1.1 The institution's Research facilities are frequently updated and there is a well defined policy for promotion of research which is uploaded on the institutional website and implemented

Response:

Vel Tech is a multi-disciplinary teaching and research institute pursuing research activities in **ten thrust research areas** such as, Additive Manufacturing, Aerodynamics and Propulsion, Artificial Intelligence and Machine Learning, Bio-Nano Technology and Bio-Sensors, Composite Materials and Metallurgy, Computational Fluid Dynamics, Finite Element Analysis, Image Processing, and Deep Learning, Nano-materials and Coatings and Unmanned Aerial Vehicles, etc.

- The Institution has received grants from various Govt funding agencies such as **DRDO, DST, ISRO, DBT, SERB, CSIR, BRNS, TNSCST, IEI, MSME, etc**. In addition, faculty members are engaged in research collaboration with international partners. As of now, **three international projects** were completed in collaboration with **Taiwan, Canada, and France**.
- Vel Tech **Research Park** has well-established National **facilities** and **Centres of Excellence** as well as Cutting - Edge Laboratories worth INR **10 Crore** in association with various organizations and industries to promote research among students and faculty members.
- **20 laboratories** such as 3D Printing and Scanning Lab, Artificial Intelligence Lab, Bio-Nanomaterials Lab, Cyber Security Lab, Dassault System Lab, Molecular and Photo Science Lab, Telecom Centre of Excellence, and PCB manufacturing facility, etc., are available at the research park and are extensively utilized for research activities.
- The Institution has **171 MoUs** with industry and established industry collaborated labs such as **WABCO Centre of Excellence** (WABCO India), **Engine test facility** (ARAI, Greaves Cotton, Ashok Leyland and TAFE), **High-Speed bearing Test Facility** established with funding from GTRE, DRDO, and promotes industry collaborated research with the active participation of faculty members and students.
- **The institution has 24 ongoing research projects** worth INR **6.36 Crore, 14 patents** were **granted** and more than **50 funded projects** were **completed** under different funding agencies.
- **Knowledge Resource Centre (KRC)** houses more than **200 innovation-driven Proof of Concepts** and research outcomes. It provides a pipeline of innovations required for **Vel Tech - Technology Business Incubator (TBI)**.
- Vel Tech has strong **international collaboration** and **171 MoUs** were signed with various Universities/research Organizations across the globe.
- Over **400 students have completed internships**, and many have completed Masters and Ph.D. programmes in various countries such as Taiwan, Germany, France, Singapore, etc. Annual conferences such as **IDAD, ICDMC, IEEE, ICSTM, and FSST** international conferences in collaboration with international partners created a launchpad for young research minds.
- The institution has received various rankings such as **NIRF (93), ARIIA (Excellent Band), The World Ranking (801-1000 Band),** and initiated **Conceive, Design, Implement and Operate (CDIO)** framework for the first time in our country.
- Faculty members have published good quality research articles in Web of Science and Scopus Indexed Journals. In the last 5 years, the **h–index is 53** with more than **9000 citations**.
- Since 2017, Vel Tech has been recognized as a Scientific and Industrial Research Organization

(SIRO) **by DSIR, Govt. of India**.

The list of equipment is available at https://www.veltech.edu.in/vel-tech-research-centers/ . The institution has active research policy since 2010, towards promoting research activities with details of the responsibilities, code of ethics, seed fund support, incentive schemes, financial support, etc. The research policy is available at https://www.veltech.edu.in/wp-content/uploads/2021/10/Research-Policy.pdf.

File Description	Document
Minutes of the Governing Council/ Syndicate/Board of Management related to research promotion policy adoption	[View Document](#)
Any additional information	[View Document](#)
URL of Policy document on promotion of research uploaded on website	[View Document](#)

3.1.2 The institution provides seed money to its teachers for research (average per year, INR in Lakhs)

Response: 65.68

3.1.2.1 **The amount of seed money provided by institution to its faculty year-wise during the last five years (INR in lakhs).**

2020-21	2019-20	2018-19	2017-18	2016-17
62.83	70.20	88.93	51.66	54.78

File Description	Document
Minutes of the relevant bodies of the University	[View Document](#)
Institutional data in prescribed format	[View Document](#)
Budget and expenditure statements signed by the Finance Officer indicating seed money provided and utilized	[View Document](#)
Any additional information	[View Document](#)

3.1.3 Percentage of teachers receiving national / international fellowship / financial support by various agencies for advanced studies / research during the last five years.

Response: 10.1

3.1.3.1 **The number of teachers who received national / international fellowship / financial support by various agencies for advanced studies / research year-wise during the last five years.**

2020-21	2019-20	2018-19	2017-18	2016-17
52	88	48	55	22

File Description	Document
Institutional data in prescribed format	[View Document](#)
e-copies of the award letters of the teachers	[View Document](#)
Any additional information	[View Document](#)

3.1.4 Number of JRFs, SRFs, Post Doctoral Fellows, Research Associates and other research fellows enrolled in the institution during the last five years.

Response: 159

3.1.4.1 **The Number of JRFs, SRFs, Post Doctoral Fellows, Research Associates and other research fellows enrolled in the institution year-wise during the last five years.**

2020-21	2019-20	2018-19	2017-18	2016-17
70	25	20	26	18

File Description	Document
Institutional data in prescribed format	[View Document](#)
Any additional information	[View Document](#)

3.1.5 Institution has the following facilities to support research

1. **Central Instrumentation Centre**
2. **Animal House/Green House**
3. **Museum**
4. **Media laboratory/Studios**
5. **Business Lab**
6. **Research/Statistical Databases**
7. **Mootcourt**
8. **Theatre**
9. **Art Gallery**

10.Any other facility to support research

Response: A. 4 or more of the above

File Description	Document
Upload the list of facilities provided by the university and their year of establishment	[View Document](#)
Upload any additional information	[View Document](#)
Paste link of videos and geotagged photographs	[View Document](#)

3.1.6 Percentage of departments with UGC-SAP, CAS, DST-FIST, DBT, ICSSR and other recognitions by national and international agencies (Data for the latest completed academic year)

Response: 94.12

3.1.6.1 **The Number of departments with UGC-SAP, CAS, DST-FIST , DBT, ICSSR and other similar recognitions by national and international agencies.**

Response: 16

File Description	Document
Institutional data in prescribed format	[View Document](#)
e-version of departmental recognition award letters	[View Document](#)
Any additional information	[View Document](#)

3.2 Resource Mobilization for Research

3.2.1 Extramural funding for Research (Grants sponsored by the non-government sources such as industry, corporate houses, international bodies for research projects) endowments, Chairs in the University during the last five years (INR in Lakhs).

Response: 500.52

3.2.1.1 **Total Grants for research projects sponsored by the non-government sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution year-wise during the last five years (INR in Lakhs).**

2020-21	2019-20	2018-19	2017-18	2016-17
103.55	124.18	114.8	59.52	98.47

File Description	Document
Institutional data in prescribed format	View Document
e-copies of the grant award letters for research projects sponsored by non-government	View Document
Any additional information	View Document

3.2.2 Grants for research projects sponsored by the government agencies during the last five years (INR in Lakhs).

Response: 1326.5

3.2.2.1 **Total Grants for research projects sponsored by the government agencies year-wise during the last five years (INR in Lakhs).**

2020-21	2019-20	2018-19	2017-18	2016-17
359.21	716.10	72.00	40.50	138.69

File Description	Document
Institutional data in prescribed format	View Document
e-copies of the grant award letters for research projects sponsored by government	View Document
Any additional information	View Document

3.2.3 Number of research projects per teacher funded by government and non-government agencies during the last five years

Response: 2.27

3.2.3.1 **Number of research projects funded by government and non-government agencies during the last five years.**

Response: 238

3.2.3.2 **Number of full time teachers worked in the institution year-wise during the last five years..**

Response: 525

File Description	Document
Supporting document from Funding Agency	[View Document](#)
Institutional data in prescribed format	[View Document](#)
Any additional information	[View Document](#)
Paste Link for the funding agency website	[View Document](#)

3.3 Innovation Ecosystem

3.3.1 Institution has created an eco system for innovations including Incubation centre and other initiatives for creation and transfer of knowledge.
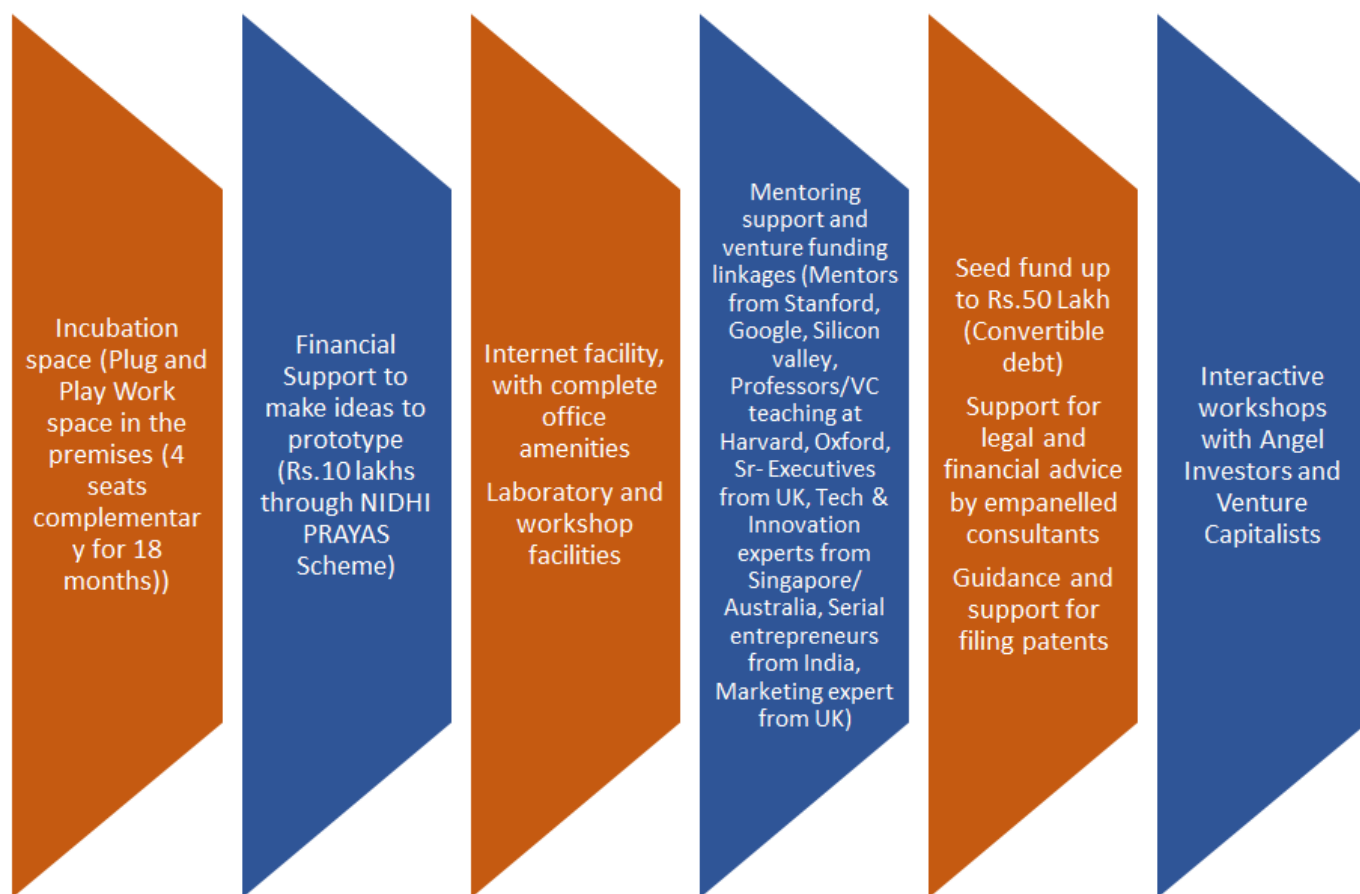
Response:

Vel Tech Technology Business Incubator (TBI) is an initiative supported by the Department of Science & Technology, India, since 2010. The whole initiative supports the early-stage start-ups by providing incubation space, mentoring, networking, and financial assistance. Vel Tech TBI has created state-of-art facilities such as an e-waste recycling pilot plant, a 3D printing laboratory, a manufacturing facility with advanced CNC machines & NDT technology for product development & inspection, Bio-incubator to support biotechnology innovations, and NVIDIA supported AI, ML, DL, & digital services lab to support IT innovations. Vel Tech TBI has been recognized as a Centre of Excellence under the NIDHI Scheme (Highest Scheme from DST) to expand the facility to a global level. Incubations are encouraged in various thrust areas including Digital Services and IOT, Analytics, AI/ML/DL, AR/VR, Mobile Apps, E-commerce, 3D printing, E-Waste / Plastic waste management, Manufacturing, Embedded systems and VLSI, Agriculture, Robotics / UAV, Health Care and Bio – Incubation. Vel Tech TBI has created a vibrant ecosystem connected with nearby industry clusters, students, faculty members, industry experts as Start-up coaches, and mentors from various parts of the world who are well experienced in starting up as well as scaling up. Since its inception, it has supported 220 start-ups and 34 of them have successfully graduated from the incubation center. Vel Tech TBI's vibrant ecosystem of start-ups consists of Mentors, Coaches, Professors, Technologists, Domain experts, Lawyers, Chartered Accountants, IP experts, Bankers, Strategic Partners, Corporate Folks, Trainers, and Media working out to nearly 500.

The following are the active programmes functional at Vel Tech TBI, which are supported by DST.

- Promoting and Accelerating Young and Aspiring Technology Entrepreneurs (NIDHI-PRAYAS)
- DST–SSS Seed Loan for Vel Tech TBI Start-ups
- Center of Excellence under NIDHI to Scale-up support to create global facilities such as manufacturing machines, Digital Services (AI, DL & ML), IoT, Fabrication Laboratory, etc.
- MeiTy TIDE 2.0 Scheme to Support ICT Based Innovations (Grant of INR Four Lakh for EIR & Grant of INR Seven Lakh from Idea to Prototype development)
- Vel Tech TBI is also the "Knowledge Partner" for Tamil Nadu Govt's Innovation Voucher Programme besides collaborating with SIDBI, FICCI, CII, etc.
- Startup India Seed Fund Scheme of INR Five Crore to support startup financially.

Strategic Partnerships are made with various organizations like (a) Cloud Credits from Amazon and

Google Clouds, (b) Free Apps from Zoho, (c) Customized Banking facilities from RBL Bank and Bank of Baroda, (d) Marketing support from Resileo Labs, (e) Venture Info from YNOS Venture Engine, (f) Mini ERP from Effitrac, (g) Computation software from MathWorks, (h) E-Commerce payment commissions free up to INR One Lakh from Paytm.

Incubation space (Plug and Play Work space in the premises (4 seats complementary for 18 months))

Financial Support to make ideas to prototype (Rs.10 lakhs through NIDHI PRAYAS Scheme)

Internet facility, with complete office amenities

Laboratory and workshop facilities

Mentoring support and venture funding linkages (Mentors from Stanford, Google, Silicon valley, Professors/VC teaching at Harvard, Oxford, Sr- Executives from UK, Tech & Innovation experts from Singapore/ Australia, Serial entrepreneurs from India, Marketing expert from UK)

Seed fund up to Rs.50 Lakh (Convertible debt)

Support for legal and financial advice by empanelled consultants

Guidance and support for filing patents

Interactive workshops with Angel Investors and Venture Capitalists

Vel Tech TBI's entire facility/support is accessible via the dedicated web link, https://www.veltechtbi.com/.

File Description	Document
Upload any additional information	[View Document](#)
Paste link for additional information	[View Document](#)

3.3.2 Number of workshops/seminars conducted on Research methodology, Intellectual Property Rights (IPR),entrepreneurship, skill development during the last five years.

Response: 701

3.3.2.1 **Total number of workshops/seminars conducted on Research methodology, Intellectual Property Rights (IPR),entrepreneurship, skill development year-wise during the last five years.**

2020-21	2019-20	2018-19	2017-18	2016-17
98	212	129	141	121

File Description	Document
Report of the event	View Document
Institutional data in prescribed format	View Document
Any additional information	View Document

3.3.3 Number of awards / recognitions received for research/innovations by the institution / teachers / research scholars / students during the last five years.

