INSTITUTIONAL ASSESSMENT AND ACCREDITATION
(Effective from July 2017)

Accreditation - (Cycle - 4)

PEER TEAM REPORT ON

INSTITUTIONAL ACCREDITATION OF
VELLORE INSTITUTE OF TECHNOLOGY

Vellore
Tamil Nadu
632014

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL
An Autonomous Institution of the University Grants Commission
P.O. Box No. 1075, Nagarbhavi, Bengaluru - 560 072, INDIA

Section I:GENERAL INFORMATION

1.Name & Address of the institution:	VELLORE INSTITUTE OF TECHNOLOGY Vellore Tamil Nadu 632014
2.Year of Establishment	2001
3.Current Academic Activities at the Institution(Numbers):	
Faculties/Schools:	17
Departments/Centres:	48
Programmes/Course offered:	79
Permanent Faculty Members:	1744
Permanent Support Staff:	1089
Students:	33322
4.Three major features in the institutional Context (Asperceived by the Peer Team):	1. Deemed-to-be-University 2. Strong and Dedicated Management 3. Excellent Infrastructure
5.Dates of visit of the Peer Team (A detailed visit schedule may be included as Annexure):	From : 25-08-2021 To : 27-08-2021
6.Composition of Peer Team which undertook the on site visit:	

	Name	Designation & Organisation Name
Chairperson	DR. BIBHUTI BHUSAN BISWAL	Director,NATIONAL INSTITUTE OF TECHNOLGY MEGHALAYA
Member Co-ordinator:	DR. DINESH CHANDRA RAI	Professor,INSTITUTE OF AGRICULTURAL SCIENCES, BANARAS HINDU UNIVERSITY
Member:	DR. ANUPAMA SHARMA	Professor,Maulana Azad National Institute of Technology Bhopal
Member:	DR. SANJAY NALBALWAR	Dean,DR BATU LONERE
Member:	DR. CHIDANANDA REDDY PATIL	Dean,KARNATAKA STATE LAW UNIVERSITY HUBBALLI
NAAC Co - ordinator:	Dr. M.S. Shyamasundar	

Section II:CRITERION WISE ANALYSIS
Observations (Strengths and/or Weaknesses) on each qualitative metrices of the key Indicator under the respective criterion(This will be a qualitative analysis of descriptive nature aimed at critical analysis presenting strength and weakness of HEI under each criteria)

Criterion1 - Curricular Aspects (Key Indicator and Qualitative Metrices(QlM) in Criterion1)	
1.1	Curriculum Design and Development
1.1.1 QlM	**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.**
1.2	Academic Flexibility
1.3	Curriculum Enrichment
1.3.1 QlM	**Institution integrates crosscutting issues relevant to Professional Ethics ,Gender, Human Values ,Environment and Sustainability into the Curriculum**
1.4	Feedback System

Qualitative analysis of Criterion 1

The curriculum of all programmes is developed in accordance with the Programme Educational Objectives (PEO) and Programme Outcomes (PO), which in turn are in tune with the vision and mission statements of the VIT. The process of developing the curriculum and the course content takes into consideration the feedback from different stakeholders which ensures that it has relevance to the local, regional, national and global developmental needs. The curricula and course content thus framed are recommended by the Board of Studies and subsequently approved by Academic Council. The curriculum finalized is found to be good in all sense and it takes care of need of the hour.

New courses introduced are aligned with demands of the industries. These courses will enhances the employability skills of students. Courses that are in-tune with the national mission of 'Make-in-India' pave way for the economic growth of the nation. Aligned with the Digital India mission, courses related to latest computer languages like Python/ PERL are made compulsory for all programmes. Courses on renewable energy, climate change and environmental effects are also offered to sensitize the students to global health. In addition, a range of co-curricular and extra-curricular activities (mandatory as part of the curriculum) are aligned with the overall development of the student, which has an impact on the national and global developmental needs.

The institute ensures integration of relevant cross cutting issues in the curriculum of all the programmes offered. Some of these courses are mandatory requirement for graduation. Taking advantage of the Fully Flexible Credit System (FFCS), students of other programmes can register these courses (under Open Elective category). Additionally, VIT admits students from all regions of India and from several countries abroad. The peer and group learning, extra-curricular courses act as melting pot cutting across age, gender, nationality not only to absorb but also to respect other cultures. Following are some of the specific information that relates to the above requirement. Gender As part of the Ethics and Values course, students are required to address the issues related to women empowerment, female foeticide prevention, child abuse, responsible living and others. Rallies and street plays, involving students, address gender related issues. As part of Law programmes, courses on 'Right to Education – Women, Minority, Equality and Environment', 'Gender, Caste and Law' and others are offered. Environment and Sustainability Environmental Science is a mandatory course in all the undergraduate programmes. Apart from this, courses on 'Environment Impact Assessment',

'Environment Quality Monitoring', 'Environmental Audit' and several others address the issues related to Environment and Sustainability. Students are involved in green auditing of the campus and keep track of carbon footprint of the campus. The students of architecture have courses on using natural and sustainable resources in their curriculum. The organic cultivation for students of agriculture showcase the importance of nature in Agriculture. Human Values and Professional Ethics Course on Ethics and Values is mandatory for all the undergraduate students. In addition to this, other courses such as Bioethics, Corporate Ethics, Business ethics, Media Ethics are incorporated in the curriculum of relevant programmes. Topics on manners and etiquettes are covered in courses related to soft skills. VIT has made the participation of students in extra-curricular activity as a mandatory requirement for graduation. At present 90 clubs and 53 chapters are available for students. Students can register in any one of these clubs / chapters, depending on their interest and undertake activities related to the chosen field and in many instances the students extend their support to the social cause and create awareness related to gender and address issues related to sustainable living. Visit to orphanages, as part of their extracurricular activity, make the students to respect the human values and make them understand the moral social responsibility.

Criterion2 - Teaching-learning and Evaluation (Key Indicator and Qualitative Metrices(QlM) in Criterion2)	
2.1	Student Enrollment and Profile
2.2	Catering to Student Diversity
2.2.1 QlM	**The institution assesses the learning levels of the students and organises special Programmes for advanced learners and slow learners**
2.3	Teaching- Learning Process
2.3.1 QlM	**Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences**
2.3.2 QlM	**Teachers use ICT enabled tools including online resources for effective teaching and learning process.**
2.4	Teacher Profile and Quality
2.5	Evaluation Process and Reforms
2.5.3 QlM	**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**
2.6	Student Performance and Learning Outcomes
2.6.1 QlM	**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**
2.6.2 QlM	**Attainment of Programme outcomes, Programme specific outcomes and course outcomes are evaluated by the institution**
2.7	Student Satisfaction Survey