Response: 210

3.3.3.1 **Total number of awards / recognitions received for *research /* innovations won by institution / teachers / research scholars / students year-wise during the last five years.**

2020-21	2019-20	2018-19	2017-18	2016-17
42	46	39	43	40

File Description	Document
Institutional data in prescribed format	View Document
e- copies of award letters	View Document
Any additional information	View Document

3.4 Research Publications and Awards

3.4.1 The Institution ensures implementation of its stated Code of Ethics for research through the following: 1. Inclusion of research ethics in the research methodology course work 2. Presence of Ethics committee 3. Plagiarism check through software 4. Research Advisory Committee

Response: A. All of the above

File Description	Document
Code of ethics for Research document, Research Advisory committee and ethics committee constitution and list of members on these committees, software used for Plagiarism check, link to Website	[View Document](#)
Any additional information	[View Document](#)

3.4.2 The institution provides incentives to teachers who receive state, national and international recognitions/awards 1.Commendation and monetary incentive at a University function 2.Commendation and medal at a University function 3. Certificate of honor 4.Announcement in the Newsletter / website

Response: A.. All of the above

File Description	Document
Institutional data in prescribed format	[View Document](#)
e- copies of the letters of awards	[View Document](#)
Any additional information	[View Document](#)

3.4.3 Number of Patents published / awarded during the last five years.

Response: 114

3.4.3.1 **Total number of Patents published / awarded year-wise during the last five years.**

2020-21	2019-20	2018-19	2017-18	2016-17
32	21	27	9	25

File Description	Document
Institutional data in prescribed format	[View Document](#)
Any additional information	[View Document](#)

3.4.4 Number of Ph.D's awarded per teacher during the last five years.

Response: 2.33

3.4.4.1 **How many Ph.D's are awarded within last five years.**

Response: 119

3.4.4.2 **Number of teachers recognized as guides during the last five years**

Response: 51

File Description	Document
Institutional data in prescribed format	
Any additional information	
URL to the research page on HEI web site	

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

Response: 8.21

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

2020-21	2019-20	2018-19	2017-18	2016-17
672	1016	992	971	657

File Description	Document
Institutional data in prescribed format	
Any additional information	

3.4.6 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: 1.97

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

2020-21	2019-20	2018-19	2017-18	2016-17
306	251	185	169	120

File Description	Document
Institutional data in prescribed format	[View Document](#)
Any additional information	[View Document](#)

3.4.7 E-content is developed by teachers :

      1.**For e-PG-Pathshala**
      2.**For CEC (Under Graduate)**
      3.**For SWAYAM**
      4.**For other MOOCs platform**
      5.**Any other Government Initiatives**
      6.**For Institutional LMS**

Response: C. Any 3 of the above

File Description	Document
Institutional data in prescribed format	[View Document](#)
Give links or upload document of e-content developed	[View Document](#)
Any additional information	[View Document](#)

3.4.8 Bibliometrics of the publications during the last five years based on average citation index in Scopus/ Web of Science or PubMed

Response: 5.29

File Description	Document
Bibliometrics of the publications during the last five years	[View Document](#)
Any additional information	[View Document](#)

3.4.9 Bibliometrics of the publications during the last five years based on Scopus/ Web of Science - h-index of the Institution

Response: 52.5

File Description	Document
Bibiliometrics of publications based on Scopus/ Web of Science - h-index of the Institution	[View Document](#)
Any additional information	[View Document](#)

3.5 Consultancy

3.5.1 Institution has a policy on consultancy including revenue sharing between the institution and the individual and encourages its faculty to undertake consultancy.

Response:

The institution has established an **Industry-Academia Cell** and actively promotes industry-academia collaboration. It has **well-defined consultancy policy** in place to guide the faculty members in taking industry and other consultancy projects. The objectives of the consultancy policy are to promote academic, industry, and research interaction. It encourages and facilitates the faculty members providing knowledge inputs sought by industry, government agencies, or other academic / research organizations. **The institution has produced industry-sponsored centres such as WABCO CoE, Engine testing Facility by (Ashok Leyland, ARAI, Greeves Cottan, and TAFE), High-Speed Bearing test (Dynaspeed Systems), PCB facility supported by AUCKUM and 3D Printing lab (RP3D Private limited)**. The consultancy policy ensures that the consultancy works undertaken by faculty members are consistent with the institution's strategic & operational objectives and that the costs are sustainable. The major consultancy work is carried out from,

- M/s. GE India Industrial Private Limited
- M/s. Metallic Bellows India Private Limited
- M/s. Naval Science & Technological Laboratory(NSTL)
- M/s. Combat Vehicles Research & Development Establishment (CVRDE)
- M/s. Hindustan Aeronautical Limited
- Preethi Home Appliances Private Limited
- ARKO Engineering & Vaaranga Engineers Private Limited

The Industrial relations team regularly visits partner industries and interact with industry experts to get the consultancy projects. Since 2010, the institution organises VISAI (International Project Competetion and exhibition) which has provided a platform for students to contribute their ideas/ innovative projects based on the industry problems and **Sustainable Development Goals (SDGs).** Students under the guidance of faculty members submit their project ideas to the industry annual events of L&T Techgium, SAE – Baha, Internation Green Car Competition. Faculty members are motivated by sharing revenue based on the nature of consultancy and by reducing their academic workload. **Four Centres of Excellence** are established inside the institution works 24X7 and delivers various jobs order of major Automobile OEMs such as,

- JKM Ferrotech & Danblock Brakes
- Danblock Brakes
- Nelcast Limited
- Tvs Sundaram Fastners
- Aswin Cold Forge Ltd
- Daimler India Commercial Vehicels
- CNH Industrial (India) Pvt. Ltd.
- New Holland Tractors
- Tata Motors
- Royal Enfield

Centre of Excellence on Non-Destructive Testing partnered with ISNT, Chennai trained more than **20 faculty members on various NDT Techniquest** to actively engage in consultancy services. **Centre for AI & Deep Learning supported by NVIDIA partnered with Boston IT Solutions** conducted FDP for 32 faculty members from the CSE/IT domain to take up consultancy and to offer skill development courses during the last 10 years. It has established the following accomplishments:

- 2800 Industry contacts
- 171 MoUs
- 56 Corporate talks by the Senior Managers and Technical Heads
- Unique Collaborative Programmes with ARAI, WABCO, and TAFE to promote research, consultancy, and content delivery.
- Each department has one or two industry experts in their BoS.
- Hackathon is organized with industry partners to solve the industry pressing problems

File Description	Document
Upload soft copy of the Consultancy Policy	[View Document](#)
Upload minutes of the Governing Council/ Syndicate/Board of Management related to consultancy policy	[View Document](#)
Upload any additional information	[View Document](#)
Paste URL of the consultancy policy document	[View Document](#)

3.5.2 Revenue generated from consultancy and corporate training during the last five years (INR in Lakhs).

Response: 725.64

3.5.2.1 **Total amount generated from consultancy and corporate training year-wise during the last five years (INR in lakhs).**

2020-21	2019-20	2018-19	2017-18	2016-17
148.28	173.47	264.37	130.02	9.50

File Description	Document
Institutional data in prescribed format	[View Document](#)
Audited statements of accounts indicating the revenue generated through consultancy	[View Document](#)
Any additional information	[View Document](#)

3.6 Extension Activities

3.6.1 Extension activities in the neighbourhood community in terms of impact and sensitising students to social issues and holistic development during the last five years.

Response:

Vel Tech organizes several extension activities to spread awareness to the young minds about social welfare through various Clubs, Student Forums, National Schemes to promote extension activities, a celebration of national & international days, and also through V-Doers (real-time projects). The institution makes consistent efforts to sensitize the nearby communities through the following regular programmes.

- E-waste awareness and plastic waste safe disposal awareness camps were held through the national facility inside the institution. In connection with this, the students from NSS and NCC assisted in collection of e-waste at CVRDE officer's guest house.
- V-Doers a unique programme adopted by the institution to reach out to EMS communities and help them through technology intervention. Students in V-Doers spend a month in a rural hill village and execute various social welfare projects. These real-time activities help students to identify social problems of rural village environments and design technical solutions to overcome the problem.
- SANDHAI is an field marketing event where students move to metro places of cities to sell the products made by orphanages. This event is organized in association with NITIE, Mumbai.
- VISAI is an annual project competition held in February month with 8 SDGs (Sustainable Development Goals)
- Organising Swachh Bharat summer internship in 5 nearby villages to educate people about waste management

Club activities focus on bringing multi and cross-cultural students under one roof to offer social welfare activities like helping the poor & orphans (in association with Mother Theresa Charitable Trust), creating awareness among illiterate people, and developing the life skills of urban dwellers around the neighborhood community of the institution. These clubs help the students to understand the real-life scenarios of people belonging to different social stratum by identifying their living environment and its impact on their lifestyle. The student's forums like anti-ragging cell, hostel committee, and class committee spreads awareness about ragging and its cause & effect among the students, improves leadership qualities and decision-making skills. These activities helped to nurture ragging-free campus during the last five years. It encourages the students to participate in solving hostel and academic-related problems. Also, these forums inspires the students to develop behavioral adaptation in a multi-cultural environment and tolerance.

Vel Tech encourages students to participate in various national schemes like NSS, NCC, Unnath Bharath Abhiyan (UBA) and organizes various national & international days like International Yoga Day, Teacher's Day, Independence Day, Republic day (https://www.veltech.edu.in/news-events/ncc-swachh-bharat/), etc., The NCC & NSS students are actively participating in various camps and are also involved in flood relief, cyclone relief and various post disaster relief activities (https://www.youtube.com/watch?v=9ay1IggaQHM). Under UBA, the institution adopted the nearby villages (Pandeeswaram, Morai, Veerapuram, Vellanur, and Kanniyaman Nagar) and conducted activities like tree plantation, blood donation, and organized workshops on life skills. These activities motivates the students to be one among with the rural and urban people and identify their real-world problems. Further, it

paved the way for the final year projects as real-life problems identified from these villages.

File Description	Document
Upload any additional information	[View Document](#)
Paste link for additional information	[View Document](#)

3.6.2 Number of awards received by the Institution, its teachers and students from Government /Government recognised bodies in recognition of the extension activities carried out during the last five years

Response: 108

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

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

File Description	Document
Institutional data in prescribed format	[View Document](#)
e-copy of the award letters	[View Document](#)
Any additional information	[View Document](#)

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

Response: 164

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

2020-21	2019-20	2018-19	2017-18	2016-17
27	47	34	30	26

File Description	Document
Reports of the event organized	[View Document](#)
Institutional data in prescribed format	[View Document](#)
Any additional information	[View Document](#)

3.6.4 Average percentage of students participating in extension activities listed at 3.6.3 above during the last five years

Response: 46.93

3.6.4.1 **Total number of students participating in extension activities listed at 3.6.3 above year-wise during the last five years.**

2020-21	2019-20	2018-19	2017-18	2016-17
3122	6016	3847	2175	1724

File Description	Document
Report of the event	<u>View Document</u>
Institutional data in prescribed format	<u>View Document</u>
Any additional information	<u>View Document</u>

3.7 Collaboration

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

Response: 185

3.7.1.1 **Total number of Collaborative activities with other institutions / research establishment / industry for research and academic development of faculty and students year-wise during the last five years.**

2020-21	2019-20	2018-19	2017-18	2016-17
187	194	184	193	167

File Description	Document
Institutional data in prescribed format	<u>View Document</u>
Copies of collaboration	<u>View Document</u>
Any additional information	<u>View Document</u>

3.7.2 Number of functional MoUs 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: 130

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

2020-21	2019-20	2018-19	2017-18	2016-17
29	25	25	27	24

File Description	Document
Institutional data in prescribed format	View Document
e-copies of the MoUs with institution/ industry	View Document
Any additional information	View Document

14-07-2022 10:26:11

Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

4.1.1 The institution has adequate facilities for teaching - learning. viz., classrooms, laboratories, computing equipment, etc.

Response:

Class rooms and tutorial rooms:

The institution has an adequate number of classrooms, laboratories, tutorial rooms, active learning spaces, seminar halls, workshops, drawing halls, exam cell, and libraries, as per the norms. Most of the classrooms, seminar halls and tutorial rooms are equipped with LCD projectors and internet access facilities through Wi-Fi/LAN ports to facilitate the faculty for the effective delivery of their lectures and demonstrations. All the classrooms are provided with standard chalkboards and white boards are also provided wherever necessary. Few of the classrooms are smart classrooms, which have facilities like round tables, oval shaped tables, square and pentagon shaped tables to conduct active learning classes and for other discussions. The average area of each classroom and tutorial room is maintained as per the norms.

Laboratories:

The laboratories are well established with all machines / equipments / devices / instruments / computers / software and other facilities to satisfy the curriculum and research requirements. The laboratories facilitate the faculty and students for doing projects, research works and for placement activities. A separate four-storeyed building with research laboratories in various disciplines is available to encourage research activities among faculty and students. Electrical supply for all the academic blocks, laboratories and hostels are fed through HT supply and in case of interruption in power supply, diesel generators with sufficient capacity are available.

Computing facilities:

Computer laboratories are available with sufficient Windows-based computers and MAC systems with a standard set of licensed technical software necessary to conduct laboratory courses, research, workshops, etc. Students can access computer laboratories from 8:00 a.m to 7:00 p.m on weekdays and from 9:00 a.m to 4.00 p.m on Sundays. Wi-Fi devices are made available in all the blocks on the institution campus. Uninterruptible Power Supply units with the required capacity are available in all the computer laboratories, seminar halls and research laboratories for smooth conduction of laboratory courses and other activities.

Central Library:

Central Library facility is available with sufficient space. The central library has two digital library sections with sufficient computers. The library has enough seating capacity. Adequate volumes of reference material in the form of printed books with different titles, e-books, book bank, National and International printed Journals, back volumes of journals, e-Journals and CDs are available for the benefit of students, faculty, staff and research scholars. Through institutional DELNET membership, e-books and e-Journals were procured for our students, faculty, staff and research scholars. Our library is an institutional

member of e-ShodhSindhu and Shodhganga. Annual subscriptions for Databases such as Scopus, Web of Science are made, for the benefit of our students, faculty, and research scholars.

The library is fully automated with Auto Lib Integrated Library Management System (ILMS) software, which is a Web version. The AutoLib software has more modules, which are much useful for effective management.

File Description	Document
Upload any additional information	[View Document](#)

4.1.2 The institution has adequate facilities for cultural activities, yoga, games and sports (indoor & outdoor); (gymnasium, yoga centre, auditorium, etc.,)

Response:

The Institution has excellent facilities for extra-curricular activities executed in various forms namely clubs, indoor and outdoor games, nationally recognized social outreach programs such as NSS and nation building initiatives such as NCC. The major portion of extra-curricular cultural activities such as Music, Dance, Arts and Drama are collectively contained within Vel Tech Club. There are separate facilities available for Music club, Dance, Arts and Drama. Club members have been actively participating in these activities in separate spaces earmarked for these clubs. Facilities for the Unnat Bharat Abhiyan cell and Swachh Bharat Abhiyan cell are well arranged on the campus for the benefit of students. Suitable office space is available for all the clubs and cells.

There is a dedicated "Yoga hall" with a total area of 432 sq. m for the practice of Yoga. Every year, the International Yoga day is celebrated on a grand scale in the open air Auditorium spreading over a large area of the campus.

There are specific facilities in the Institute and hostels for Indoor games namely Badminton, Table Tennis, Chess, Carrom, Karate, Kabaddi and Billiards. These facilities are well-utilized by most of our students and faculty members. Outdoor game facilities are well-established in an area of more than 20 acres of land for games such as Football, Hockey, Cricket, Kabaddi, Volleyball, Handball, Basketball, Ball badminton, Throwball and Futsal in the Institute and hostels. Almost all students utilize these facilities every day.

Four fully equipped Gymnasiums with an average area of about 109 sq. m are located in the B3 block, Prince & Leaders hostels for boys and Queens hostel for girls. Students are well utilising these facilities to keep them physically fit for participating in games, sports and for their general fitness.

The Institution also caters to facilities specific to track and field events. Facilities such as running tracks with 8 lanes (for 200 and 400 metres), Relay, Long jump, Triple Jump, Shot put, Discus throw, Javelin throw, etc., are established and maintained.

File Description	Document
Upload any additional information	View Document
Geotagged pictures	View Document

4.1.3 Availability of general campus facilities and overall ambience

Response:

Learning is made easy and interesting when the surroundings are equally inspiring. Student learning and the learning environment are inseparable. The institution buildings are with stunning architectural styles and natural aesthetics. The campus is well designed and features lush greenery dotted with many trees and other exotic plants providing a campus that is as much paradise as Institution. Besides the stunning architecture, it is also praised for its meticulously landscaped grounds and pedestrian-friendly walkways. Green infrastructure of the campus is well maintained by dedicated gardening team.

The institution has five hostel complexes for gents and ladies with all modern amenities. Each hostel complex has separate mess and dining facility with all amenities. Canteen facilities are available for faculty, staff and students. A three storeyed staff quarters with all amenities including 24X7 security and power backup.

Lift facility is made available in academic building. Waiting rooms are provided for the benefit of students in few blocks. Well planned black top and concrete roads were laid both in academic and hostel campuses. The campus and hostels are provided with good quality drinking mineral water. For general purpose usage, water is extracted from open well and bore wells. Bank of Baroda and ATMs, Post office, and reprographic facilities are available within the academic and hostel complexes which are used by all our students, staff and faculty.

The campus facilities are designed with environmental consciousness in mind. Dedicated sewage water treatment plant and solar water heaters are effectively utilized. Rain water harvesting facilities are available within the campus. Biodegradable waste is treated by Biogas plants. There is also a dedicated Incinerator for mixed wastes and unique E-Waste handling facility.

The Institution also has solar street lights at strategic locations. The solar cum wind power plant is installed in the research park which supply power to a research lab. The entire campus is provided 24X7 continuous uninterrupted power supply through EB HT supply and two Diesel power generators as back up. All hostels are also provided with generator backup for the benefit of students.

Institutional transportation facility is used by over 60% of faculty and dayscholar students. Around 20% of faculty and day scholar students travel by Metropolitan Transport Corporation bus transport and 20% by own transport to commute to the institution. Vehicle parking facility with security and surveillance is available for the benefit of faculty, staff and students.

Dedicated medical facilities with qualified doctor, nurses and the Institution's own ambulances are made available within campus on 24X7 basis. Group insurance is made available for faculty, staff and students. The Institution follows standard safety procedures with dedicated fire extinguishing systems for the entire building and fire extinguishers at strategic locations. Ramps and specialized rest rooms are provided in the

campus for disabled individuals.

File Description	Document
Upload any additional information	[View Document](#)
Paste link for additional information	[View Document](#)

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

Response: 43.52

4.1.4.1 **Expenditure for infrastructure augmentation, excluding salary during the last five years (INR in lakhs)**

2020-21	2019-20	2018-19	2017-18	2016-17
622.42	2386.45	5591.64	5852.49	2617.93

File Description	Document
Upload audited utilization statements	[View Document](#)
Upload any additional information	[View Document](#)
Institutional data in prescribed format	[View Document](#)

4.2 Library as a Learning Resource

4.2.1 Library is automated using Integrated Library Management System (ILMS) and has digitisation facility

Response:

Library Automation

Library is automated with Nirmal software since 1997. In the year 2017, Web version of AutoLib Integrated Library Management System (ILMS) software was installed and automated.

This web based Library software specially designed with the due consultation with the library consultants which fulfills the end users by taking care of their requirements pertaining to all the library operations. Its salient features like Cataloguing, Circulation, Web OPAC (Online Public Access Catalogue) for information retrieval of the books and Periodicals, Various Reports modules and its remote accessibility facilitate the students, scholars and end users to get right information at the right time.

The Library has digitization facility by using the Shodhganga digital repository. This Library Automation software is fully integrated, user-friendly and multi-user software**.** AutoLib is a state of the art solution for Library Automation. AutoLib has all the features to automate the activities of modern libraries. AutoLib is WEB enabled for Intranet and Internet environments, Incorporating the latest JAVA/ IT/WEB technologies, tools and techniques.

The AutoLib – (ILMS) software has the following 20 modules which will satisfy the needs of the stakeholders for effective library management**:**

1. Database Creation and Maintenance (Cataloguing)
2. Member Master
3. Counter Transactions (Circulation)
4. Search (OPAC) - Simple Search Module
5. Advanced Search Module
6. Report Management (MIS Reports)
7. E-resources Linking
8. News Paper Clippings
9. Stock Verification
10. System Administration/ Management
11. Online User E-Gate Register in Library
12. Book Order/ Indent Processing
13. Journal Issues Management
14. Article Indexing and Abstracting
15. Question Banks
16. Binding Management
17. Data Import
18. Bulk Counter
19. Query Builder cum Report Generator
20. User Request Service

Digitization

Library has digitization facility by using DSpace digital library software. Soft copies of institutional repositories are added in this portal for user reference. Doctoral Theses are uploaded in Shodhganga digital repositories for research reference. RFID Technology is implemented and Scanners are available for softcopy creation. The Library is equipped with 90 PC systems with WiFi / intranet connectivity, Digital library acts as a boon to the students and faculty for their academic and research purpose. Library has annual subscription for e – journals (IEEE, ASME, ASCE, J-Gate), e-books (Proquest, Pearson, McGraw Hill) and database such as Elsevier/ Scopus and Web of Science and member of e-ShodhSindhu, Shodhganga and National Digital Library of India (NDLI). The Central library is having Institutional membership with DELNET, British Council Library and Anna University.

Further, books and journals will be procured for the students, faculty and researchers based on their request through inter library loan like DELNET and British Council Library. The Library has massive collection of 1,05,518 printed books, 70,000 e-books and millions of e-journals, and facility to access NPTEL lectures. In addition to the books, the library is providing 20 kindle devices to the students to enhance digital access of e-resources. The faculty and students are facilitated to detect Plagiarism through **Turnitin and Urkund(Ouriginal)** softwares.

File Description	Document
Upload any additional information	[View Document](#)
Paste link for additional information	[View Document](#)

4.2.2 Institution has access to the following: 1. e-journals 2. e-ShodhSindhu 3. Shodhganga Membership 4. e-books 5. Databases 6. Remote access to e-resources

Response: A. Any 4 or more of the above

File Description	Document
Upload any additional information	[View Document](#)
Institutional data in prescribed format	[View Document](#)

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

Response: 84.34

4.2.3.1 Annual expenditure for the purchase of books and journals including e-journals year-wise during last five years (INR in Lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
131.68	79.05	60.68	96.15	54.12

File Description	Document
Institutional data in prescribed format	[View Document](#)
Audited statements of accounts	[View Document](#)
Any additional information	[View Document](#)

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

Response: 10.61

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

Response: 1058

File Description	Document
Details of library usage by teachers and students (Library accession register, online accession details to be provided as supporting documents)	[View Document](#)
Any additional information	[View Document](#)

4.3 IT Infrastructure

4.3.1 Percentage of classrooms and seminar halls with ICT - enabled facilities such as LCD, smart board, Wi-Fi/LAN, audio video recording facilities. (Data for the latest completed academic year)

Response: 100

4.3.1.1 **Number of classrooms and seminar halls with ICT facilities**

Response: 248

File Description	Document
Upload any additional information	[View Document](#)
Institutional data in prescribed format	[View Document](#)

4.3.2 Institution has an IT policy, makes appropriate budgetary provision and updates its IT facilities including Wi-Fi facility

Response:

The Board of management of Vel Tech Rangarajan Dr. Sagunthala R & D Institute of Science and Technology (Vel Tech) has approved an IT policy which establishes the approaches and responsibilities for protecting the confidentiality, integrity, and availability of the information assets that are accessed, created, managed and controlled by the Institution in a legal way. The IT policy is strictly adhered by the students, faculty for the usage of computers, internet, wifi connectivity.

Budget is allocated at the start of every academic year and for the past five years INR 14.36 Crore was spent on IT infrastructure facilities. The internet bandwidth is increased from 1000 mbps to 3000 mbps for the past five years and around two crores is spent every year for the Internet Leased Line of JIO and also for M/s Techne online services against the rental charges of the wifi devices. Computers, repographic facilities, server facilities, and biometric devices are procured every year as per the requirements.

The Institution has well-established computer labs with Internet for students and staffs. All the departments and administrative offices are provided with facilities such as Laptops, Printers and Scanners. The class rooms, seminar halls are equipped with LCD projectors for effective dissemination of knowledge. Uninteruppted power supply is available in all labs and offices. All the desktop computers are connected by LAN. The library is fully automated with Auto Lib Integrated Library Management System (ILMS) software, which is a Web version. The AutoLib software has more modules, which are much

useful for effective management.

V-learn software automates the day to day academic activities and establishes a smooth flow of information between the students and faculty. Separate softwares are available for fee payment, hostel bookings, hall ticket generation, transport booking, etc.,

Vel Tech has about 3500 network connections covering more than thirty buildings across the campus. Computer Maintenance Cell (CMC) is responsible for running the Intranet and Internet services. CMC is running the Firewall security, Proxy, DHCP, DNS, web and application servers and managing the network of the campus completely.

The user can access the IT resources for academics, research, knowledge updating and gaining information related to Vel Tech through proper authentication. Each user accessing from inside campus will be given individual Login credentials. Through that the user can access the Internet. Additionally they can also access the softwares such as Hostel Management System (HMS)/ V- learn/ Exam management system/ Payment Gateways for Fee payments/ official e-mail through the college website. Microsoft Teams is available for the Online teaching learning process.

All hostel students can use free wifi facility at their hostels only for academic purpose. However, Vel Tech ensures minimum 98% availability of the network except during natural calamity/disaster times. Free SIM cards are given to all administrative officers of the Institution.

Vel Tech CMC team has the rights to verify Vel Tech owned end devices and its operational conditions at any time.

File Description	Document
Upload any additional information	[View Document](#)

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

Response: 4:1

File Description	Document
Upload any additional information	[View Document](#)
Student – computer ratio	[View Document](#)

4.3.4 Available bandwidth of internet connection in the Institution   (Leased line)

Response: A. ?1 GBPS

File Description	Document
Upload any additional information	[View Document](#)
Details of available bandwidth of internet connection in the Institution	[View Document](#)

Other Upload Files	
1	[View Document](#)

4.3.5 Institution has the following Facilities for e-content development

1. **Media centre**
2. **Audio visual centre**
3. **Lecture Capturing System(LCS)**
4. **Mixing equipments and softwares for editing**

Response: A. All of the above

File Description	Document
Upload any additional information	[View Document](#)
Institutional data in prescribed format	[View Document](#)
Links of photographs	[View Document](#)

4.4 Maintenance of Campus Infrastructure

4.4.1 Average percentage expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component during the last five years

Response: 21.84

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

2020-21	2019-20	2018-19	2017-18	2016-17
1079.66	2102.83	1990.75	1579.19	1532.33

File Description	Document
Upload any additional information	[View Document](#)
Institutional data in prescribed format	[View Document](#)
Audited statements of accounts	[View Document](#)

4.4.2 There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc.

Response:

Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology has a wide range of buildings, classrooms, laboratories, playgrounds, dining halls and other common amenities. A separate section named as Maintenance & Services (M&S) section is available under the control of a Professor designated as Head (M&S). It has a well understood procedure to maintain the facilities in the campus in order to ensure that facilities are utilised properly and effectively.

The main objective of the M&S section is to monitor and ensure the optimal utilization of various resources for the smooth conduct of teaching learning process.

The M&S section has qualified engineers, executive engineer, maintenance supervisors for all technical divisions, electricians, plumbers, computer maintenance staff, carpenters, AC mechanics, housekeeping staff, civil engineers etc., who will attend the repairs and maintenance works immediately while the complaints are raised. As per the nature of the maintenance works, the M&S section categorizes the works as Major work and Minor works. The M&S section will solve the minor maintenance issues within one hour to two days and will solve the major maintenance issues within one week to fifteen days.

Scope of the M&S section:

- Ensures the maintenance of Institution buildings, infrastructure, electrical, plumbing, air conditioning, Sewage Treatment Plant, RO water plants, guest house and common areas.
- Ensures to keep the classrooms, laboratories, faculty cabin, non-academic areas like gyms, rest rooms, auditorium, cafeteria, and play grounds clean and hygiene.
- Disposes the waste materials in proper ways that are collected from various places.
- Renovation, interior painting, mechanical & civil works and repair of furniture & water lines are also their part of services.
- Maintains a complaint register for the complainant to enter the type of faults so that the M&S section will resolve all the issues in a timely basis.
- Annual maintenance contract is executed with the authorised vendors for UPS, Generators, Turnstile gates, CCTV camera systems, passenger lifts, etc.

Responsibility and Nature of work:

S. No.	Type of Maintenance & Services	Locations	Responsibility	Nature of Work
1	Cleaning	**Academic Area:** Classrooms, Laboratories, Libraries, Vice Chancellor office, Registrar office, CoE Office , office of Deans, HoDs and Faculty Cabins, Auditorium **Non-Academic Area:** Dining Hall, Cafeteria, Corridor, Toilets, Lawn **Common Area:** Ground, Gym, RO Plant, STP, Security Office	Housekeeping Supervisors	Ensures the cleanliness and hygienic nature.
2	Electrical	**Academic Area:** Classrooms, Laboratories, Libraries, Vice Chancellor office, Registrar office, CoE Office , office of Deans, HoDs and Faculty Cabins, Auditorium **Non-Academic Area:** Dining Hall, Cafeteria, Corridor, Toilets, Lawn, Lift **Common Area:** Ground, Gym, RO Plant, STP, Security Office	Maintenance Supervisor-Electrical Supervisor	Repairs and replacement of light, fan, switch box, electrical cables, motors, AC, etc.
3	Computer systems & Networking	Classrooms, Laboratories, Libraries, Vice Chancellor office, Registrar office, CoE Office , office of Deans, HoDs and Faculty Cabins, Auditorium **Non-Academic Area:** Dining Hall, Cafeteria, Corridor **Common Area:** Security Office	Maintenance Supervisor-CMC / System Admin	Monitoring and Maintenance of computer system and networking devices, Internet facility, CCTV
4	Plumbing	**Academic Area:** Classrooms, Laboratories, Libraries, Vice Chancellor office, Registrar office, CoE Office , office of Deans, HoDs and Faculty Cabins, Auditorium **Non-Academic Area:** Dining Hall, Cafeteria, Corridor, Toilets, Lawn **Common Area:** Ground, Gym, RO Plant, STP, Security Office	Maintenance Supervisor-Plumbing in-charge	Monitoring and Maintenance of water distribution system
5	Gardening	Lawn and Tree Maintenance	Maintenance supervisor-Garden in-charge	Monitoring and Maintenance of green environment, trimming of tree, lawn and plants.
6	Civil repair and maintenance, Construction, repair of Furniture , repair of lab equipment etc.	**Academic Area:** Classrooms, Laboratories, Libraries, Vice Chancellor office, Registrar office, CoE Office , office of Deans, HoDs and Faculty Cabins, Auditorium **Non-Academic Area:** Dining Hall, Cafeteria, Corridor, Toilets, Lawn **Common Area:** Ground, Gym, RO Plant, STP, Security Office	Maintenance Supervisors-and concerned lab in-charges and technicians	Monitoring and Maintenance of civil repairs, carpentry repairs etc.

Maintenance and Service Department aims at optimum utilization of various resources in the campus through Preventive Maintenance and Breakdown Maintenance. Housekeeping supervisors are available to oversee the cleaning of classrooms, roads, common places, classroom tables etc. Sufficient securities are located at the gates of the campus, hostel and the places wherever necessary.

The horticulture team comprising of a garden supervisor and gardeners will maintain the gardens in the campus. The sewage treatment plants in all the hostels are maintained by the civil engineer. The classrooms are maintained by the staff under the control of HoDs and they will inform the M&S section for any maintenance and services issues and it will be rectified immediately. Scrap disposal is carried out periodically throughout the year.

The website of the Institution is maintained regularly by a separate web-admin team under the control of the Registrar. Also, the Registrar will obtain the mandatory certification to ensure the safety of systems deployed in the campus such as building safety, electrical safety, fire safety and lift safety.

File Description	Document
Upload any additional information	[View Document](#)

Criterion 5 - Student Support and Progression

5.1 Student Support

5.1.1 Average percentage of students benefited by scholarships and freeships provided by the institution, Government and non-government agencies (NGOs) during the last five years (other than the students receiving scholarships under the government schemes for reserved categories).

Response: 65.1

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

2020-21	2019-20	2018-19	2017-18	2016-17
4338	7714	5641	3877	1885

File Description	Document
Upload self attested letter with the list of students sanctioned scholarship	[View Document]
Upload any additional information	[View Document]
Institutional data in prescribed format	[View Document]
Link for additional information	[View Document]

5.1.2 Average percentage of students benefited by career counseling and guidance for competitive examinations as offered by the Institution during the last five years.

Response: 65.34

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

2020-21	2019-20	2018-19	2017-18	2016-17
8702	5178	3547	3706	2679

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

5.1.3 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. Awareness of trends in technology

Response: A. All of the above

File Description	Document
Institutional data in prescribed format	View Document
Any additional information	View Document
Link to Institutional website	View Document
Link for additional information	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
Upload any additional information	View Document
Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee	View Document
Details of student grievances including sexual harassment and ragging cases	View Document

5.2 Student Progression

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

Response: 75.37

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

2020-21	2019-20	2018-19	2017-18	2016-17
87	14	18	16	6

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

2020-21	2019-20	2018-19	2017-18	2016-17
101	19	23	19	11

File Description	Document
Upload supporting data for the same	[View Document](#)
Institutional data in prescribed format	[View Document](#)
Any additional information	[View Document](#)
Link for additional information	[View Document](#)

5.2.2 Average percentage of placement of outgoing students during the last five years

Response: 30.16

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

2020-21	2019-20	2018-19	2017-18	2016-17
1071	563	234	221	163

File Description	Document
Upload any additional information	[View Document](#)
Self attested list of students placed	[View Document](#)
Institutional data in prescribed format	[View Document](#)

5.2.3 Percentage of student progression to higher education (previous graduating batch).

Response: 13.35

5.2.3.1 **Number of outgoing student progressing to higher education.**

Response: 305

File Description	Document
Upload supporting data for student/alumni	[View Document](#)
Institutional data in prescribed format	[View Document](#)
Any additional information	[View Document](#)

5.3 Student Participation and Activities

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

Response: 72

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

2020-21	2019-20	2018-19	2017-18	2016-17
4	25	9	24	10

File Description	Document
Institutional data in prescribed format	[View Document](#)
e-copies of award letters and certificates	[View Document](#)
Any additional information	[View Document](#)

5.3.2 Presence of Student Council and its activities for institutional development and student welfare.

Response:

Student Council of the Institution provides an exceptional opportunity to the students from different schools of the Institution with their representation in various aspects of decision making, academic and

administrative committees. This empowers the **leadership skills**, **nurtures the life of students** in all its fullness, sets it on the path of excellence and brings a better academic environment. The suggestions of student coordinators are highly valued with regard to policy making for student activities.