Qualitative analysis of Criterion 2
Assessing learning levels of students VIT has a robust and dynamic mechanism of assessing the learning levels of the students. On admission to various programmes, the students undertake a Computer Based Test (CBT) which assesses the English language proficiency. Based on the performance of students, a series of non-credit English Language bridge courses are offered to students with low proficiency. After completion of these courses, the credit course on English is offered. This enables the institution to address the difficulties of students who had their studies in vernacular medium. Since students with diverse mix of courses taken in the qualifying examination are being admitted to various programmes, customized bridge courses such as Introduction to Life Sciences, Basic Mathematics, Introductory Biology, Anatomy and Physiology, Life Science for Biomedical Engineers and Agricultural Heritage are offered as applicable. Special initiatives for Slow Learners Students scoring less than 50% in the first Continuous Assessment Test I (CAT-I) are classified as slow learners. A provision is available in the institutional LMS to faculty member to upload the required material for slow learners, and a follow-up action is also taken in the form of additional classes, tutorials, and assignments. The flexible credit system followed in the institution facilitates the students to pace their learning. Special Programs for Advanced Learners Opportunities exist for students to complement and enhance their learning experience by crediting additional courses in diverse areas. Students having more than 8.5 CGPA are eligible for Minor or Honours credential. The advanced learners can secure additional 15 credits in any specialization and earn a Minor Credential. Students can also choose additional 15 credits in their program of study and earn an Honours Credential. The institute also facilitates research at the undergraduate level and enables students to earn credits by registering for Undergraduate Research Experience (URE). The regulation also permits students to complete the theory/lab credit requirements in advance, so that they can do their capstone project as Semester Abroad Program (SAP) or in industries. The vibrant set of student clubs and chapters of Professional Societies provide advanced learners to have hands - on experience in various domains of their choice.

VIT introduced Curriculum for Applied Learning (CAL) and objective of CAL is to emphasize student centric methods. It is seen that student-centric methods and the three principal learning modes are given due weightage in planning the curriculum and this aspect is made a regular component in majority of the courses. Most of the core courses have either a regular laboratory or project component as part of the course. Participatory Learning: Active Learning Methods (ALMs) like Group Discussions, Workshops, Assignments, Technical clubs, Hackathon etc. help the students whose learning style is in sync with Participatory Learning. Students are also encouraged to carry out the projects in groups. Experiential Learning: Most of the core courses have either a regular laboratory or project component as part of the course. In CAL, the students have an opportunity to "Learn by doing" in at least 60% of the courses. This can be either through conventional laboratory or project based learning. The VIT utilizing various techniques like simulations, demonstrations, case studies, etc. in the implementation of experiential learning. Problem Solving Methodologies: The teaching-learning process at VIT, incorporates some mandatory innovative courses blended in the curriculum. Under-graduate engineering students should undergo courses like "Technical Answers to Real World Problems (TARP)", "Introduction to Innovative Projects (IIP)" and "Lean Start-up Management (LSM)". Students are expected to register for TARP course in the pre-final / final year. The objective of this course is to identify real life problems and use engineering principles / technologies to address the problem. The solution is expected to be in the form of fabrication / coding / modelling / product design / process design / relevant scientific methodologies. While solving the problems, students are expected to take care of technical, economic, social, environmental, political and demographic feasibility. The course on "Lean Start-up Management" helps the students to identify business opportunities that utilise their technical expertise. The student should propose a business model/plan and also explore the various funding opportunities for such ventures. The student is made aware of legal, regulatory, corporate social responsibility and tax related issues. The course on "Introduction to Innovative Projects" aims to develop innovative thinking skills and helps in building confidence to handle day-to-day issues. These courses in the curriculum enhance the learning experience of the students.

The learning characteristics of the current generation students are increasingly inclined towards digital, web and mobile based technologies. In view of recent advancements in ICT, the teaching learning process at VIT has been realigned. VIT has taken care of integration of ICT in education, inter alia, does promote autonomous learning, student-centered learning, higher order thinking, problem solving, cooperative learning, collaborative learning, social learning and self-paced learning and finally, integrated learning. VIT has developed an indigenous Learning Management System (LMS) called V-TOP and most of the teaching learning process tools have been integrated into it. In addition to institutional LMS, the faculty members can also use open source educational software MOODLE, which is customized specifically for VIT's teaching-learning infrastructure management and administration. Evaluation of student performance under various parameters over an extended period of time in the semester is being carried out through V-TOP. The LMS is taking care all expected activities. collaborative study, blogs and forums, and assessment of the performance. All class rooms are equipped with LCD, Wi-Fi and Smart Board. Each school has a dedicated smart class room with Lecture Capturing System (LCS). VIT has a vast collection of online resources; faculty and students can use the digital library software called VIT e-Gateway, which comprises of full text databases, e-journals and e-books like, Sciencedirect, Springer, IEEE, RCS, INDIA STAT, EBSCO, NATURE, Taylor and Francis etc. It also contains electronic thesis data bases like ProQuest. VIT has developed a mobile application of the library called MyLoft. The institute has also developed a new feature, V-PROPEL, a Virtual Programming Lab (VPL), which automatically validates source codes written in various programming languages. It supports more than 25 programming languages and scripts. From 2017 onwards, VIT has added more than 3000 lectures captured using Lecture capturing system installed in Smart Class rooms. More than 60 full courses

have been captured so that they can be used by the students for their revision as and when they want. The institute strives towards becoming the epitome of excellence in the field of online education and allied areas. To facilitate these objectives, VITOL (VIT On Line learning institute) equipped with world-class virtual studio was inaugurated in 2019, with an objective to provide MOOC courses with exceptional learning experience through cutting edge technologies by the subject experts.

Examination procedures and processes at VIT, all examination related processes and procedures are integrated into the indigenous software V-TOP and is being continuously upgraded. All activities related to examinations including exam scheduling, venue and seating deatils, mark entry, grade processing, publication of results, paper seeing process, revaluation and issue of consolidated grade sheet are carried out digitally. Both relative and absolute grading are practised based on the type and mode of the course and also based on the number of students enrolled in a class. Processes integrating IT Conduct of Examinations: Examinations are conducted in paper (normal) mode. With the faculty empowerment in action, faculty members are empowered to set their own question paper. However, there is also provision for setting common question paper for same courses offered in multiple batches. Question papers are accepted only after moderation by the moderation committee, set up by the Department. The question paper is submitted through V-TOP. Evaluation of Answer Scripts: Digital Valuation System (DVS) From the academic year 2016-17 onwards, Digital Valuation System (DVS) is being practised to reduce the exam cycle time. Under this process, physical answer scripts are scanned using high speed scanners and made available to faculty for digital evaluation. Answer scripts are identified using barcode of the student's registration number and are masked during valuation. During the academic year 2017-18, "Paperless Digital Exam Services" were conducted on an experimental basis through exam pads. Continuous Internal Assessment System Continuous assessments carry an overall weightage of 60%. The assessments include written tests and several other assessment options. Written tests include Computer Based Tests (CBT), Open Note Book (ONB) and Open Book (OB) type, in addition to the regular examination mode. ONB and OB examinations ensure that the students concentrate on developing their higher cognitive levels. The other assessment options include home assignments (both manual and digital), involvement in technical events, online courses, video recording, quiz and several others. Rubrics are well-defined and communicated to the students in advance. All assessments are mapped to the appropriate course outcomes. The marks obtained in the continuous and final assessments are used to quantify the attainment of the course outcome. However, only the grades obtained by the student, in a given course, are considered for calculating the programme outcome and programme specific outcome attainment. Evidence of Success After the introduction of Digital Valuation System (DVS), the following improvements have occurred Removal of totalling errors and errors in evaluating excess questions answered by students Publication of results within 10-12 working days from the last day of the examination which reduced our exam cycle.