The Student Council will enhance communication among students, administration, faculty and parents. It promotes an environment conducive to educational and personal development and promote friendship and respect among students. The Council meets every month to support the effective administration of students and faculty in the development of the Institution.

Anti-ragging Central Committee is another Institutional body with student coordinators who establish measures for prohibiting, preventing and banning ragging menace on and off campus in accordance with AICTE and UGC regulations, Supreme Court directives and State act.

The Institution has established **Sensitization, Prevention and Redressal of Sexual Harassment** committee to combat all forms of discrimination against girl students and to take proactive steps towards gender sensitization and abolishment of sexual harassment.

Student Amenities and Hostel Committee – The student representatives with nominated faculty members visit canteens and hostels to monitor the quality and hygiene of the foods and collect feedback from the peers.

Vel Tech Clubs include Literary club, Music club, Creative arts club, Dramatics club, Photography & short film shooting club and Classical dance club. All religion & national festivals, and sports activities are conducted to imbibe national integration.

VISAI, an International Project Competition and Exhibition from Engineering themes to Sustainable Development Goals is conducted for two days every year. **Lavaza, an annual cultural and Technical intercollegiate event** is conducted for two days involving all the students exhibiting their leadership, creativity, technical and interpersonal skills.

National Cadet Corps with students are encouraged in the institute to develop the leadership, character, comradeship, spirit of sportsmanship and the ideal of service among the students.

National Service Scheme is also emboldened in the institute enabling the student to participate in social service activities like organizing blood donation, rural health & sanitation, adult education, and environmental awareness camps in the neighboring areas as a social responsibility. The Institution has **Swachh Bharat** scheme through which the students and staff members participate in the **Cleanliness Drive** regularly in and around the institution campus, and also involve in special cleanliness drive in selected villages.

Unnat Bharat Abhiyan scheme engages faculty and students of the Institution in community activities such as adopting a number of villages in consultation with the District Collectors for the development activities to improve the social and economic well-being of the rural communities.

The progress of the Institution is achieved with the collective involvement of students and faculty through **professional societies** such as IEEE, IET, CSI, ACE, EWB, SEDS, SAE-INDIA, ICI and TSF.

File Description	Document
Upload any additional information	[View Document](#)
Link for additional information	[View Document](#)

5.3.3 Average number of sports and cultural events / competitions organised by the institution per year

Response: 17.6

5.3.3.1 **Number of sports and cultural events / competitions organised by the institution year - wise during the last five years.**

2020-21	2019-20	2018-19	2017-18	2016-17
6	21	16	19	26

File Description	Document
Upload any additional information	[View Document](#)
Report of the event	[View Document](#)
Institutional data in prescribed format	[View Document](#)
Link for additional information	[View Document](#)

5.4 Alumni Engagement

5.4.1 The Alumni Association / Chapters (registered and functional) contributes significantly to the development of the institution through financial and other support services.

Response:

Vel Tech Alumni Association is registered under the Tamil Nadu Registration of Societies Act with Registration no. 374 of 2014 dated 21st July 2014.

The institution believes in creating and maintaining relationships with its alumni from different parts of the world and acts as a bridge among alumni, current students, and the almamater. Vel Tech alumni are dynamic, taking up various lofty positions worldwide, proving their mettle in diverse fields of Technologies, Sciences, Management, etc. Presently, we have 15273 Alumni in India and other countries. Vel Tech Alumni Association supports and ensures a lifelong nexus with the institute.

There are 31 chapters, among which 09 are overseas chapters around the world like Singapore, France, Germany, etc., and 22 are regional chapters.

University Governance

Vel Tech alumni act as a member in statutory and non-statutory bodies like the Board of Studies and the Internal Quality Assurance Cell (IQAC). More than twelve alumni including Mr. Arjun (CSE-2014), Program Analyst in CTS, Chennai, are involved in the departments' Board of Studies; Mr. Vinoth Rajagopal, Project Manager in Mphasis, Chennai, serves as an alumni member in Vel Tech IQAC.

Vel Tech Alumni Mentorship

This program provides alumni working at MNCs worldwide with the opportunity to share their professional and personal experience and expertise with the vibrant group of current Vel Tech students. The connections made in the program enable the institution to prepare the current students towards a prosperous future.

Career Guidance

The college alumni network is one of the essential sources of placement opportunities for current students. Recently, Mr. Vasantha Raman, one of our alumni, working as Director in Donyati India Pvt Ltd, recruited eight students for his company.

Alumni Scholarship

Vel Tech alumni provide Alumni Scholarships to economically downtrodden students based on their merits. Alumni support a diverse range of scholarship recipients to inspire current students. Our Alumni, Mr. Abiman of 2006 batch, General Manager in Bin Muqadam Enterprises LLC, Oman, contributes INR 20,000 every year.

Curriculum Development

Alumni working in various companies worldwide, are fully conscious of cutting-edge technologies and sciences, provide suggestions and feedback that aid to revise the syllabus / introducing new courses such as Cloud Computing, Internet of Things, Deep Learning, Blockchain Technologies, Data Science using Python, Hacking Technologies, Artificial Intelligence, and Python Programming.

Alumni-student Interaction

Alumni-Student Interaction programmes are conducted in which our Alumni enlighten the students in various aspects such as career guidance, higher studies, and competitive exams. The following table gives the number of interactions arranged in Vel Tech.

2020-21	2019-20	2018-19	2017-18	2016-17
42	25	21	7	24

File Description	Document
Any additional information	[View Document](#)
Link for additional information	[View Document](#)

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

Response: C. 20 Lakhs - 50 Lakhs

File Description	Document
Any additional information	[View Document](#)
Link for any additional information	[View Document](#)

Criterion 6 - Governance, Leadership and Management

6.1 Institutional Vision and Leadership

6.1.1 The institution has a clearly stated vision and mission which are reflected in its academic and administrative governance.

Response:

The governance activities of the Institution are clearly reflected in the Vision and Mission statement of the institute. The Vision and Mission statements are:

Vision

"To create, translate and disseminate frontiers of knowledge embedded with creativity and innovation for a positive transformation of the emerging society."

Mission

"To nurture excellence in teaching, earning, creativity and research; translate knowledge into practice; foster multidisciplinary research across science, medicine, engineering, technology, and humanities; incubate entrepreneurship; instill integrity and honor; inculcate scholarly leadership towards global competence and growth beyond self in a serene, inclusive and free academic environment."

The vision and mission statements of the institute, approved by the Board of Management have developed a conducive, committed educational and work environment for teaching, learning, innovation, and research, outline the goals to be achieved at different stages of progress.

The Vice-Chancellor constitutes various statutory bodies and Non-statutory bodies such as,

1. Board of Management
2. Academic Council
3. Planning and Monitoring Board
4. Finance Committee
5. Other non-statutory bodies

The Vice-Chancellor as the Chairman convenes the meetings for the above bodies, and is responsible for holistic development, maintaining high standards, reinforcing the culture of excellence in teaching-learning, research, collaborations, career development, and social outreach programmes.

The Dean Academics in consultation with Deans and Heads of the Department will initiate the process of curriculum design in line with the vision and mission of the Institution, syllabi revision as per the emerging needs, the conduct of Board of Studies, Academic Council, and prepares the academic calendar for the smooth functioning of all academic activities.

The academic governance of the Institute ensures that the academic objectives are implemented effectively in order to satisfy the need of the Industry and Institution. The following are the signature activities under academic governance:

- Teaching-Learning reforms have been introduced with CBCS and CDIO framework ensuring academic flexibility.
- Introduction of new programmes in emerging areas
- Innovations through funded research projects, quality publications, patents, industry-linked projects for the period of nine months, and consultancy work
- Semester abroad programmes
- Establishing Centre of Excellence in emerging areas

The administration of the Institute ensures transparency and provides the better systems of governance. In all decision making participatory style of management is practiced.

- The Registrar is responsible for the supervision and management of all administrative and operational functions under the direct control of the Vice-Chancellor. The Registrar shall enter into agreements, sign documents, and authenticate records on behalf of the institution.
- The Controller of Examinations is responsible for preparing the calendar of examination, smooth conduct of Semester End Examinations and timely publication of results.
- E-governance is implemented in Administration, Finance and Accounts, Examination, and Students Admission & Support.
- All the Statutory Committees and Non-Statutory committees are in place to ensure proper governance in academics and administration.
- Employee wellbeing is ensured through adequate safety measures and welfare schemes.

Besides, continuous improvement is ensured through regular systematic audits, and monitoring by well-defined quality assurance procedures.

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

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

Response:

The Institute practices participative management and decentralization in all activities with a balance between transparency and confidentiality ascertained through their representation in appropriate regulatory bodies. Each of the functionaries viz., Registrar, CoE, Deans, and HoDs have specific roles and responsibilities, confining to the Bye-Law of the institution.

Participative Management

The Institute promotes a culture of participative management by involving all the faculty, staff, and students in various activities. The suggestions are validated to improve the overall excellence of the Institute.

Case Study: Annual Budget Preparation

- The notification will be sent to all the Deans and Head of the Department/Sections to prepare the department/section-wise annual budget estimate under the different budget heads specified in the notification.
- Deans will convene the meeting with Heads to discuss the requirements of the respective department for the preparation of proposed budget.
- The Head of the Department/Section will convene the meeting with all the faculty and staff to inform them to submit the requirement for the next financial year.
- Faculty and staff have the freedom to propose budget for their Lab and classroom requirements.
- All the academic and Administrative budgets will be consolidated by the Registrar and it will be submitted to the Vice-Chancellor for consideration.
- This proposed budget will be placed before the members of the Finance committee by the Finance Officer in the Finance committee meeting for consideration and approval.
- The recommended budget will be approved by Board of Management subsequently.

Decentralization

Case study: Design of Curriculum and Syllabus

The support administrative system consisting of various committees and cells were constituted for carrying out various activities involved in the program curriculum, implementation, and better attainment of POs/PEOs. The chief administrator is the Head of the Department and is assisted by the Program Coordinator to coordinate the activities of all the committees and cells constituted. The various committees

are Program Advisory Committee, Program Curriculum Committee, and Module coordinator/course coordinators.

Department Advisory Committee is constituted with members from Alumni, Industry, Academia, and Management. These members are generally eminent and experienced in their fields. Their advice is taken while key decisions are made for improving the program or the Department as a whole. Their input is also vital in establishing Program Educational Objectives /Program outcomes and periodic review of the Program including curriculum design.

Program Advisory Committee (PAC):

The Program Advisory Committee constituted with Head of the Department (Chairman), Program Coordinator (Convener) and Senior faculty members (Members). The PAC is responsible for coordinating activities related to accreditation. Those include PEO, PO and Curriculum review process, and formulation of assessment methods, various survey mechanisms and also coordinating with other committees. The committee conducts students exit survey to collect the outgoing graduate's feedback on the quality of the program.

Program Curriculum Committee (PCC):

Program Curriculum Committee studies recommendations of various international and national professional societies (ACM/IEEE) regarding the Computer Science and Engineering Curriculum. Also takes input from the other committees regarding the needs of the stakeholders while formulating the Curriculum. This committee is responsible for defining the composition of the courses in the curriculum, credit distribution and contact hours. The Committee prepares the draft curriculum and places before the Board of Studies (BoS) for suggestions on modifications and their approval. All Course Coordinators are members of this committee. The Program Curriculum Committee constituted with Head of the Department (Chairman), Program Coordinator (Convener) and Senior faculty members (Members).

Module coordinator/course coordinator:

Responsible to implement, assess and review of the Course content. This committee collects the evaluation and recommendation sheets from the respective faculty of all courses. Course coordinator also responsible for collecting the Course survey (Indirect) from students at the end of the course through the concerned faculty member. Based on the recommended actions by the faculty regarding the possible review of the course content the committee consults the Program Accreditation committee and Program Curriculum Committee for incorporating any modifications for improvement.

The Course Assessment and Evaluation Committee constituted with Head of the Department (Chairman), Program Coordinator (Convener) and all Course Coordinators (Members).

The below figure describes the process of curriculum design.
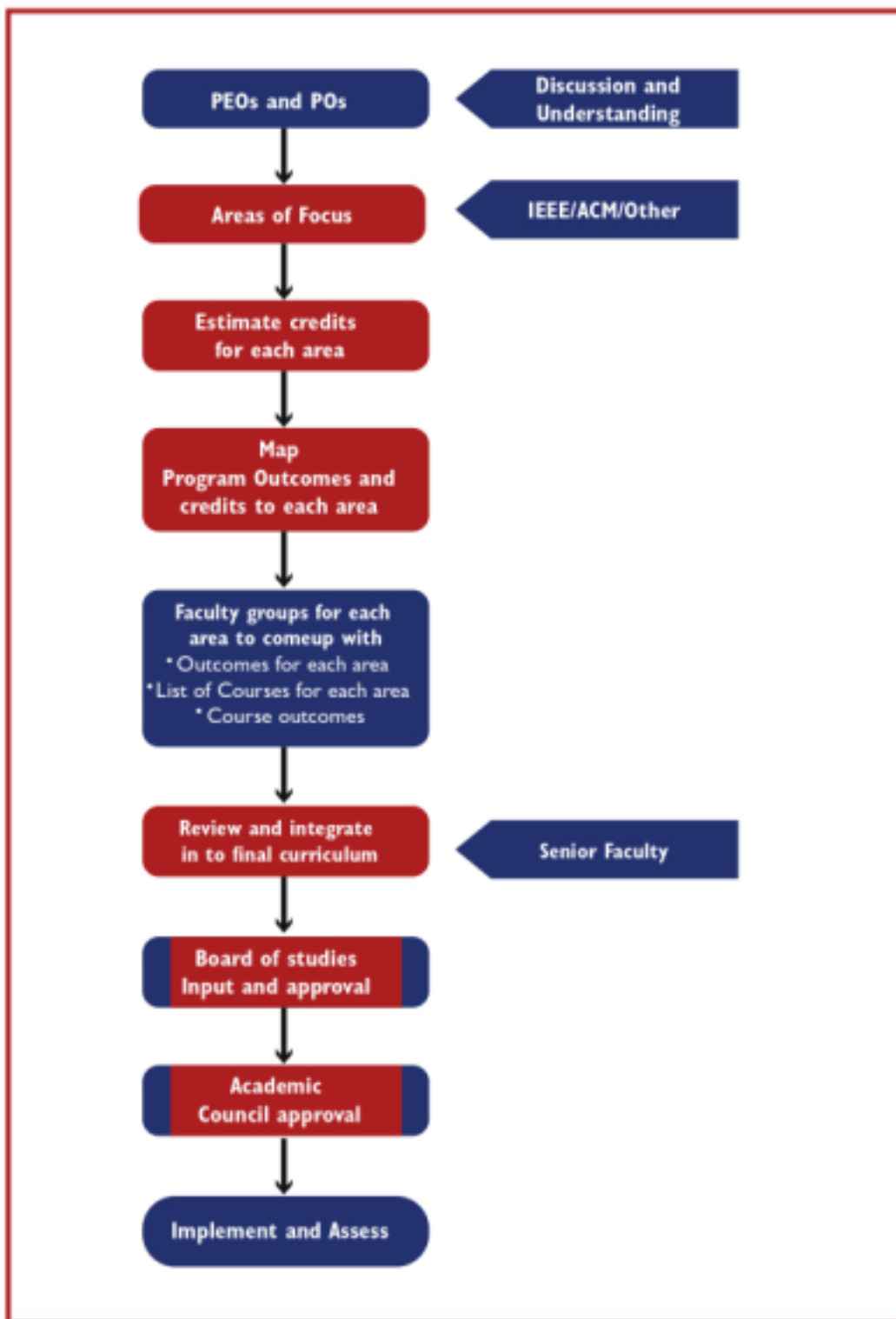
After finalizing the curriculum in BoS and ACM, the handbooks with detailed syllabus are printed and distributed to all the students and faculty.

File Description	Document
Any additional information	[View Document](#)
Link for Additional Information	[View Document](#)

6.2 Strategy Development and Deployment

6.2.1 The institutional Strategic plan is effectively deployed.

Response:

Keeping the vision and mission of the Institute, the five year Strategic Plan was prepared for the **enhancement in Teaching Learning** with introduction of new Programmes in different Domains and **excellence in Research, Innovation and Entrepreneurship** by faculty and students. Subsequently, there were effective improvements.