IT has been following outcome based teaching learning process and got its first set of programs accredited by ABET in 2010. Currently, all programs of the institution have the generic Program Outcomes (PO) which ensure the attainment of graduate attributes. The programs also have Program Specific Outcomes (PSO), which address the program specific requirements. The PSOs are formulated taking into consideration the expectations of respective professional bodies of the program like UGC,ASME, ASCE, AICTE and IEEE. At the course level, all courses of the program, have well-defined set of course outcomes. The course outcomes are formulated during the syllabus design stage and they address the higher order thinking capabilities. A team of faculty members handling the course formulate the COs and the same is deliberated and approved in the Board of Studies. The project and laboratory components of the courses also separate learning identities. Based on the specific requirements of courses the number of course outcomes vary. All the instruments used for evaluating the student performance, including assignments, quizzes, individual questions of continuous

assessment tests and final assessment tests are mapped to specific Course Outcomes. This enables the precise quantitative valuation of attainment of course outcomes based on student's output. In all assessment processes, specific emphasis is given to test the attainment of higher order thinking skills.   Publicizing PO, PSO & COs The POs and PSOs of all programmes are published in the website of the Institution, in the students' LMS and in the Syllabus books of programmes POs and PSOs are displayed at the strategic locations in Schools. All faculty members are exposed to the concept of Outcome Based Teaching Learning (OBTL) Process Refresher programs are conducted for faculty members on the OBTL Process Thus the institution has in place a well-defined POs & PSOs for all programs and COs for all the courses. These details are published in the institution website and are integrated with the teaching learning and evaluation system of the institution.

It is observed that PSOs are formulated by a team of senior faculty members of the program during the curriculum design stage itself. The PSOs are approved by the respective Board of Studies (BoS) with representation from Industries, after due deliberation. At the course level, all courses of the program, have well-defined set of course outcomes. The course outcomes are formulated during the syllabus design stage and they address the thinking capabilities in addition to other capabilities. A team of faculty members handling the course formulate the COs and then placed in BoS for its approval . The course outcomes are planned and designed so as to cover the entire syllabus and the designated competencies. The project and laboratory components of the courses also separate learning identities.. All the instruments used for evaluating the student performance, including assignments, quizzes, individual questions of continuous assessment tests and final assessment tests are mapped to specific Course Outcomes. This enables the precise quantitative valuation of attainment of course outcomes based on student's output. In all assessment processes, specific emphasis is given to test the attainment of higher order thinking skills.   Publicizing PO, PSO & COs The POs and PSOs of all programmes are published in the website of the Institution, in the students' LMS and in the Syllabus books of programmes POs and PSOs are displayed at the strategic locations in Schools.

Criterion3 - Research, Innovations and Extension (Key Indicator and Qualitative Metrices(QlM) in Criterion3)	
3.1	Promotion of Research and Facilities
3.1.1 QlM	**The institution Research facilities are frequently updated and there is well defined policy for promotion of research which is uploaded on the institutional website and implemented**
3.2	Resource Mobilization for Research
3.3	Innovation Ecosystem
3.3.1 QlM	**Institution has created an eco system for innovations including Incubation centre and other initiatives for creation and transfer of knowledge.**
3.4	Research Publications and Awards
3.5	Consultancy
3.5.1 QlM	**Institution has a policy on consultancy including revenue sharing between the institution and the individual and encourages its faculty to undertake consultancy.**
3.6	Extension Activities
3.6.1 QlM	**Extension activities in the neighbourhood community in terms of impact and sensitising students to social issues and holistic development during the last five years.**
3.7	Collaboration

Qualitative analysis of Criterion 3
VIT has a well-defined policy for promoting research and regularly updating the research infrastructure and has given priority to the research. VIT in their annual budgets, allocate adequate resources for procuring and maintaining the state of the art equipment and instruments. The institution also has centralized facilities and research centres to cater to the research needs of faculty members and students. Some of the major research facilities augmented in the last five years are Mass Spectrophotometer BIACORE3000 Nuclear Magnetic Resonance Spectrometer (NMR) 200 kV High Resolution Transmission Electron Microscope (HRTEM) Open Electronic Control Unit (ECU) for Engine Testing Hybrid Laser GMA Welding Power Source with Robot Scanning Electron Microscope Anechoic Chamber Metallic 3-D Printer Other than the equipment and instruments, the institute subscribes to important research journals such as Elsevier, Springer, IEEE, ASME and ASCE. The annual subscription amount spent on Journals for the financial year 2018-19 was Rs. 5.92 crores. The institution has also subscribed to Scopus indexing database. The various research laboratories and centres established in the recent past like Autonomous Vehicle Research Lab, Human Organ Manufacturing and Engineering Laboratory, 3-D Printing Lab and Wearable Technologies Laboratory enable focussed research in frontier areas of Science and Technology. To cater to the increasing space requirements for the expansion of research facilities, the institution has initiated the construction of "Pearl Research Block". To promote quality of research and to enhance the research output, the institution has launched various research promotion schemes, which include Institutional Ph. D fellowship of Rs.20,000/- p.m. for a period of 3 years to the full time Ph. D research scholars. Currently, 902 research scholars are getting benefitted. Seed money grant to young faculty members to establish their research facility in VIT. In the financial year 2018-19 a total amount of 421.54 lakhs of rupees was sanctioned and 177 faculty members were benefitted by this scheme. "Raman Research Award" to inculcate the Research Culture among students and research scholars. Research Award" to faculty members, as financial incentive for (i) Quality Publications including journal publications, books and book chapters (ii) Patents (iii) Funded Projects and (iv) Contribution to the 'h' index of the institution. VIT also provides full financial support for participation in national conferences and partial support up to 50% for participation in International Conferences. Publication fee for open access publication in high impact factor publication is also supported. The amount spent on the purchase of new equipment in the last five financial years is shown below and it demonstrates the periodic updating of research infrastructure. VIT bagged the FICCI Higher Education Excellence Award for "Excellence in Enabling Research

Environment" in the year 2019.