Enhancement in Teaching-Learning:

All the faculty members of the institution underwent OBE training workshops. As a result, six B.Tech. Programmes were accredited by NBA. Program evaluation, a part of the faculty appraisal system are conducted regularly. To improve the faculty teaching competence, the institute started a faculty peer learning community called the "Teaching Developers Initiative" (TDI). It comprises 15 passionate faculty members to enhance the faculty teaching competency. The TDI has been modeled to create an encompassing movement towards enhancing the teaching skills of faculty members, through peer learning. Every Friday, the members of TDI meet and discuss various active/participative/experimental/experiential learning methods. They share their classroom experiences which in turn help the fellow faculty members to implement the methods effectively.

The New Programmes in B.Sc. (Multimedia), B.Sc. (Visual Communication), B.Com.L.L.B., B.A.L.L.B., B.B.A., B.Com., M.Sc. Programmes in Maths, Physics, Chemistry, Data Science and M.A. in English were started. The programmes in the emerging domains such as B.Tech. in Artificial Intelligence & Data Science, Artificial Intelligence & Machine Learning, and Computer Science & Design were also introduced.

Excellence in R&D

The strategic plan comprises review, evaluation, reporting, and re-planning. The faculty members pursuing Ph.D. are financially supported, encouraged with incentives to publish in Scopus and SCI indexed journals, Seed money is provided to faculty for carrying out their research ideas, 100 % financial grant is given for filing the patent for Faculty and Students. The following points clearly show the improvement when compared to the status in the year 2016.

- 500 faculty participated in various FDPs
- The provision of research lab facilities improves the quantity and quality of publications, patents, and sponsored research projects through multi-disciplinary research.
- Improvement in Scopus publication from 1,268 to 4,749 research papers, h-index from 98 to 112 and Citations from 24,487 to 41,985.
- Improvement in Web of Science publication from 422 to 1,929 research papers, h-index from 44 to 59, and Citations from 5,779 to 14,602.
- 76 funded projects worth INR 50 Crore
- 14 patents granted out of 114 published and 141 filed

- 30 research awards
- Increased number of MoUs with Industries from 105 to 178, and International Universities from 82 to 162
- 90% of the students undergo Inplant Training / Internship, 70% of the students carry out their major projects in industries and 120 students undergo international internships every year
- International Professors visited to deliver Short term Courses increased from 12 to 132
- Faculty with Ph.D. increased from 97 to 326
- Improved PhDs awarded from 18 to 119
- Conducted 183 innovation, entrepreneurship, and IPR events
- Established NIDHI Centre of Excellence with funding of INR 23 Crore

File Description	Document
Any additional information	[View Document](#)
Strategic Plan and deployment documents on the website	[View Document](#)

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

Response:

A well-defined organizational hierarchical structure with functionaries exists in the institution in order to process and incorporate good governance with a set of policies and guidelines for various specific and demarcated activities involved in the areas of Academic, Administration, Financial, Admissions, Research, Consultancy, Auditing, etc.

1. Examination Manual
2. Scholarship policy
3. Reservation policy
4. SOP for Student Related Fees
5. Service rules and HR policy
6. Innovation and start-up policy
7. Research policy
8. Consultancy policy
9. Intellectual Property Rights policy
10. Internal Audit Manual
11. Information Technology policy
12. Maintenance policy

Administrative Setup

The highest governing body of the institution is Board of Management with the Vice Chancellor as the Chairman of the Board. The Board of Management of the institution is independent of the sponsoring body with full autonomy to discharge its academic and administrative responsibilities.

The Chancellor of the institute is appointed by the sponsoring body who monitors the initiatives to attain the vision and mission of the institution. The Chancellor presides over the convocation of the Institution.

As per the UGC rules, the Vice Chancellor is appointed by the Search-Cum-Selection-Committee (SCSC), approved by the Board of Management as per the UGC rules. The Vice Chancellor is the Principal Executive Officer of the Institution and he exercises overall supervision of the institution.

The Registrar is the administrative head of the institute and is the ex-officio Secretary of the Board of Management, the Academic Council and the Planning and Monitoring Board. The Registrar is responsible for the smooth conduct of all administrative activities such as maintenance of records, official correspondence, and convening meetings. He represents the institution in all official meets and legal pursuits apart from being the custodian of the official records.

The Controller of Examinations is a statutory officer, who is responsible for the conduct of examinations and publication of results.

The Finance Officer is responsible for the preparation of annual budget estimates and statements of accounts for submission to the Finance Committee and the Board of Management.

The Academic structure comprises the Deans of Seven schools followed by the Heads of the various departments and the faculty members of the departments.

S. No.	Role	Responsibilities
1	Dean (Academics)	Monitors and coordinates the student academic activities
2	Dean (Research and Development)	Coordinates the research and development activities of the institution
3	Dean (Internal Quality Assurance Cell)	Ensures the quality enhancement and sustenance of the Institution with regard to academic, administration and research activities, compilation and submission of data to reputed Ranking Agencies
4	Dean (Research Studies)	Monitors and coordinates the activities of academic research programmes
5	Dean (Industry Relations and TBI)	Coordinates the Industry Institute Relations, Consultancy projects, Innovation & Entrepreneurship activities
6	Dean (Campus to Corporate)	Coordinates the student Training and Placement activities
7	Dean (Campus Life)	Monitors and coordinates all the extension activities such as NCC, NSS, UBA, sports and cultural events
8	Dean (HRDC)	Coordinates Human Resource Development activities of the institution
9	Dean (Hostels)	Monitoring and ensuring student discipline in the hostels, redressal of grievances of the hostel students
10	Dean (International Relations)	Coordinates international relation activities, such as Undertaking MoUs with Institutions and universities abroad, student exchange programme and semester aboard programmes

The statutory committees are constituted as per the guidelines of the UGC.

- Academic Council to discuss and finalize the academic activities
- Planning & Monitoring Board to monitor the developmental plans
- Finance committee for approving the budget and financial related activities

Besides the statutory committees, non-statutory committees were also constituted to prevent ragging, sexual harassments, redress the grievances of the faculty members, non-teaching staff, and students. These committees function towards the welfare of the stakeholders, maintain peace and harmony in the campus.

File Description	Document
Any additional information	[View Document]
Link to Organogram of the University webpage	[View Document]

6.2.3 Institution Implements e-governance covering following areas of operation

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

Response: A. All of the above

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

6.3 Faculty Empowerment Strategies

6.3.1 The institution has a performance appraisal system, promotional avenues and effective welfare measures for teaching and non-teaching staff .

Response:

The institution has well established system of appraisal, promotion and effective welfare measures for both teaching and non-teaching staff members.

PERFORMANCE APPRAISAL SYSTEM & PROMOTIONAL AVENUES

Teaching Staff

The institution adopts a self-appraisal system for reviewing the performance of faculty which is developed based on the Academic Performance Indicator given by UGC. The newly joined faculty becomes eligible for appraisal after one year of service. The review for performance appraisal is conducted for faculty

members for annual increments.

The Faculty Appraisal System consists of four criteria which are further bifurcated into essential & desirable categories.

1. Teaching, Evaluation and Learning contributions
2. Professional, Co-curricular, and Extension activities
3. Research, Publication, Consultancy, and Development
4. Other institution-building activities

A 360-degree feedback forms the core of the faculty appraisal system. Students' Feedback on the course handling faculty is sought at the end of every semester, which is also reflected in the appraisal.

The self-appraisal reports duly filled by the faculty along with HoD's recommendation are audited by a panel consisting of institutional experts.

The eligible faculty members present their performances to the panel.

Apart from the Teaching-Learning documents, the following details were also verified during the appraisal.

- Course file
- Record maintained for Laboratory courses
- Minutes of Module Coordinator / Course Coordinator meeting
- Projects guided
- Research Project
- Publications
- FDP/Workshop attended
- Mentoring
- Events Co-ordinated
- Examination Records
- Involvement in extensional service
- Placement /Alumni association

Based on the performance in the appraisal, the annual increment and career advancement will be granted.

Non-teaching Staff

- The performance appraisal includes a confidential report by the reporting officer/ HoD/ Dean, which would be scrutinized by the HR-Head & the Registrar.
- The final approval would be granted by the Vice-Chancellor.

The confidential report essentially includes the following attributes:

1. Willingness and initiation to do work
2. Completing the assigned work in the stipulated time
3. Realizing the responsibility
4. Number of leaves availed during the period including loss of pay

5. Any negative remarks
6. Attitude in workplace

Effective Welfare Measures

The various measures implemented for the welfare of the teaching and non-teaching staff include the following, but are not limited to:

- Various categories of leave including Casual, Earned, Medical, Maternity, Special, and Study Leave
- Social security benefits viz., Gratuity, EPF, Group Health Insurance, etc.,
- ESI facility for non-teaching staff
- Quarters at subsidized tariff for the Faculty
- Bank, ATM, Canteen, Free In- house medical and Ambulance Facilities
- Faculty Recreation Club
- Celebration of multicultural festivals
- Summer and Winter vacations for eligible members
- Mother's Fund Contribution
- Recurring Deposit Contribution
- Registration Fee, TA/DA for attending conferences and presenting projects to Funding Agencies
- Revenue Sharing in consultancy projects
- Long Service Allowance for faculty working for more than 10 years
- Reimbursement of IPR Filing Charges
- Rewards for Best Teaching, Best Research, and Life Time Achievement
- Concession in tuition fees in Vel Tech group of institutions for the wards of the faculty
- Interest-free advance of two months salary and loan on EMI basis from social welfare fund

File Description	Document
Any additional information	[View Document](#)

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

Response: 60.53

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

2020-21	2019-20	2018-19	2017-18	2016-17
109	309	397	382	287

File Description	Document
Details of teachers provided with financial support to attend conferences, workshops etc. during the last five years (Data Template)	[View Document]
Link for Additional Information	[View Document]

Other Upload Files	
1	[View Document]

6.3.3 Average number of professional development / administrative training Programmes organized by the institution for teaching and non-teaching staff during the last five years.

Response: 53.8

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

2020-21	2019-20	2018-19	2017-18	2016-17
87	56	63	37	26

File Description	Document
Details of professional development / administrative training Programmes organized by the University for teaching and non teaching staff (Data Template)	[View Document]
Any additional information	[View Document]
Link for Additional Information	[View Document]

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

Response: 53.33

6.3.4.1 **Total number of teachers attending professional development Programmes, viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes year wise during last five years**

2020-21	2019-20	2018-19	2017-18	2016-17
391	361	358	215	120

File Description	Document
IQAC report summary	[View Document](#)
Details of teachers attending professional development Programmes during the last five years (Data Template)	[View Document](#)
Any additional information	[View Document](#)

6.4 Financial Management and Resource Mobilization

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

Response:

Being a self-Financial Institution / Deemed to be University, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology meets the expenditures with the student fees, which is the major source of income.

To meet out the imminent requirements for research and teaching learning resources, the institutuion mobilizes its resources also through:

1. Funded projects
2. Research projects
3. Funds generated through consultancy
4. Industry linked laboratories & Centre of Excellence
5. The Alumni, who also provide financial and non-financial support for various activities in the Institution.

Apart from the above, funds are also mobilized through;

1. Fee collected by organizing the FDP, conferences, workshops, etc.,
2. Leasing out the infrastructure facilities to various commercial utility facilities for students, faculty members and officials of the Institution such as banks (Bank of Baroda), Canteen, Cafeteria etc.,
3. The funds are generated as a result of interest accrued, overhead charges from the research fund received from various funding agencies and funding from alumni donors.
4. Hostel fee collected from the hostellers

The funds generated from these resources are used for maintenance and development of the Institution.

Optimum utilization of funds:

1. Funds are allocated prominently for teaching-learning practices besides induction and orientation programs, workshops, inter-disciplinary activities, training programs, Refresher Courses, Faculty Development Programs, Conferences, Industry Academia interactions ensuring quality education

2. The internal audit committee examines the necessity and usefulness of the requirement and ensures the optimal utilization of funds before recommending for approval

3. For the purpose of purchase, the internal purchase committee negotiates with the suppliers and vendors to reduce the purchase costs

4. Budget is utilized to meet day-to-day operational and administrative expenses and maintenance of fixed assets

5. Upgradation of lab facilities in various departments and Centre of Excellence are being setup with the specific allocation of funds to promote research facilities in the Institution

6. Some funds are allocated for social service and co-curricular activities as part of social responsibilities through NSS and NCC

7. For optimal utilization of various equipment in the labs, the institution promotes the culture of inter-department sharing of resources

8. Minimal use of electricity, water, and energy by deploying suitable check points to save the excessive amount spent for their purposes

9. Institution uses energy saving technologies through installation of solar plants on concessional rates

File Description	Document
Any additional information	[View Document](#)

6.4.2 Funds / Grants received from government bodies during the last five years for development and maintenance of infrastructure (not covered under Criteria III and V) (INR in Lakhs).

Response: 1573.19

6.4.2.1 *Total Funds / Grants received from government bodies for development and maintenance of infrastructure (not covered under Criteria III and V) year wise during the last five years (INR in Lakhs).*

2020-21	2019-20	2018-19	2017-18	2016-17
6.42	129.77	0	1437	0

File Description	Document
Details of Funds / Grants received from government bodies during the last five years (Data Template)	[View Document](#)
Any additional information	[View Document](#)
Annual statements of accounts	[View Document](#)

6.4.3 Funds / Grants received from non-government bodies, individuals, philanthropists during the last five years (not covered in Criterion III and V) (INR in Lakhs)

Response: 181.54

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

2020-21	2019-20	2018-19	2017-18	2016-17
11.61	31.56	61.21	39.35	37.81

File Description	Document
Institutional data in prescribed format	[View Document](#)
Any additional information	[View Document](#)
Annual statements of accounts	[View Document](#)

6.4.4 Institution conducts internal and external financial audits regularly

Response:

INTERNAL AUDIT

- The institution periodically conducts internal and external financial audits.
- The institution has qualified Chartered Accountants who carry out the internal audits to ensure all procedures and guidelines set by the management are adhered to financial transactions.
- As a part of the internal audit, critical processes like Admission, Payroll, Procurement, Fixed asset Management, Accounting transactions and statutory compliance are reviewed.

The review consists of:

- Admission Process Review
- Scrutiny of application process, short listing process, fee norms, merit scholarships offered
- Payroll Review
- Reviewing of recruitment process, Induction process, Training of newly appointed staff, performance appraisal of teaching and non-teaching staff
- Procurement
- Review of operating expenses, vendor selection process, Purchase Oder processing, Advance Cash accounts, Goods receipt and Invoice verification
- Fixed Asset Management
- Annual stock verification, Asset records, Depreciation charges, and CAPEX
- Financial Accounting
- Review of payable accounts, receivable accounts, General Ledger records, Cash and Bank Balances, Financial Statements of the year
- Revenue Recognition
- Verification of various fee receipt categories including tuition fees, examination fees, transport fees, hostel fees and other incomes

- Statutory Compliance
- Verifying mandatory contributions like PF & Gratuity, Mediclaim remittances, GST and payment as per labour laws

EXTERNAL AUDIT

- The external audit is carried out by the Statutory Auditor.
- The consolidated annual financial statement of accounts of the Institute is audited and certified by statutory auditors.
- Th audited account statement is placed before the Finance Committee and then to the Board of Managerment for the approval.
- The approved audited account statement is placed in the Institution website once in the year.

File Description	Document
Any additional information	[View Document](#)
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 by constantly reviewing the teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals.

Response:

The Internal Quality Assurance Cell (IQAC) was established on September 9, 2013. Having celebrated the achievement of National Accreditation and Assessment Council (NAAC) with 'A' grade during 2015, the Institution had reconstituted the IQAC committee as per the guidelines of NAAC on December 31, 2015 and subsequently two more reconstitutions have been done on December 13, 2018 and February 18, 2021 respectively.

The IQAC accelerates its functions towards quality enhancement and sustenance in all activities viz. several strategies in the areas of Teaching-Learning, Evaluation, Research, Co-curricular and Extra Curricular activities.

Institutionalized Practice I

Processes followed to improve quality of Teaching & Learning Adherence to Academic Calendar

- Institution Academic Calendar is prepared well in advance before the start of academic year which is disseminated through website highlighting the winter and summer vacation and State Government holidays.

- The academic calendar provides date of commencement of the academic session, duration of semester, period of continuous internal assessments, end semester examinations and last instructional day.

- Adhering to academic calendar, course instructors/coordinators prepare course plan and Teaching-Learning materials well in advance, conduct continuous assessment and evaluation, and maintain analytic records of courses.

- Course instructors are given freedom of conducting seminars, assignments, quiz, and assessments as desired by faculty members.

Laboratory classes are intrinsic part of an engineering course and the experience gained by the students will enhance them as independent learners, critical thinkers and researchers. The objectives for enhancement in laboratory experiences are augmenting understanding of course content, developing practical skills, improving scientific reasoning and enhancing teamwork abilities. Primarily, it is an improvement with regard to conducting an experiment, recording observations and analyzing an experimental data.

Progress of each course is monitored by Course/Module coordinators through series of seven meetings (theory and integrated courses) and three meetings (laboratory courses) in a semester, with the presence of course handling faculty members and Head of the Department, with well-defined agenda points for each meeting to ensure the execution of course plan and best laboratory experiences respectively.

Theory Course- Module Coordinators Meeting Schedule

Meeting No.	Schedule	Important points to be discussed
1	Conducted before the commencement of semester after course allocation is done	Content delivery and assessment methods, Lecture plan, Guest Lecture/ Industrial visit/ workshops etc., Identification of the requirement of learning resources.
2	Conducted after 15 days of the first meeting	Verification of 1st unit Course materials as per course plan, Discussion on the preparation of Assignment sheets, Question Bank for competitive exams/ GATE etc., the readiness of Course Orientation Presentation/ material.
3	Conducted after the completion of first unit as per academic calendar	Verification of completion of syllabus with respect to the lesson plan, Course materials for the unit –II & III; Analysis of Students Performance in Unit Test-1, Online Students' feedback and any other issue.
4	Conducted after the completion of second unit as per academic calendar.	Verification of completion of syllabus with respect to the lesson plan, Course materials for the unit –IV & V; Analysis of Students Performance in Assignments.
5	Conducted after the result announcement of Mid Term test -1	Analysis of Midterm Test -I performance, Attainment of Course outcomes based on the Unit Test-1, Midterm Test-1 and assignment
6	Conducted after the completion of fourth unit as per academic calendar	Verification of completion of syllabus with respect to the lesson plan, Analysis of Students Performance in Unit Test 2, Online Students' feedback and any other issue, Discussion on the Design of Course exit survey to be deployed at the end of the semester.
7	Conducted after the declaration of end semester exam results	Analysis of Course Outcome attainment based on the Direct Assessment and Course exit survey, Identification of the changes/ improvements to be brought in terms of course content/ syllabus and content delivery based on the Course Outcome attainment/ Course exit survey. Discussion on the identification of the faculty "FDP" requirements based on the Course Outcome/ course exit survey attainment level. Reviewing on the Quality of CIA and End semester Examination Question papers.

Laboratory Course- Module Coordinators Meeting Schedule

Meeting No.	Schedule	Important points to be discussed
1	Conducted before the commencement of semester after course allocation is done	• Reviewing list of the experiments. • Modifying the experiments (should record the modifications with proper justification). • Frame the experiments such that at least one experiment must be a design experiment. • Verification of lab course outcomes and lab manuals. • Identification of infrastructure facilities and other requirements.
2	Conducted after the model practical examination- 1	• Action taken report of the previous meeting. • Verification of lab observation book and record notebook. • Verification of model exam-1 results, assessment analysis, outcome analysis and Feedback from students. • Follow up of lab experiments, identification of gaps and rectification.
3	Conducted after the result declaration of end semester exam	• Action taken report of the previous meeting. • Verification of lab observation book and record notebook. • Feedback from students. • Verification of semester end examination result, model exam results, assessment analysis and outcome analysis. • Identification of gaps and rectification. • Servicing of the equipment's and replacements if any.

Institutionalized Practice II

- The two best innovative teaching and learning methods employed in the institution are **Outcome Based Education** and **Choice Based Credit System** where the focus of education has shifted from the educator to learner and also flexibility in choosing programs/courses. These practices encourage learners to accomplish all fundamental graduate attributes and ensure continuous professional development and lifelong learning skills.

Nowadays, bringing and retaining the engineering students in the conventional classrooms is a big challenge prevailed internationally. The solution, pronounced by the learning scientists is Teaching-learning, should be transformed as Learning by facilitation which happens in a space wherein students will learn actively with peers. The institution had established seven such active learning hives and faculty members have been facilitating students towards collaborative and cooperative learning through Blended Learning, Problem Based Learning, Peer Instruction, Jig-saw, Think-Pair-Share, Concept Test, Mud card, Gallery Walk and flipped classroom.

File Description	Document
Any additional information	[View Document](#)
Link for Additional Information	[View Document](#)

6.5.2 Institution has adopted the following for Quality assurance 1. Academic Administrative Audit (AAA) and follow up action taken 2.Confernces, Seminars, Workshops on quality conducted 3. Collaborative quality initiatives with other institution(s) 4.Orientation programme on quality issues for teachers and students 5. Participation in NIRF 6.Any other quality audit recognized by state, national or international agencies (ISO Certification, NBA).

Response: A. Any 5 or more of the above

File Description	Document
Upload e-copies of the accreditations and certifications	[View Document](#)
Upload details of Quality assurance initiatives of the institution (Data Template)	[View Document](#)
Any additional information	[View Document](#)
Paste web link of Annual reports of University	[View Document](#)

6.5.3 Incremental improvements made for the preceding five years with regard to quality (in case of first cycle), Post accreditation quality initiatives (second and subsequent cycles).

Response:

Academic Initiatives

- Choice-Based-Credit-System(CBCS) has been implemented since 2015 in-line with Outcome Based Education (OBE) and its objectives.
- Curricula and course syllabi are continuously updated by considering the Stakeholders' input.
- Regulations were revised incorporating NEP 2020 guidelines.
- Adoption of new concept in education called "**Conceive-Design-Implement-Operate" (CDIO)** approach which includes provisioning of **Engineering Workspaces** to support and encourage hands-on learning of products, processes, system building, disciplinary knowledge, and social learning.
- Improvement in Quality of academic process and documentation via regular academic audit by external and internal experts
- The industry-institute interaction is blended in our curriculum with industries such as WABCO India Pvt. Ltd., GARC and ARAI.
- Students are facilitated for better attainment of learning outcomes through E-resources available at library, Active Teaching-Learning process, Practical integrated theory courses, Industry-Institute Higher Learning courses, etc.
- Lifelong learning and career development skills of students are improved through MOOC and Skill Certification courses
- V-Learn Course Management(MOODLE based) are implemented for Course registration, Student attendance, course eligibility, assignment submission, continuous assessment, course material sharing made transparent and accessible in real-time
- G-Suite / Microsoft Teams applications are used for Online Classes, discussion forums and exams
- 24X7 Wi-Fi facility with bandwidth of 3Gbps

Innovation and Start-up Promotion

- Established NIDHI Centre of Excellence with funding of INR 23 Crore
- NIDHI PRAYAS grant of INR 7 Crore for establishment of PRAYAS Shala and Idea to Prototype grant

- MeitY awarded TIDE 2.0 Centre to support ICT innovation with grant of INR 1.5 Crore
- Admitted 226 budding entrepreneurs
- Conducted 183 innovation, entrepreneurship and IPR events
- ARIIA ranked 5th in 2019, 8th in 2020 and Excellent Band in 2021 for Institution's Innovation achievements
- Granted Start-up India Seed fund scheme with INR Five Crore
- Strategic partner with Stanford, Amazon, Google and various National Banking sectors for helping Start-ups.

Industry, Research and Extension Aspects:

- 500 faculty participated in various FDPs organized by reputed institutions/ Industries with financial support
- Provision of research lab facilities, seed money and monitory benefits to the faculty improves both quantity and quality of publications, patents and sponsored research projects through multi-disciplinary research.
- 30 Research awards
- Hosted Smart India Hackathon for three years (Hardware and Software editions)
- 90% of students are undergoing Inplant Training / Internship every year
- 70% of students undergo Major Project in Industry
- 120 Students per year undergo International Internships

S. No.	Description		Improvement in last 5 years	
			2016	2021
1	Publications	Scopus	1,268	4,749
		Web of Science	422	1,929
2	h-index	Scopus	98	112
		Web of Science	44	59
3	Citations	Scopus	24,487	41,985
		Web of Science	5,779	14,602
4	MoUs with Industries		105	178
5	MoUs with International Universities		82	162
6	No. of Faculty with PhD. Qualification		97	326
7	No. of PhDs Awarded		18	119
8	No. of International Professors visited to deliver Short Term Courses		12	132
9	Consultancy works		5	50
10	Patents		18 filed	14 granted out of 114 published and 141 filed
11	Funded Projects		54 projects with grant of INR 23 crore	76 projects with grant of INR 50 Crore which include Foreign collaborative funding for Indo-Korea, Indo-Taiwan and Indo-Canada
12	Extension activities		68	163

Rankings and Recognitions

- Band 251-300 in The Young University Rankings 2022 by Times Higher Education (THE) Rankings
- Band 601-650 in QS Asia University Rankings 2022
- Diamond University Rating awarded by QS I•GAUGE
- Top hundred position in 'NIRF India Ranking' under engineering category in a row of five years.

File Description	Document
Any additional information	[View Document](#)

Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

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

Response:

The institution has taken several gender equity initiatives and as a result, 35% of women are employed in our campus. Approximately 15 % of the total students are females.

The Institution takes utmost care in the areas of safety, security, counseling, common rooms represented by the following initiatives.

SAFETY & SECURITY

- The entire campus is covered by electronic surveillance through CCTV cameras covering office areas, classrooms, and corridors
- Round the clock security officers are posted for the entire campus
- SPARSH, an exclusive committee is constituted to prevent any kind of harassment, especially to girl students
- Classes are also being organized on a regular basis to teach self-defense
- All outsiders need to make an entry in the visitor's book and be allowed with a visitor's pass
- Medical facilities are arranged for girl students on the campus as well as in the respective hostels
- 24x7 Ambulance service is available for any medical emergency
- Adequate seating capacity for boys and girls are provided in Canteen areas
- Dean (Hostels) has been appointed who oversees the functioning of Gents and Ladies hostels
- Each hostel consists of Chief and Deputy Wardens who take care of student discipline
- Ladies hostel is strategically located within the main campus
- Students who travel by bus are provided with separate ID cards to be produced on demand by authorities.
- Parking facilities are available for students' vehicles

COUNSELING

- The institution follows a Mentor-Mentee system wherein mentees are allotted to faculty mentors who help in the areas of academics and guide them in making their career choices
- The mentors play a vital role in making students choose the elective courses for registration and enrollment in every semester.
- Mentoring sessions are conducted periodically to ensure the well-being of the students
- The Institute has a Counseling center headed by a qualified counselor through whom the students can get free counseling for any issues

COMMON ROOMS

- The common rooms are available for boys and girls separately in all academic blocks, as well as, in the hostels.

- Various facilities including a good ambiance & internet connections are provided in the common rooms.

OTHER INITIATIVES

- The IEEE women Engineering unit of Vel Tech monitors various programs and initiatives taken with regards to women empowerment and welfare activities
- To ensure gender equity in all academic and co-curricular activities, the Institution organizes the following type of co-curricular activities
- Women Employability Program
- Special workshops for women faculty to enhance their teaching skills
- Women Hygiene: A grooming seminar for girl students
- Woman's Day Celebration
- Mother's Day Celebration
- Soft Skill training programs
- Guest Talk sessions on Women Empowerment
- Sports meet exclusively for Women
- Health Awareness campaigns for Women
- Financial Literacy Program for Women

File Description	Document
Specific facilities provided for women in terms of: a.Safety and security b. Counselling c. Common Rooms d. Day care center for young children e. Any other relevant information	[View Document](#)
Annual gender sensitization action plan	[View Document](#)

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

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

Response: A. 4 or All of the above

File Description	Document
Geotagged Photographs	[View Document](#)
Any other relevant information	[View Document](#)

7.1.3 Describe the facilities in the Institution for the management of the following types of

degradable and non-degradable waste (within 500 words)

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

Response:

This institute is committed to follow sustainable practices in order to build and maintain a green campus and to adopt zero waste discharge.

SOLID WASTE MANAGEMENT (SWM)

- It is practiced to convert the waste generated at the campus, by way of segregation as organic waste, recyclable waste, and converting the same into another reusable form
- The Collected and segregated waste will be unloaded at the waste processing yard and processed as per SWM management practices
- Recyclable waste is further segregated and disposed of through vendors on need basis
- Bio-degradable waste is duly composted and used for gardening purposes
- Sanitary napkins waste is safely disposed of using disposable machines
- Food waste is appropriately disposed
- Several SWM training and awareness programs are conducted
- The institution has partnered with ITC for effective collection of waste papers and convert into green forms

LIQUID WASTE MANAGEMENT

- The Institution has set up 7 nos. of Sewage Treatment Plants (STP) of 1000/500 KLD capacity.
- The sewage is characterized by presence of organic, inorganic solids.
- The chain of treatment is aimed to remove such pollutants from the wastewater so that it can be effectively reused.
- The treatment system consists of preliminary, Primary, and Secondary The Eco-Bio Bricks helps in the attachment of bacteria in the treatment system and help in the better removal of organic content from the wastewater.
- The STP is maintained regularly. Treated water is used for landscaping and flushing purposes

E-WASTE MANAGEMENT

- All obsolete electrical and electronic wastes are disposed of as e-waste to vendors for proper destruction, without damaging the environment, and certificates are obtained
- Electronic waste that is disposed of includes TVs, Computer Monitors, Printers, Scanners, Keyboards, Mouse, Phones, Fax, Photocopy machines, cables, memory chips, motherboard, compact discs, cartridges, etc.,
- Hazardous E-wastes are handed over to the authorized processors and a certificate of destruction is obtained.

- SOP is in place for handling the e-waste.
- The Institution ensures that generated e-wastes are not disposed of, along with the other solid wastes generated.
- The institution has partnered with a company for effective collection and disposal of all the E-wastes.

BIOMEDICAL WASTE MANAGEMENT

The biomedical waste management plan has been effectively implemented in the department of Biotechnology. The biomedical waste has been segregated onsight and disposed by the industry associated with the instituion.

OTHER ENVIRONMENT-CONSCIOUS INITIATIVES

- Being a proactive and environment-conscious organization, the Institution adopts rainwater harvesting system to save water
- Divyangjan Friendly Campus
- Plastic-Free Campus
- Paperless Office
- Pedestrian Friendly roads
- Green Landscaping

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

7.1.4 Water conservation facilities available in the Institution:

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

Response: A. Any 4 or all of the above

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

7.1.5 Green campus initiatives include:

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

Response: A. Any 4 or All of the above

File Description	Document
Various policy documents / decisions circulated for implementation	[View Document](#)
Geotagged photos / videos of the facilities	[View Document](#)
Any other relevant documents	[View Document](#)

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

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

Response: A. Any 4 or all of the above

File Description	Document
Reports on environment and energy audits submitted by the auditing agency	[View Document](#)
Certification by the auditing agency	[View Document](#)
Certificates of the awards received	[View Document](#)
Any other relevant information	[View Document](#)

7.1.7 The Institution has disabled-friendly, barrier free environment

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

reading material, screen reading

Response: B. 3 of the above

File Description	Document
Policy documents and information brochures on the support to be provided	[View Document](#)
Geotagged photographs / videos of the facilities	[View Document](#)
Details of the Software procured for providing the assistance	[View Document](#)
Any other relevant information	[View Document](#)

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

Response:

This Institution has always been at the forefront of sensitizing students to the cultural, regional, linguistic, communal and socio economic diversities of the state and nation. The salient features of the activities in progress to promote and maintain peace and tranquility of the institutional campus are summed up as follows:

1. The NSS and the Unnat Bharat Abhiyan (UBA) Cell of this Institution are working together with the people of rural India in identifying development challenges and evolving appropriate solutions.
2. The teams of the student volunteers from NSS and UBA are constantly having touch with the nearby villages Morai, Vellanur, Veerapuram, Kollumedu undertaking the rural development works such as cleaning the footpath / roads leading to the villages under the rural community enhancement and development scheme.
3. The honourable Founder and Chairman, a philanthropist always think in the positive ways to promote the welfare of the people in the village and eradication of their poverty by all possible means. Essential Medicines, clothes and food are distributed to them through the NSS wing.
4. During the first wave of COVID 19, around 12,000 Kg of the wheat flour bags were distributed to the poor villagers residing at the nearby villages of this Institution. In one such incident on 30.04.2020, the wheat flour bags were distributed in the presence of Tahsildhar of Avadi in order to help the poor villagers during lockdown period.
5. Most of the administrative employees of this Institution are from the nearby villages and the Institution, not only takes care of them but also their wards to give better education by providing admissions to their children in the schools run by the management.
6. The students are admitted to this institution of the basis of the merit and reservation rules of the Government. The process of admissions is done in a transparent manner and unbiased manner with demarcated guidelines and procedures of this Institution.
7. The students in this Institution are from all the parts of the country and abroad. having varied culture and traditions. Therefore, it has been emphasized for adoption of the principle " Unity in diversity" to respect the cultures, religious values, linguistics, social and economic status of all the

students hailing from different regions to make all of them feel secured and contended, facilitating communal harmony.

8. The recruitment and promotions of the teachers and non-teaching staff are done as per the norms and guidelines of this Institution in an unbiased manner, given due consideration of the Government reservation rules and policies.

9. There are curriculum courses under the value education category promoting rich cultural heritage and human values.

10. The SC/ST cell takes care of enhancing the diversity among the students, teaching and non-teaching staff population and at the same time elimination the perception of discrimination.

File Description	Document
Supporting documents on the information provided (as reflected in the administrative and academic activities of the Institution)	View Document
Any other relevant information	View Document

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

Response:

- The institute in its nascent stages of inception had envisioned contributing to Nation Development, mainly by 1)Advancement of technology of scientific and industry of our country and 2)Enriching the knowledge of the vast human capital of our country by Teaching and Learning on par with excellence.