The institution has a well-established 'Technology Business Incubation' center known as 'VIT-Technology Business Incubator (VIT-TBI)', and it has been operational since March 2003. It is a joint initiative with Department of Science and Technology, Govt. of India. The VIT-TBI has subsequently partnered with TIFAC, TDB, DSIR, MSME and BIRAC of the DBT on various innovation & entrepreneurship programs and through grant funding. VIT-TBI has worked with international agencies such as UNIDO and 'infoDev' (The World Bank Group) in the past. VIT-TBI provides access to infrastructure, prototype development, research assistance, funding, business consulting etc., in a single window mode to early stage technology entrepreneurs. It also makes use of the huge research infrastructure of the institute. VIT-TBI is a 'PRAYAS Center' under the NIDHI scheme of DST for nurturing knowledge-based and technology-driven ideas and innovations into successful start-ups. 'BioNEST' - A Bioincubation Center at VITTBI has been set up with the support from BIRAC, and is a state of the art incubation center supporting innovative start-up companies and bio entrepreneurs engaged in the broad areas of life sciences and medical devices. The major activities of VIT-TBI include: Extending seed funding & grants to start-ups in the technology domains of Energy, Healthcare, Manufacturing, Agriculture, Biotechnology and Information technology Providing infrastructure and resources for R&D with facilities for Design, Experimentation and Product Development for innovators/startups Encouraging New Product Development in cutting-edge technologies benefiting the society Organising structured innovation & entrepreneurship capacity building programmes for all the stakeholders at regular intervals Managing the Entrepreneurship Cell (E-Cell) of VIT for the promotion of entrepreneurship on campus Through the E-Cell, support innovative student startup projects with VIT grants up to Rs.5 Lakhs in phases Some of the recent programs organised by VIT-TBI are: 'MedTech Challenge' for students/early stage entrepreneurs to encourage innovations in the healthcare and medical devices sector (Jan 2019) Two-week Faculty Development Programme on "Entrepreneurship, Innovation and Incubation", (Nov – Dec 2018) 'HackerTech' with tracks on Machine Learning/Artificial Intelligence, Augmented Reality/Virtual Reality, Blockchain, Data Analytics, Robotics & Automation and Cybersecurity, for students (Oct 2018) Three-day Entrepreneurship Awareness Camp for students (Oct 2018) Six-week Technology Entrepreneurship Development Programme (TEDP) in 'Food & Agro Processing' (Oct – Nov 2018) Details of VIT-TBI are available on http://www.vittbi.com/. Towards establishing a conducive innovation ecosystem, as part of the curriculum, all students undergo two University Core Courses (i) Introduction to Innovative projects and (ii) Lean Start-up Management. These project-based courses enable students to learn through hands on projects. All schools of the University periodically organise various Hackathon, Codeathon and Designathon competitions for students to enhance their design thinking capabilities. About 60 companies have been incubated or are in the process of being incubated during the past 15 years. Some of the prominent companies incubated by the VIT TBI are: Xcode Life Science Pvt. Ltd., (https://xcodelife.co/) Thinkcore Technologies Pvt. Ltd., (http://www.thinkcoretech.com/) The Meditube Media Pvt. Ltd., (https://www.themeditube.com/) Kvyor Genomics Pvt. Ltd., (http://www.kyvorgenomics.com/) Virtis Bio Labs (http://www.virtisbiolabs.com)

Vellore Institute of Technology has a transparent policy for consultancy and the same is displayed in the institutional website. https://vit.ac.in/sites/default/files/VIT-Consultancy-Policy.pdf   The salient features of the consultancy policy are: Standard terms and conditions for industrial consultancy Well defined procedure for securing and executing the consultancy works The role of institution's organisational structure in execution of consultancy Streamlining the interaction with the industry Facilitating multidisciplinary

consultancies Revenue sharing scheme for different types of consultancy and testing Standard forms for all sub processes To promote sponsored research activities, the institution has established a separate office for Sponsored Research and Industrial Consultancy (SpoRIC) to act as a nodal centre for obtaining and managing consultancy projects for the Institution. SpoRIC has a Director and is assisted by four Assistant Directors, and a set of Advisors and Consultants having R & D and Industrial exposure. The institution encourages faculty members to establish a strong connect with various industries. Select faculty members visit identified industries periodically and interact on a continuous basis. This continuous interaction enables faculty members to identify industrial problems for solving through consultancy mode or through student projects. After interactions for about an year and after some salient outcomes in terms of collaboration, the relationship is formalised through Memorandum of Understandings. Sustained interactions have also resulted in industries like Danfoss, Schneider Electric India, Johnsons Controls India and Valeo setting up Industry Sponsored Laboratories. SpoRIC has created a Technology Development Cell as a network of Institutions and Industries with VIT as the nodal coordinating agency. The major functions of Technology Development Cell are: (i) To increase access of industry to cutting edge technology developed within institutions. (ii) To capitalise on the research base of VIT and partner institutions for evolving world class technology. (iii) To take up collaborative applied research projects along with Industries. (iv) To assess and identify potential technology areas to create productive eco-system of industry and institutions. The specific concessions given to faculty members to focus more on Industry Consultancy and Connect include. Transparent revenue sharing mechanism Sponsorship of travel and other expenditure during all official visits Grant of on duty for all such visits Consideration of contributions in extension activities in performance evaluation Reduced academic workload for significant contributions The study increase in the number of projects carried out and the total revenue from consultancy and testing projects demonstrates the institutions growing performance in this count. Number of Consultancy & Testing Projects Carried out   Revenue Generated from Consultancy and Testing Projects (in lakhs of Rupees)

VIT strongly believes in the need for the holistic development of students and accordingly the institution is putting forth consistent efforts in directing the students' energy towards addressing the real life issues of common man, and the society at large. In the Engineering Curriculum of VIT, all students undergo a two credit course on "Technical Answers to Real World Problems" in which students as project teams take up a problem of the neighbourhood community and come out with innovative technical solutions to these problems. Some of the problems taken up and addressed include low cost effluent treatment system for tanneries, robotic block removal in underground sewage system, disaster assessment and mitigation using IoT, and low cost water purifier.   VIT has over 150 clubs and chapters, which are active student bodies providing platform for students to indulge in various co-curricular, extra-curricular and outreach activities. Of these, the following 20 clubs provide avenues, for direct interaction of the students' with the society. Anokha (Welfare of the underprivileged kids) Ayuda (Club for improving Health & Literacy of masses and assistance to old) Becoming I Foundation (Youth for community development) FEP-SI (For a Fairer & more egalitarian society) E2PC (Energy & Environment Protection Club) Fifth (5th) Pillar (Against Corruption at every level of society) Good Girls and Boys (GGB) (Sustainable Development) Juvenile Care (Charitable trust that works for the welfare of underprivileged kids) Kalvi (Uplift the marginalized living in slums and villages through quality education, skill enhancement and healthcare) Leo Club (Youth organization of Lions Clubs International) Make A Difference (MAD) (For children in orphanages and street shelters) National Cadet Corps (NCC) (To Develop Character, Comradeship, Discipline, Leadership, Secular Outlook, Spirit of Adventure, and Ideals of Selfless Service) National Service Scheme (NSS) (To understand and Serve the community) Rotaract Club (To improve the lifestyle of the underprivileged) The Red Ribbon (Blood Donation) Uddeshya (Club for "Empowering Youth - Fueling Change") Universal Higher Education Trust

(UHET) Club – HEARTS (Promoting Higher Education among Economically Weak and Meritorious Students) TEDXVIT (A Platform seeking a deeper understanding of the world) Youth Red Cross Association (YRC) (For Protection of health and life, To Serve the sick, To Promote National and International friendship) VIT SPARTANS (A forum to the hidden talents in Students) The detailed account of objectives and activities of various student clubs is available in the website https://vit.ac.in/campus/Clubs/Social%20Outreach Some of the significant outcomes of these initiatives are: The vigorous efforts of various clubs and chapters of VIT, Vellore and Chennai have led to the planting of thousands of trees and improving the green cover all over Vellore and in areas around VIT Chennai The Palar River cleaning project, initiated by VIT has yielded desirable results and was recognised by the Government of Tamil Nadu with its "Green Award 2017" VIT Vellore remains as an Institution with the large number of Blood Donations for more than 15 years.