- The institute involves and trains students and faculty and makes them participate in National Schemes like Swachh Bharat and International Yoga Day. Also, the institution contributes to Renewable Energy Sources and E- waste management.

- The institute promotes education through critical comparison, development of systems with understanding of personal, social, and professional responsibility, and as indispensable access to all segments of society.

- The institute provides an unparalleled opportunity for an all round development, well-proportioned education for effective living and for citizenship. The institute works with innovation towards national aspirations and contemporary developments and needs and yet maintains a balanced multidisciplinary approach.

- The institute interfaces with society through extramural, extension and field research related programmes with academic excellence. Every action is as a result of the conviction that it is in the interest of the nation and the institution will be able to contribute towards national development.

- The professors who are highly qualified and ethically strong professionals have contributed to the pool of human resources of the country every year.

- The Centres of Excellence in the Institute like Telecom Centre of Excellence, Centre of Excellence for Design, Centre of Excellence for Cyber Security, Vel Tech Technology Business Incubator, Centre of Excellence National Instruments, show that the institute is equally keen on improving the current practices of the industry which are important for nation's development.

- The institute has received several projects funded by various government sponsoring agencies such as DST, DRDO, CSIR, etc.,
- The institution is also involved in collaborative activities with International research institutes and universities which is strong indication of the institution's contribution to nation building.

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

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

Response: A. All of the above

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

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

Response:

It has been a regular practice of the Institution to celebrate all National festivals in a befitting manner, as the same would have positive influence, on the next generation of our country.

The **Matribhasha Diwas** is celebrated every year in our campus on 22nd February, to commemorate International Mother Language Day – a Day dedicated to promoting awareness of Linguistic and Cultural Diversity and Multilingualism. The programme with the different performances are displayed by the students, staff, and faculty in different languages. The Essay Writing Competition, Debate, Traditional dance competition, Solo singing competitions were conducted to the students, and prizes were distributed to the winners. The students were made aware of the importance of Multilingual and multicultural societies existing through their language which transmit and preserve traditional knowledge and cultures in a sustainable way.

The **Constitution Day**, also known as '**Samvidhan Divas**', is celebrated in the Instituion on 26th November every year to commemorate the adoption of the Constitution of India. The Institution observes the day by organising events involving staff and students particularly from the school of Law. The

prominent speakers, who are expertise in constitional and human rights are invited as Guests to deliver lectures on democratic behaviour, Indian tradition, mythology, religion and practices, fundamental principles of Constitution etc. in order to create awareness. The students use to read the Preamble of the Constitution during that particular day, which is concluded with the National Anthem.

The Independence Day & Republic Day celebrations are conducted in the traditional way, in which, the Student Toppers from UG & PG will hoist and unfurl the national flag respectively. This practice is one of the best practice, to honor the meritorious student in our institution. The event will be attended by students, supporting staff, scholars & faculty members and guest performances of the students, highlighting the history of our country would be arranged.

Teacher's day - 5th September: Teachers' Day is a special day for the appreciation of teachers, and may include celebrations to honour them for their special contributions in a particular field area, or the community. We are organizing Teachers' Day Celebrations to felicitate teachers who obtain higher qualifications and recognize other academic achievements.

Engineers day - 15th September: The institute conducts Engineers' day celebrations every year on 15th September i.e., Sir Mokshagundam Visvesvaraya birth anniversary. During the celebrations, the students are encouraged to participate in various competitions, and prizes are given to the winners. This event increases creative thinking in the young minds of engineering students.

National Sports Day: It is celebrated on 29 August every year to commemorate the birthday of Indian hockey legend Major Dhyan Chand. On this day, the Mini Marathon competition has been organized and prizes are distributed to the winners.

Several social awareness programmes like blood donation, tree plantation, saving the environment, making a pollution-free campus, etc., are organized.

The festivals like Diwali, Christmas, and Ramzan have been organized involving all the stakeholders of this institute. Other popular festivals of our country such as Pongal, Onam, Ugadi, Dussehra, Ganesh Chaturthi, RakshaBhandan, and Holi are celebrated in true spirit and with the participation of a good number of students and staff members.

File Description	Document
Geotagged photographs of some of the events	[View Document](#)
Any other relevant information	[View Document](#)
Annual report of the celebrations and commemorative events for the last five years	[View Document](#)

7.2 Best Practices

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

Response:

Best Practice I

TITLE OF THE PRACTICE

PROMOTING TRANSLATIONAL RESEARCH AND ENRICHMENT OF RESEARCH QUALITY

OBJECTIVES OF THE PRACTICE

- To promote the visibility of the institute by establishing centers of excellence, state-of-art facilities, interdepartmental and translational R & D activities
- To protect innovations through IPR Cell and encourage researchers to participate in outreach activities
- To serve as a facilitator for Interdisciplinary-Integrative research approaches with Industry-Academia and National-International research network set-up
- To create awareness regarding research funding, grant writing, research ethics, data analysis, and management among researchers through training, lectures, and by sharing E-learning resources
- To inspire faculty with incentives towards research activities and providing seed grants
- To warrant the quality and integrity of innovations in research accomplishments as per the Code of Practice for Research

THE CONTEXT

The National Education Policy (NEP) focuses on developing a robust ecosystem of multidisciplinary research in Higher Educational Institutions (HEIs). The thrust areas such as biotechnology, machine learning, artificial intelligence, energy, and 3D printing need to be focused for enhancing the R&D scope of our country. The societal challenges such as providing clean drinking water, sanitation, improving air quality, and infrastructure monitoring are to be addressed effectively with high-quality interdisciplinary research. The overarching aim of NEP is to enable a culture of research to pervade through HEIs across our nation. As per the UN agenda, contribution towards Sustainable Development Goals (SDGs) through research, teaching, and practical activities is the need of the hour. Thus, the institute addresses the need for NEP and SDGs by investing in the development of quality resources, manpower, technologies, and anchoring multi-stakeholder practices.

THE PRACTICE

- Centres of Excellence (CoE) in Manufacturing, Artificial Intelligence & Machine Learning, and WABCO CoE are established to promote research in cutting-edge technologies
- IPR cell helps the students and faculty members to file patents, designs, copyrights, and trademarks
- The Institute provides funds to the faculty members for filing provisional patents and supports until the patent is granted
- Seed grant is provided to the faculty members to perform preliminary research, procurement of research equipment, software, and other research activities
- The institute provides funds to the faculty members for participating in national and international conferences, workshops, symposiums, and seminars
- Incentives for publications, funded projects, patents granted, and books published

- 171 MoUs were signed with various Industries/ Research Institutes and 171 International universities and organizations have entered into agreements to promote research collaboration
- Doctoral committee meetings are regularly conducted and codes of ethics are strictly followed to enhance the Ph.D. research quality
- 183 workshops are conducted for Innovation, IPR, Entrepreneurship, and Design thinking during the last five years
- Special sessions on "How to write a project proposal" have been conducted to the faculty members for improving their grant writing skills in-line with funding agency requirements
- Research discussions and interactive sessions are organized with scientists from DRDO, ISRO, CSIR, UNIDO, Central Silk Board, Horticulture research institutes and other renowned organizations for getting collaborative funded projects
- Active industrial discussions with WABCO, TAFE, Daimler and TVS groups, etc., for promoting Industry-Academic research
- Collaboration with the Indian Council of Agriculture Research–Central Institute of Brackish Aquaculture to help Aqua sector farmers in enhancing feed conversion ratio of vannamei shrimps
- Interdisciplinary research (Bio-Technology, Computer Science, and Mechanical) in collaboration with Delhi University for identification and 3D mapping of seaweeds using drones on the coast of Odisha and development of added-value products from seaweeds
- Under DBT and DST AgroTech funded projects with productive collaboration from Central Silk Technological Research Institute Bengaluru, and IIT Chennai, researchers of our institute are able to develop industry-ready products which are able to cater to the needs of the textile, environment, and food sectors
- Development of SWARM of UAVs for landslide monitoring, infrastructure inspection, water, and air quality measurement to satisfy the need of SDGs

EVIDENCE OF SUCCESS

- 24 Research Projects worth INR 636 Lakh funded by DBT, DRDO, DST, ISRO, SERB, Central Power Research Institute, and TNSCST are ongoing.
- h-Index is increased from 98 to 112 in Scopus and from 44 to 59 in Web of Science.
- Citations are increased from 24487 to 41985 in Scopus and from 5779 to 14600 in the web of science.
- The number of publications is increased from 1268 to 4749 in the last five years.
- IPR cell has filed 141 patents in which 14 are granted and 114 are published.
- Over 20 research labs are fully functioning at Research park with active Industry-Academia collaboration.
- High-speed bearing test facility developed with GTRE funding of INR 188 Lakh is well utilized for testing the bearing of HAL, CVRDE, and GE.
- In the last five years, 119 PhDs were awarded and 159 JRFs / SRFs / Research Associates are involved in various research projects and activities.
- Received INR 180 Lakh from Non-Govt. agencies and INR 700 Lakh from Govt. agencies for Research in the last five years.
- A seed fund of INR 300 lakh was provided to faculty members for promoting various research activities in the last five years.
- Procured research equipment worth INR 50 Lakh under various funding agencies to enhance research in Algal Biotechnology, green pesticides, development of smart fibers, and natural foaming agents.
- International research collaboration: Indo-Canada addressed inspection of bridges and heritage

structures, Indo-Korea focused on water quality monitoring using drones, and Indo – France focused on the development of Electric Bike.

- The accomplishment of various Rankings: ARIIA – Excellent Band, QS Asia: 601-650 Band, THE Impact Ranking for SDG 9 (Industry, Innovation, and Infrastructure): 201 -300 Band

PROBLEMS ENCOUNTERED AND RESOURCES REQUIRED

- Few high-end analytical types of equipment are not available in our institute and the students and faculty members expect more centralized research facilities in pursuit of high-quality research. More funding is required to enhance the cutting-edge facilities. The institute is looking for FIST, MODROB, and other funding resources to enrich the research facilities
- Faced difficulties in supporting researchers to secure external funding for research projects in line with our institute strategies. More interactive sessions for the faculty members are needed to understand the requirement of funding agencies.
- Collaborative research with industries to solve the real-time problems to be strengthened
- Frequent meetings with industry by visiting their premises to improve the Industry-Academia collaboration.

Best Practice II

TITLE OF THE PRACTICE

PROJECT WORK THROUGH PROBLEM-BASED LEARNING

OBJECTIVES OF THE PRACTICE

This practice provides students with tools for the independent acquisition of knowledge, skills, and competencies at an advanced academic level. During their studies, many students will have the opportunity to coordinate with external partners on the solution of scientific problems.

Intended outcomes of this "best practice": Students learn best when applying their research-based knowledge in their work with an authentic problem. At the same time, this practice supports students in the development of their communication and cooperation competencies, and in acquiring the skills required while taking an analytical and result-oriented approach. This practice enables students to work with contemporary issues that are relevant to their discipline or profession.

Underlying principles or concepts of this practice:

- THE PROBLEM as Point of Departure
- GROUP Work: The group work includes aspects such as knowledge sharing, collective decision-making, action coordination, and mutual feedback. Student groups also engage in close cooperation with their supervisor(s) and with external partners. (e.g. Businesses or other project groups).
- EXEMPLARITY: The exemplarity of the project ensures that through their project work, the students will acquire knowledge and competencies which are applicable in a wider context than that of the project itself.
- THE STUDENTS ARE RESPONSIBLE FOR THEIR OWN LEARNING ACHIEVEMENTS: The students themselves are responsible for their cooperation in the group, as well as for the organization of the learning process and the course outcome of the project.

- LEADS TO RESEARCH INITIATIVES AT VEL TECH: Success of student projects gives confidence to the industries to collaborate with Vel Tech for higher levels of works such as Consultancy/R&D works.

THE CONTEXT

Vel Tech team met the senior officials and made several visits to many of the industries, with whom we have collaborated to make them aware of this proposal and give them confidence that their problems can be addressed through student projects. To give confidence to the industries that these projects are not like routine Projects done for learning purposes as part of students' academic program, Vel Tech will work with them in getting the tangible results through student projects guided by Faculty members of appropriate specialization as required, so that it is a WIN-WIN situation for both. Hence, Vel Tech makes faculty members visit industries to understand the nuances and specific issues with reference to the problems. Each industry has its own technical problems/practices. Faculty training helps in guiding the students appropriately through periodical reviews and in getting tangible results.

THE PRACTICE

All progressive Industries work towards continuous improvements in their process and product development and in meeting this goal various functional teams are given tasks with the specific achievable target. Vel Tech approached these industries and assured them of positive results in the areas where they face problems. The problems are taken as problem-based student projects. The students work with the functional teams of the industries to study the process/product development, collect the required data, analyze and come up with solutions under the supervision of the faculty.

Generally, the duration of student projects is 3 to 4 months for B.E/B.Tech undergraduate students. But this period is so short, by the time the student gets to know the nuances, he will be under compulsion to complete the project within 3 months. The industries gave us feedback that the longer duration of the project will help intangible results.

Vel Tech revised the regulation to allow "Advanced Learners/Fast Learners " (who are able to complete all the courses within six semesters as per the Choice Based Credit System and earn the credit except the project work) for doing student projects of longer duration of 8 to 9 months commencing from June till March next year.

EVIDENCE OF SUCCESS

Wabco India limited, Sundaram Clayton Limited, India Pistons, Amalgamations Repco, Amco Batteries, Shardlow India limited, TVS Brakes India Limited, Larsen & Toubro Limited, are some of the leading industries that came forward to give Problems as student projects.

Harita Seating Systems limited, a Joint venture between Harita Seating Systems Limited and F.S.Fehrer Automotive GmbH, Germany specialized in manufacturing of PolyUrethane (PU) foam pads, two/three-wheeler seats, PUcomposites, MCU, and interior modules, identified the following Problems as Student Projects:

- Automation in the final inspection of seats for Yamaha, BMW, TOYOTA vehicles to identify the Wrinkle defects, Cut Pinhole, and Missing components by the installation of high precision

cameras to capture images and reduce manpower by more than 30 %.

- Testing method checking across plants and re-checking the foaming testing.
- Customer complaint action re-audit& new action identify across plants.
- Reduction of freight cost - TVSM project (Hosur) or Overall freight reduction at Chennai

Out of the above Projects, "Automation in the final inspection of seats for Yamaha, BMW, TOYOTA Vehicles to identify the defects" was given as a consultancy project for its implementation. The Vel Tech team has completed a special consultancy project given by Harita Team.

PROBLEMS ENCOUNTERED AND RESOURCES REQUIRED

Problems encountered are: Making aware of industries and giving assurance to industries that Vel Tech will work along with the industry by nominating Faculty of required specialization to get involved as a guide to the students to ensure the targeted outcome is achieved.

Faculty members guiding the students are motivated to successfully address any conflicts that arise during Project and to create synergies between different cooperation cultures by collaborating with external partners and engaging in interdisciplinary learning environments.

Vel Tech provides space for the students to work together in CDIO (Conceive, Design, Implement, Operate) Lab, which is available for doing Projects right from the first year onwards unlike other Institutions where Projects by students start much later. This CDIO Lab has computers, Mechanical/Electrical equipment, and software for students attending courses and project work.

File Description	Document
Best practices in the Institutional web site	[View Document](#)
Any other relevant information	[View Document](#)

7.3 Institutional Distinctiveness

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

Response:

Incubate Entrepreneurship

After the immediate recognition as Deemed to be University (under section 3 of the UGC act, 1956), one of the priorities of this institute is to inspire, engage and drive entrepreneurship skills among the students, faculty members and staff of the Institute.

In line with the institutional mission and national priority, the institution established the Technology

Business Incubator in the year 2010 with a view of promoting entrepreneurship to bring the campus born ventures. Vel Tech Technology Incubator is an institutional mechanism which is dedicated to support entrepreneurship, promoting new technological business ideas to become a growth-oriented startup. https://www.veltechtbi.com/

It supports startups by providing free incubation space with internet connection, mentoring support and networking support. The other strategic partner offerings are from Google Cloud credits, Amazon credits, ZOHO Apps for business, RBL/BOB/DBS bank account, Paytm, Resileo Labs, YNOS venture engine, Effitrac, Stanford Seed Spark, Wadhwani Foundation, Math works, Sri Ramachandra Hospital, Kauvery Hospital, Sales & Marketing, Training and Workshops. It offers facility support such as Manufacturing CoE, IT/ITES (Al/ML/DL - DGX - I Platform), E-Waste recycling, 3D Printing, PCB Line of Equipment, and Financial Seed Support. https://veltechtbi.com/index.php

Vel Tech Technology Incubator has been selected as "NIDHI - Centre of Excellence" catalyzed and supported by NSTEDB Division, Department of Science and Technology (DST), GOI with funding support to scale up its activities. It has also been approved by DST-NIDHI-PRAYAS, SEED SSS, MeitY TIDE 2.0, and SISFS. https://veltechtbi.com/index.php

Vel Tech TBI has the Incubation Space – 30,000 Sq.ft, Office Space – 8000 Sq.ft , Thrust area equipment, Space – 64000 Sq.ft, Conference room – 10,000 Sq.ft, Meeting room – 3500 Sq.ft, Our Thrust Area Equipment Space, CoE of manufacturing, E-waste and Plastic waste recycling facility, CoE of Design, Engineering & Manufacturing – Dassault Supported, CoE of Virtual Instrumentation facility – Supported by NI, Additive Manufacturing facility, CDIO Facility – Product development, CoE for Vehicle Control Systems – Supported by Wabco, CoE for SMD & SMT Technologies, CoE for AI, ML & DL – Supported by NVIDIA.