Criterion4 - Infrastructure and Learning Resources (Key Indicator and Qualitative Metrices(QlM) in Criterion4)	
4.1	Physical Facilities
4.1.1 QlM	**The institution has adequate facilities for teaching - learning. viz., classrooms, laboratories, computing equipment, etc.**
4.1.2 QlM	**The institution has adequate facilities for cultural activities, yoga, games (indoor, outdoor) and sports. (gymnasium, yoga centre, auditorium, etc.)**
4.1.3 QlM	**Availability of general campus facilities and overall ambience**
4.2	Library as a Learning Resource
4.2.1 QlM	**Library is automated using Integrated Library Management System (ILMS) and has digitisation facility**
4.3	IT Infrastructure
4.3.2 QlM	**Institution has an IT policy, makes appropriate budgetary provision and updates its IT facilities including Wi-Fi facility**
4.4	Maintenance of Campus Infrastructure
4.4.2 QlM	**There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc.**

Qualitative analysis of Criterion 4

Departments of Vellore Institute of Technology are located in the Main campus (VIT Vellore) and the VIT Chennai campus. VIT is spread over 563.65 acres of land. Of the total built-up area of 7,65,294 sq.m, an area of 2,20,158 sq.m is used for academic activities (classes, labs, library, auditoriums, etc.) and 4,56,319 sq.m for hostels. The remaining area is used for support facilities like play grounds and canteens. At VIT, strategies are adopted for delivering teaching – learning process, which includes interaction and direct contact between the student and teacher in class rooms, laboratories and library. We have well-furnished class rooms ubiquitous ICT facility, state-of-the-art laboratories and excellent computing facilities for nurturing teaching – learning and research. The picture give below illustrates how the services are designed so that students can learn effectively. Class rooms: VIT has 375 class rooms cater the needs of UG and PG programs, including specialized interdisciplinary programs. All the class rooms have LCD facility, Wi-Fi connectivity and equipped with smart board as well as white board. This facilitates multimedia presentation and also enables lecture capturing. It is well equipped with facilities of effective teaching and learning. Teaching & Research Laboratories: VIT is very well equipped with laboratory facilities for hands-on training of UG and PG students. Additionally, it has specialized laboratories that provide interdisciplinary facilities with state-of-the-art equipment for PG & Ph.D. students to carry out their research work. We have 341 teaching and research labs in various programs. There are several laboratories funded by Industry including, Motorola wireless and RFID Application lab, ETAS simulation lab, IBM Mainframe centre, Pearson Vue Testing centre, Microsoft innovation centre, CISCO centre etc. that train the students in state-of-the-art application and instrumentation. Some of the advanced lab facilities in the campus includes, VCARE, Nano Composite, Sol-Gel Biosensor, SEM, NMR Spectrometer, to name a few. Computing Equipment: Currently, computing equipment has become the backbone network of any discipline and smartphone and Wi-Fi enabled for students of Generation Z. With foresight, VIT established IT infrastructure that has been widely spread across academic buildings, laboratories and hostels using high speed robust network with access to Internet through multiple ISPs. All computers are connected to the internet over high-speed cables facilitating a 1:4 availability of computer to students. The computer laboratories cover many cutting-edge research sectors, such as Networking & Pervasive, Cloud Computing & Data Analytics, Analog & Digital Circuits, to mention only a few. VIT

provides uninterrupted access to information and network services with required internet bandwidth and Wi-Fi access points. The security solutions from Palo Alto, McAfee, CISCO AMP & K7 etc. are used to secure campus IT facilities. Energy efficient, large data storage system built to the needs of the stakeholders for storage of their academic data. As technology demands, it has also subscribed to a wide variety of software licenses.

Departments of Vellore Institute of Technology are located in the Main campus (VIT Vellore) and the VIT Chennai campus. VIT is spread over 563.65 acres of land. Of the total built-up area of 7,65,294 sq.m, an area of 2,20,158 sq.m is used for academic activities (classes, labs, library, auditoriums, etc.) and 4,56,319 sq.m for hostels. The remaining area is used for support facilities like play grounds and canteens. At VIT, strategies are adopted for delivering teaching – learning process, which includes interaction and direct contact between the student and teacher in class rooms, laboratories and library. The VIT has well-furnished class rooms ubiquitous ICT facility, state-of-the-art laboratories and excellent computing facilities for nurturing teaching – learning and research. The picture give below illustrates how the services are designed so that students can learn effectively. Class rooms: VIT has 375 class rooms cater the needs of UG and PG programs, including specialized interdisciplinary programs. The most of the class rooms have LCD facility, Wi-Fi connectivity and equipped with smart board as well as white board. This facilitates multimedia presentation and also enables lecture capturing. Additionally, it has specialized laboratories that provide interdisciplinary facilities with state-of-the-art equipment for PG & Ph.D. students to carry out their research work. The VIT has 341 teaching and research labs in various programs. There are several laboratories funded by Industry including, Motorola wireless and RFID Application lab, ETAS simulation lab, IBM Mainframe centre, Pearson Vue Testing centre, Microsoft innovation centre, CISCO centre etc. that train the students in state-of-the-art application and instrumentation. Some of the advanced lab facilities in the campus includes, VCARE, Nano Composite, Sol-Gel Biosensor, SEM, NMR Spectrometer, to name a few. Computing Equipment: Currently, computing equipment has become the backbone network of any discipline and smartphone and Wi-Fi enabled for students of Generation Z. With foresight, VIT established IT infrastructure that has been widely spread across academic buildings, laboratories and hostels using high speed robust network with access to Internet through multiple ISPs. All computers are connected to the internet over high-speed cables facilitating a availability of computer to students. The computer laboratories cover many cutting-edge research sectors, such as Networking & Pervasive, Cloud Computing & Data Analytics, Analog & Digital Circuits, to mention only a few. VIT provides uninterrupted access to information and network services with internet bandwidth and Wi-Fi access points. The security solutions from Palo Alto, McAfee, CISCO AMP & K7 etc. are used to secure campus IT facilities. Energy efficient, large data storage system built to the needs of the stakeholders for storage of their academic data. As technology demands, it has also subscribed to a wide variety of software licenses.

Every attempt is made by the institution to ensure that all students find VIT a very lively, fun-filled and resourceful community to enrich their erudite years. Some of the major general campus facilities that are available and aid in providing a good ambience for an enjoyable learning experience at VIT are listed below. Self-sufficient campuses with all amenities Sufficient number of hostel blocks for male and female students Variety of non-vegetarian and vegetarian vendors of different cuisine cater to various hostels Laundry services and salons in all hostel blocks Canteens in the vicinity of each academic block provide easy access to food and refreshments Photocopying facility in all academic blocks Well established Wi-Fi connectivity in the campuses for easy access to academic and research needs Closed circuit TV cameras for ensuring students'

safety 24x7 male and female security personnel at all vital points Health centre with in-patient facility and 5 ambulances provide the required 24x7 health care facility Approach ramps and lifts for all buildings to facilitate differently abled students Transport facilities are provided both in and outside the campus so that day scholar students can easily commute from their residences/locations in and around Vellore and Chennai Battery operated vehicles for commuting inside the campus Walkways for safe, easy and congestion free movement of students inside the campuses Railway under bridges (RUB) for safe commuting between hostel and academic blocks Banks and ATM facilities Electrical power backup which is provided by standby power generators Guesthouse for the convenience of the visiting family members of students with online booking facility Gymnasium for male and female students with state-of-the art equipment Chillout Plaza containing two modernized music halls and two dance halls Other facilities include pharmacies, post office, courier services, book store, digital photo studios, grocery shop, tailoring, opticals, etc., to meet the day-to-day needs VIT campus has about one-third (32%) of its total area brought under green cover by the horticulture department RO water treatment plant with 1,135 KLD capacity with well-connected water supply network to provide 24x7 drinking water to the entire campus The institute has well established solid waste management system for collection, segregation, disposal along with manure composting facility For liquid waste management, modern water treatment plant with an installed capacity 4,500 KLD recycles about 90% of waste water for secondary applications such as, flushing, gardening and vehicle washing VIT Community Radio 90.5 MHz facilitates students to participate in mass media activities and contribute to build an effective, vibrant and sustainable community. The program contents include development in health, education, environment, agriculture, rural and other socially relevant aspects.

Centre for Technical Support (CTS) maintains the policies governing the use of VIT computing and IT communication resources. The IT Policy applies to the resources administered by the administrative departments such as Library, Computer Laboratories, Offices of the Institution, Hostels and Guest houses wherever the network facility is provided by the Institution. Further, the entire faculty, students, staff, departments, authorized visitors/visiting faculty and others who may be granted permission to use the IT Infrastructure, and must comply with the guidelines. Certain violations of IT policy laid down by VIT by any institution member may even result in disciplinary action against the offender by institution authorities. The Acceptable use policies are applicable to Employees, Students, and Vendors & Visitors. CTS have framed various policies like Procurement, Installation, of Hardware, Network and software. E-mail account has been facilitated to employee and students under E-mail Use policy which is reviewed and maintained whenever the modification happens. Website Hosting and Database Usage policy has its method and hierarchy which is followed systematically. VIT has proper budgeting process to arrive the IT budget needs of every school/department. Requirement gathering happens at school/departments. Once the IT budget is finalized at the school/department level, the approved budget is consolidated at CTS and arrive the total IT Budget requirement. An average Annual Budget of Rs.17.87 Crore per year, provided on improving the IT facility shows the commitment of our Management in building the world-class IT facility in our campus. This includes the Capital and Operational budget of Vellore and Chennai Campus. IT infrastructure has been widely spread across connecting 56 buildings with very high-speed robust network backbone. Our Computer network is built on CISCO switching platform with backbone running on 10Giga at present. 12000+ IP enabled devices are connected to this fast network. Understanding the demands of faculty and students to use digital media for their research, teaching & learning process, required internet bandwidth is made available through four major Internet service providers. WiFi access points are positioned across the campus to facilitate internet access to our students, faculty and guests while they are in the campus. Seamless internet access given to students through Hotspots and well-planned WiFi network at Hostel rooms. The comprehensive infrastructure includes servers with   sufficient storage for Private Cloud VMs and Virtual

Desktop Infrastructure(VDI) implemented for the students to work with engineering software anytime, anywhere and from any device. Campus IT facility secured by implementing the best of the security solution from Palo Alto, McAfee, CISCO AMP and K7 which includes Next Generation firewall, Application firewall, Email Security, Advance Malware Protection, Endpoint Threat Protection, Openness etc. IT expansion is done based on assessing the requirement and also understanding the need of implementing the best of the breed technology to support the teaching and learning process. Also meticulous in the assessment of the industry requirement with respect to advancement in technology and ensure our students are well aware of the technologies prevailing in the market.

VIT has put in place standard procedures and practices which are aimed to provide excellent infrastructure facilities and periodically maintenance of them. The Planning and Monitoring Board members comprising of Vice Chancellor, Pro Vice-Chancellors, Registrar and Director Estates periodically review the utilization and maintenance of infrastructure in the campuses. Procedure for Maintaining and Utilizing Academic Facilities and Library: The Estates – Department directly takes care of the physical infrastructure like class rooms, Faculty cabins, Admin Offices, School offices, Laboratories, Galleries, Seminar halls, Auditoria, Hostels, Gardens and Circulation Areas and various Sports Complex. The below mentioned procedures are adopted for utilizing and maintaining various infrastructure facilities: Classrooms and laboratories are allotted by Dean / Academics through the dedicated online platform/software (FFCS) Seminar halls, galleries and auditoriums are booked and allocated using the online platform Facility management team supervised by a manager takes care of maintaining all the physical infrastructure facilities like classrooms, seminar halls, gallery halls, lifts, etc. Maintenance related complaints are monitored through Call monitoring system and their reports are logged appropriately Well-established mechanisms for sharing sophisticated facilities like advanced microscopy facility, and an online booking facility Online booking of transport facilities for taking the students on Industrial Visits, official meetings of faculty and staff Each department/school has its own staff that include mechanics and technicians to maintain the lab equipment under the guidance of Lab In-charge who is a faculty in the program Lab equipment is maintained by the dedicated technicians in the labs on a periodic basis during summer/winter vacations Many departments have Annual Maintenance Contracts (AMC) with suppliers and companies for the repair and maintenance of key equipment Value added courses, Remedial learning classes, Summer and Winter semester for weak senior students, Preparation for TOFEL/GRE/GMAT/NET/GATE/UPSC etc. and other training programs for Campus Placements are conducted, during week-ends besides the regular teaching hours Central Library is fully air-conditioned and equipped with state-of-the-art of technology such as KOHA 19.05 Version, RFID self-check-in book drop and check-out kiosk, Touch screen KIOSK for library information display, Discussions rooms, Video conferencing facility, CCTV & Flap barrier etc. Central library works on all 365 days in a year and is well-utilized Procedure for Maintaining Computers and IT related equipment: Centre of Technical Support (CTS) is responsible for the upkeep and maintenance of all IT related and electronic equipment including computers and surveillance cameras CTS has on its role many system administrators, technicians and instructors who are responsible for repair and maintenance of equipment and computers including network related issues and surveillance system. Procedure for Maintaining Physical Infrastructure Facilities: The maintenance department under Director, Estates maintains the physical infrastructure on the campus which includes both breakdown and preventive maintenance of facilities All maintenance activities are tracked by a ticketing method (PEOPLE ORBIT 1.0/VIT Online service request) follows Maintenance request-service-satisfaction and feedback cycle for all repairs and services undertaken There are several experienced Civil and Electrical Engineers and dedicated technicians to maintain the AV system in class rooms and labs whose service can be availed upon request These staff report to the Director, Estates who ensures that class rooms, laboratories and other academic areas are functional and well maintained Scheduled and annual maintenance contract is in

place for all major electrical equipment such as air conditioners and lifts Periodical maintenance of utilities like Housekeeping, Power supply, Sewage Treatment & Reverse Osmosis plants, Water supply, Fire Hydrant systems and Public Address systems are carried out and the same is entered in the log book There are housekeeping activities by Log sheets. Horticulture department looks after the premises for making the campus look clean and green. Procedure for Maintaining Sports Facilities: Sports section has full-fledged Physical Director, Deputy Director, Assistant Director, Instructors, and Grounds men who maintain and clean the sports facilities and grounds All regular maintenance works are managed by the Physical Education Department, while all major works are addressed by the Estate Department.