Vel Tech established various support services to provide handholding support to incubated startups,

- Mentoring for prototype, product development and commercialization
- In-house 3D Printing, PCB Design and fabrication, CNC machines and CDIO lab to support prototype development
- Start-up coach – experienced teaching faculty to mentor the product development
- Demo day/ support to incubatees to participate in technical events
- Industry connect to get expert advice

Functional Support - Legal Advice, H.R. Support, Marketing support

- Associated with Rajasekaran Associates for speedy IP/Legal advice
- IPR policy in place
- Mentoring support from Chennai Patent office/NRDC – Visag
- IP Adviser – Dr BK Sahu, VIZAG to advice incubated Startups
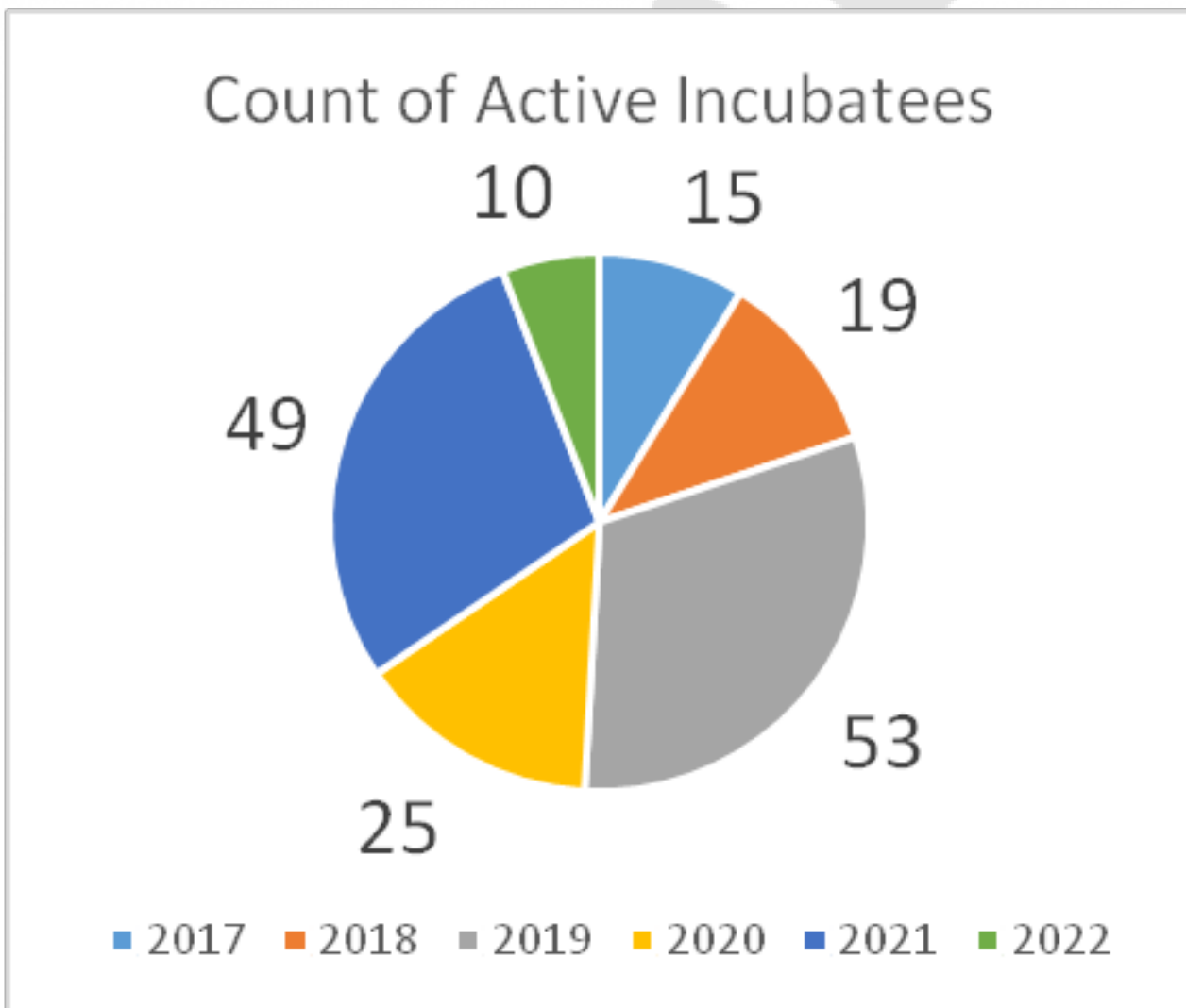- Regular events to educate Startups on importance of IP protection

Networking – Investor, Corporate, and Government

- Vel Tech TBI established wide industry associations for mentorship, technical support
- Knowledge Partner of EDII TN – Voucher Programme
- Associated with FICCI, SPIN, CII, ISBA.

- Partnered with Industry Association – ACMA, AIMA, SIDCO & TIDCO

Funding done by incubator into incubatees

- NIDHI PRAYAS Scheme –funded 28 idea stage startups
- DST – SEED Support Scheme supported 13 Startups to the tune of INR 200 Lakh
- EDII TN Voucher Programme – Funded One Startup worth INR 3.5 Lakh
- MeitY TIDE 2.0 Scheme - funded 4 idea stage startups

ATAL RANKING OF INSTITUTIONS ON INNOVATION ACHIEVEMENTS

Count of Active Incubatees

10 15 19 49 53 25

2017 2018 2019 2020 2021 2022

2019	Ranked 5th Position
2020	Categorized as 'Band A' institution (rank between 06-25) in category
2021	ranked "Excellent band"under University & Deemed to be University (Private/Self Financed) (Technical)

Achievements Since 2010

226+ Incubatees Registered, 50+ in Pre-Incubation	600+ members in Veltech TBI Ecosystem	45+ Mentors (International and National) / Startup Coaches 40+	15 Strategic Partners
32 IPs and 8 International Journal Papers	50+ Awards & Recognitions for Vel Tech TBI Incubatees	Best Incubator Award at Anna University, 2018	3 Major Programs of Govt of India being anchored by Vel Tech TBI
30+ Conferences as Host, Speaker, Exhibitors, Panelists, Delegates	8000+ people trained by Veltech TBI on various training programs, workshops	500+ permanent jobs and 1500+ temporary jobs created by Vel Tech TBI Incubatees	6 Thrust areas / Centers of Excellence created with state-of-the-art machines
15+ Event/Support Partners (Institutional Bodies/Association)	40+ Media Coverage & 100+ Social Media Imprints of Vel Tech TBI and Incubatees	13 Angel Investors and VC's as part of Investor Collaboration	Hackathons, Pitch-fests, Innovation Showcase, Demo days
Startups Total Revenue Generated (FY 2020-21) 4+ Crores	External Investments Raised 6+ Crores	Valuation of Startup 70+ Crores	External Entrepreneurs 90%
Startup Success Rate 30%	Stanford SEED SPARK program for South Asia - Veltech TBI is a big collaborator / Wadhwani Foundation - Regularly	2nd Biggest in Incubatee enrolment, Support, Job creation, Infrastructure etc. next to IIT Madras	Tie-up with SIDCO to help MSME/ Collaborated with major institutions like Institute of Directors, SPIN Chennai,
Veltech TBI start-ups getting global recognition (Startup grind, Google ventures, Forbes Magazine etc)	Collaborated with media like "The New Indian Express and Nanaya Vikatan"	Partnered with Industry Association – ACMA, AIMA, SIDCO & TIDCO	Knowledge Partner with EDII

File Description	Document
Any other relevant information	[View Document](#)
Appropriate web in the Institutional website	[View Document](#)

5. CONCLUSION

Additional Information :

Vel Tech aspires to be a multi-disciplinary and research-led institution with multiple schools across Engineering, Management, Law, Arts and Sciences. The institution is producing graduates with the depth and breadth of knowledge, skills, and attitudes that are required to lead in the 21st century. The impact of Vel Tech's contributions in the last 5 years are highlighted below.

- To provide learning opportunities to the economically poor students, the institution offers Mahatma Gandhi National Merit Scholarships ranging from 25% to 100% of the tuition fee to students
- The institution was accredited with 'A' grade by NAAC (3.17 CGPA) in the first cycle.
- CDIO-Engineering Workspaces are accessible to promote and stimulate hands-on learning of products, processes, system development, disciplinary knowledge, and social learning.
- Adoption of Outcome Based Education and Evaluation in line with the Washington Accord
- Experts from world-renowned premier institutions and top-tier industries visit Vel Tech regularly for academic and research-related discussions.
- Vel Tech's Research fellowships are given to full-time Ph.D. scholars. Financial incentives for the publication of research papers, consultancy & funded projects to the faculty, seed fund and 100% contribution to patenting fees, etc., have created a positive impact on research output.
- First private university received NIDHI Centre of Excellence recognition from Ministry of Science and Technology, Govt. of India.
- Vel Tech's Institution Innovation Cell received star rating (4.5 star in 2018-19, 5 star in 2019-20 and 4 star in 2020-21) from the Ministry of Innovation Cell, Govt. of India.
- In 2018, Vel Tech received the Guinness World Records certificate for the largest human image of a wheelchair accessibility symbol which consisted 1550 students.
- Partnered with NVIDIA to establish AI & ML- Centre of Excellence for the worth of INR 1.5 Crore
- Vel Tech Kabaddi (Men) team secured the remarkable achievement as runner-up in All-India Inter-University Kabaddi Men Tournament 2017, organized by the Association of Indian Universities
- S. Harini, Second Year Law Student and NCC Naval Wing Cadet of our institute brought the laurel by participating in Prime Minister Rally at New Delhi on the occasion of 73rd Republic Day Celebrations in January 2022
- First among the Top 10 performing institutions in AICTE-Eduskills virtual internship 2022

Concluding Remarks :

Vel Tech has a well-framed vision and mission, considering the needs of society. Best academics, state-of the-art-infrastructure, well-equipped laboratories, industry interaction, self-learning, co-curricular and extracurricular activities cater to the holistic development of the students and faculty.

The institute is proactive in meeting the demands and goals of the National Educational Policy, NEP-2020 in terms of **research and development**. The institute has active research collaborations with Industries and foreign Universities to enhance the activities in thrust areas such as Bio-Technology, Machine Learning, Artificial Intelligence, Data Science, Energy and 3D Printing. The institute also promotes United Nations' SDGs for which VISAI, an international project competition & exhibition is annually conducted by our institute to support this claim.

As an initiative of **skill development** stated in NEP, the institution provides hands-on training to the students through the facilities available at the Centres of Excellence established in association with the top-notch industries like WABCO, ARAI, Ashok Leyland, etc. Furthermore, the institute has established a Technology Business Incubator for motivating students to become entrepreneurs.

On par with national goals regarding **social engagement and life skills**, the institute organizes societal outreach events with the support of NCC, NSS, UBA, SB schemes, and student clubs. Also, Hackathons (Software and Hardware Editions) and SANDHAI are regularly organized to motivate students. The institute conducts value education courses with various extension activities to produce **socially responsible citizens** of our nation.

In recognition of **competitive excellence**, Vel Tech has received awards in the recent past, including Times Higher Education Rankings for the "Young University Rankings 2022", QS Asia University Rankings 2022 in the Band 601-650, ARIIA awarded for the "Innovation & Entrepreneurship Achievement" and Diamond University Rating awarded by QS I-GAUGE, University of the year 2020 by Higher Education Review, Outstanding Engineering Institute for Research and Innovation in 2020 and Outstanding University in Training and Placement in 2021 by Digital Learning.

The institute believes that the growth in academia and research activities, creating awareness on social and national issues, and contributions in terms of activities of relevance to the local community will fulfil the requirements of **SDGs** and **NEP-2020**.

6.ANNEXURE

1.Metrics Level Deviations

Metric ID	Sub Questions and Answers before and after DVV Verification
2.4.4	**Average percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government/Govt. recognised bodies during the last five years** 2.4.4.1. **Number of full time teachers receiving awards from state /national /international level from Government/Govt. recognized bodies year wise during the last five years** Answer before DVV Verification: 	2020-21	2019-20	2018-19	2017-18	2016-17
---	---	---	---	---
36	51	30	12	10 | Answer After DVV Verification : | 2020-21	2019-20	2018-19	2017-18	2016-17
---	---	---	---	---
19	23	19	6	8	 Remark : DVV has considered Only State, National and International level from Government/Govt. recognized bodies.
3.3.3	**Number of awards / recognitions received for research/innovations by the institution / teachers / research scholars / students during the last five years.** 3.3.3.1. **Total number of awards / recognitions received for *research* / innovations won by institution / teachers / research scholars / students year-wise during the last five years.** Answer before DVV Verification: 	2020-21	2019-20	2018-19	2017-18	2016-17
---	---	---	---	---
52	53	58	50	56 | Answer After DVV Verification : | 2020-21	2019-20	2018-19	2017-18	2016-17
---	---	---	---	---
42	46	39	43	40	 Remark : DVV has not consider shared certificate of appreciation and participation by HEI.
3.4.6	**Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years** 3.4.6.1. **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:

2020-21	2019-20	2018-19	2017-18	2016-17
409	344	275	245	165

Answer After DVV Verification :

2020-21	2019-20	2018-19	2017-18	2016-17
306	251	185	169	120

Remark : DVV has considered only those books and chapters with ISBN numbers.

3.6.2	**Number of awards received by the Institution, its teachers and students from Government /Government recognised bodies in recognition of the extension activities carried out during the last five years** 3.6.2.1. **Total number of awards and recognition received for extension activities from Government/ Government recognised bodies year-wise during the last five years.** Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
37	34	24	23	27

Answer After DVV Verification :

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

Remark : DVV has not consider shared certificate of appreciation by HEI.

3.6.3	**Number of extension and outreach programs conducted by the institution through NSS/NCC, Government and Government recognised bodies during the last five years** 3.6.3.1. **Number of extension and outreach programs conducted by the institution those through NSS/NCC, Government and Government recognised bodies during the last five years** Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
32	52	41	36	26

Answer After DVV Verification :

2020-21	2019-20	2018-19	2017-18	2016-17
27	47	34	30	26

Remark : DVV has not consider shared days activities.

| 3.6.4 | **Average percentage of students participating in extension activities listed at 3.6.3 above during the last five years**

3.6.4.1. **Total number of students participating in extension activities listed at 3.6.3 above year-wise during the last five years.**

Answer before DVV Verification: |
|---|---|

2020-21	2019-20	2018-19	2017-18	2016-17
4062	6723	4746	3326	2400

Answer After DVV Verification :

2020-21	2019-20	2018-19	2017-18	2016-17
3122	6016	3847	2175	1724

Remark : DVV has not consider those students participated in days activities.

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

4.2.3.1. Annual expenditure for the purchase of books and journals including e-journals year-wise during last five years (INR in Lakhs)

Answer before DVV Verification: |
|---|---|

2020-21	2019-20	2018-19	2017-18	2016-17
134.13	79.68	60.68	96.15	54.12

Answer After DVV Verification :

2020-21	2019-20	2018-19	2017-18	2016-17
131.68	79.05	60.68	96.15	54.12

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

4.2.4.1. **Number of teachers and students using library per day over last one year**
Answer before DVV Verification : 5291
Answer after DVV Verification: 1058

Remark : DVV has made the changes as per average of teacher and students using library per day on (dates) |
|---|---|

| 4.4.1 | **Average percentage expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component during the last five years**

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

(INR in lakhs)

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
2751.89	6487.06	5496.47	4037.02	3332.77

Answer After DVV Verification :

2020-21	2019-20	2018-19	2017-18	2016-17
1079.66	2102.83	1990.75	1579.19	1532.33

5.3.3

Average number of sports and cultural events / competitions organised by the institution per year

5.3.3.1. **Number of sports and cultural events / competitions organised by the institution year - wise during the last five years.**

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
8	30	28	24	32

Answer After DVV Verification :

2020-21	2019-20	2018-19	2017-18	2016-17
6	21	16	19	26

Remark : DVV has excluded National festivals, Mothers Day, Alumni Meet etc., from the data template.

2.Extended Profile Deviations

ID	Extended Questions
1.2	**Number of departments offering academic programmes** Answer before DVV Verification : 19 Answer after DVV Verification : 17
2.5	**Total Expenditure excluding salary year-wise during last five years (INR in Lakhs)** Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
6525.26	15259.68	15118.84	12324.71	6919.10

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
5058.60	14226.70	10828.07	7260.31	4651.73