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Criterion5 - Student Support and Progression (Key Indicator and Qualitative Metrices(QlM) in Criterion5)	
5.1	Student Support
5.2	Student Progression
5.3	Student Participation and Activities
5.3.2 QlM	**Presence of Student Council and its activities for institutional development and student welfare.**
5.4	Alumni Engagement
5.4.1 QlM	**The Alumni Association / Chapters (registered and functional) contributes significantly to the development of the institution through financial and other support services.**

Qualitative analysis of Criterion 5

There is an active student council body of the institute which encompasses members from all disciplines judiciously selected based on their academic and extracurricular skills. The duties of the council is to look all round activities of various student clubs and chapters.

The Student Council for each academic year is formally inaugurated with oath taking ceremony by its members. The role of the Council is very vital in bridging the gap between the students and administration. They also help in enhancing the academic, cultural fests and various student related issues like monitoring the food quality, safety and security of the students etc. They also help in various societal concerns and outreach activities like Swatch Bharat mission, Unnat Bharat schemes, socially relevant projects for the community etc.

The Alumini network of VIT is very active consisting of 18 chapters across the country and 30 chapters outside the country including USA, Australia, UK, Muscut, Rwanda, Canada, Germany, Singapore etc.

The VIT Alumni Association (VITAA), a registered body in India and USA, has been functioning from the institute campus. The main aim of the association is to maintain link between the institution and the alumni and share information on mutual growth, achievement and advancement in various fields. Besides, VITAA conducts various social activities such as blood donation and health check-up camps, tree planting events, various competitions for school kids etc. for the benefit of the society.

The Alumni also helps the final year students in their project work and also mentor them regarding various internships and placements. The University, in turn, provides free access to the library and assists budding alumni entrepreneurs to incubate technology ventures. Alumni also help in delivering expert lectures, conducting webinars in upcoming new areas. They also give various fellowship awards to meritorious students who are under privileged.

Institute provides Alumni with the 'Distinguished Alumni Award' to those who have made prominent

contributions to the field of Academics & Research, Corporate Career, Entrepreneurship and Social Development.

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Criterion6 - Governance, Leadership and Management (Key Indicator and Qualitative Metrices(QlM) in Criterion6)	
6.1	Institutional Vision and Leadership
6.1.1 QlM	**The institution has a clearly stated vision and mission which are reflected in its academic and administrative governance.**
6.1.2 QlM	**The effective leadership is reflected in various institutional practices such as decentralization and participative management.**
6.2	Strategy Development and Deployment
6.2.1 QlM	**The institutional Strategic plan is effectively deployed.**
6.2.2 QlM	**The functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment and service rules, procedures, etc.**
6.3	Faculty Empowerment Strategies
6.3.1 QlM	**The institution has a performance appraisal system, promotional avenues and effective welfare measures for teaching and non-teaching staff .**
6.4	Financial Management and Resource Mobilization
6.4.1 QlM	**Institutional strategies for mobilisation of funds and the optimal utilisation of resources**
6.4.4 QlM	**Institution conducts internal and external financial audits regularly**
6.5	Internal Quality Assurance System
6.5.1 QlM	**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.**
6.5.3 QlM	**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).**

Qualitative analysis of Criterion 6

Academic and Administrative Governance of VIT, a deemed to be university is governed by UGC regulations. The statutory bodies of the institute are: Board of Management (BoM), Planning and Monitoring Board, Finance Committee, Academic Council, and Board of Studies, constituted as per the UGC norms.

The proposed content and pedagogy is recommended by the Board of Studies to Academic Council for approval. The approved programmes are explored for implementation by the Planning and Monitoring Board and further taken up with BoM for final approval. Once approved, the programme is further refined based on the feedback by students, teachers and industry experts.

To facilitate research ambience and innovative culture, separate offices of Academic Research and Sponsored Research & Industrial Consultancy are there. These offices in consultation with Research Advisory Committee formulate policies and procedures on all matters related to Research and Consultancy for approval by P&M and BoM.

Another office, Patent Cell facilitates patenting for faculty and students. A unique Innovation Lab functions to promote inter-disciplinary projects. Each course has a separate module to address the current development

connected to the field wherein the participation of industry experts brings out the latest developments. The Schools and Research Centres conduct conference/ symposia/ hackathons for promoting research and innovation.

The HR office explores and recommends welfare schemes like medical benefits, performance incentives, sabbatical leave, on-campus accommodation etc., for faculty and staff. The Academic Staff College organizes relevant training programmes for the professional development of faculty.

The proctoring scheme that operates under office of Students' Welfare helps the students to resolve academic and personal problems. A team of counsellors in the Office of Students' Welfare is also available for psychological counselling.

Collaborative Research is essential for visibility and funding. VIT established the office of International Relations to collaborate with foreign Institutes for research, faculty and student exchange. The office of Sponsored Research & Industrial Consultancy and office of Placement bring in industry collaboration in terms of consultancy, internships and placements. VIT participates in various social welfare schemes targeted towards the community through Centre for Sustainable Rural Development and Research Studies, Universal Higher Education Trust, NSS, NCC, Youth Red Cross and various clubs and chapters. Centre for Disaster Mitigation and Management creates awareness on survival methods during calamities.

The VIT community radio serves the farmers and general public through various interactive programmes.

VIT has adopted decentralization, participative management and empowerment in all academic, administrative, finance, research and outreach activities. The administrative structure reflects completely decentralized system with well-defined roles and responsibilities. VIT provides ample opportunities to its major stakeholders viz. students, faculty, staff, alumni and employers to participate in the development of the institute. The stake holders have representations in all statutory bodies and university level committees / cells. There are 17 Schools and 10 Research Centres headed by Deans and Directors, entrusted with the responsibility of maintaining high standards in academics and research.

Strategic plan has been formulated in tune with the vision of the institute to excel in teaching, research and innovation was chalked out in the year 2016.

After three years, the institute has been chosen as the Institute of Eminence, by the Govt. of India. The salient

features of the strategic plan are deployed by offering more multi- and/or trans-disciplinary programmes and courses in areas; by improving the strength of trained faculty, by increasing global visibility through collaborative activities and enrolment of foreign students; Strengthening centralized instrumentation facilities and undertaking socially relevant applied research. This is done through appropriate action plan and measures, creating conducive research ambience, publishing peer reviewed journals; Special scheme is evolved for inviting international faculty for various academic activities, promoting collaborative Research / Faculty exchange / Student exchange with top foreign universities; Strengthening internships and procuring international projects for joint research.

All the statutory bodies are constituted as per UGC norms, and they meet periodically to formulate polices, critically review the progress made and offer suggestions for institutional development.

The Board of Management (BoM), constituted as per UGC norms, is the apex body which formulates all policies and procedures and provides academic and administrative leadership. The Planning and Monitoring Board translates the strategic vision of the institution into concrete yearly plans and monitors their implementation.

The Academic Council reviews the regulations, curricula and syllabi of various academic programmes.

The Finance Committee approves the budget, monitors the budgeted spending and reviews the internal and external audited reports. It also monitors the resource mobilisation process and ensures allocation of resources for future needs.

The academic and administrative activities are taken care of the statutory officers and the bodies duly constituted.

The institution also has various grievance redressal bodies such as Internal Complaints Committee (ICC) and grievance redressal committees for students, faculty and staff members.

VIT follows performance appraisal system evolved by the Office of Human Resource to assess the performance of teaching and non-teaching staff on an annual basis on a 100 point scale. The employee is given the feedback and suggestions after deliberation in the meeting of Deans and Directors chaired by Vice Chancellor. Outstanding performance by a staff member is reckoned for fast track promotions. Appropriate social security and welfare measures are provided to the employees. An incentive of one month salary is given for outstanding performance. Seed money is also provided for research by faculty members.

The institute follows the systematic procedure to mobilize resources and utilizes the fund for its activities by collection of tuition fees. The financial transactions are transparent as payment through cash is completely done away with. Additional resources are generated through consultancy, funding of the research projects from various national and international institutions and entrepreneurs. Further some of the patents which are

converted into commercial products add to the revenue.

The institution has a provision for creating Endowments by philanthropist and entrepreneurs.

Funds are also generated by facilitating incubation / start-ups to utilise the infrastructure available and expertise from the faculty. Alumni also collaborate in corpus generation.

The Institute follows the mercantile system of accounting and complies with the guidelines and Indian Accounting Standards (Ind AS) recommended by the Institute of Chartered Accountants of India. It has a well laid down internal control mechanism by internal auditors, audited independently every quarter, apart from in depth annual statutory audit carried out by reputed external auditors. Periodical monitoring of expenditure, compared with the approved budget, is carried out. Both internal and external audits are conducted and objections raised are well taken care off.

Institutionalizing Experiential Learning Since 2010, VIT has been extensively followed. The Project Based Learning pedagogy is adopted and reviewed by IQAC. The institution allocates appropriate annual budget for organising activity based learning.

To promote experiential learning, schemes such as Summer Research Grant Programme and Fast Track Research Initiative are floated.

The IQAC institutionalizes the process of reviewing the teaching-learning process through Student Quality Circle Meetings (QCMs), Students' end semester feedback, Outgoing students' survey and academic audit. Periodic academic audit is conducted and suggestions are implemented.

The institution undertook a major curriculum revision exercise in 2015 and introduced the Curriculum for Applied Learning.   VIT has introduced digital tools and platforms in all aspects of teaching-learning and evaluation. Deployment of custom-developed comprehensive learning management system is done.

Administration and examination sections are digitised. Examination reforms include allocation of 60% weightage for continuos assessment and 40% of End semester examination. Awards are instituted to encourage research publications, patents and book publication.

Criterion7 - Institutional Values and Best Practices (Key Indicator and Qualitative Metrices(QlM) in Criterion7)	
7.1	Institutional Values and Social Responsibilities
7.1.1 QlM	**Measures initiated by the Institution for the promotion of gender equity during the last five years.**
7.1.3 QlM	**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**
7.1.8 QlM	**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).**
7.1.9 QlM	**Sensitization of students and employees of the Institution to the constitutional obligations: values, rights, duties and responsibilities of citizens (within 500 words).**
7.1.11 QlM	**Institution celebrates / organizes national and international commemorative days, events and festivals (within 500 words).**
7.2	Best Practices
7.2.1 QlM	**Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual.**
7.3	Institutional Distinctiveness
7.3.1 QlM	**Portray the performance of the Institution in one area distinctive to its priority and thrust within 1000 words**

Qualitative analysis of Criterion 7
The two of the core values of the institution are "Social Development" & "Respect for All" of Vellore Institute of Technology. Concrete action plans are in place to establish and promotion of gender equity. The institution picks up the topper boy and girl from each district of Tamil Nadu to provide free education. Women are encouraged to participate in all its activities, the institution ensures. Gender sensitization is imparted to the students through appropriate courses in the curriculum. Safe environment is created for lady students and employees so that they can pursue their academic act research activities without hindrance by adopting measures like providing safe transport to lady students during night hours, installing CC cameras throughout the campus, employment of adequate number of female security guards, etc. Self-defense training is given to female students and they are encouraged to take part ins sports and games. Lady students are provided with the services of professional counsellors to equipment in competing for campus selection is dream companies. Workshops on prevention of sexual harassment in workplaces are organized to create awareness about rights and obligations. The Institution has successfully created a gender-sensitive ambience ensuring respect and dignity for female folk on the campus. Organic and green recyclable wastes are collected in bins differently coloured from homes, hostels and canteens and are composted along with garden waste. Recyclable waste are sold to vendors for recycling. Sanitary waste is given to a certified agency on alternate days for incineration. Sewage water treatment plants are in place and treated water is recycled for sanitary and gardening purposes. The sludge is also composted

and used as manure for the gardens. The biological wastes are safely disposed through 'Ken Bio links Pvt. Ltd'. E-wastes are regularly collected from source points and sent to e-waste storage area. Then it is sent to M/s Veltech systems, Chennai, an authorised agency to collect e-wastes. Hazardous chemicals waste is treated and discharged to the water treatment plant. Silica gel is widely used in TLC column is sent to the recycler. Strong acids and bases are neutralized and disposed to the water treatment plant. All equipment using radioactive elements for their functioning are carefully salvaged as per the instructions in respective manuals. Institution doesn't explicitly use radioactive materials in its research.

The institution has successfully created a home away from home for the diverse student and staff members. This is reflected in the fact that never there was a campus unrest. The promotion of cultural diversity and harmony is reflected in organisation and celebration of festivals involving people of different cultures and religions. This enables in internalising religious tolerance and promotion of harmony on the campus. Activities are arranged give an opportunity to diverse population to portray their language skills showcase their cultures. These programs by students of various nationalities, is a magnificent display of the diverse international culture. An annual event "AIKYA" is organised to showcases the vast heritage of India and its various cultures reflecting unity in diversity. In AIKYA, students from different states of India parade in their traditional costume depicting the rich cultural heritage and diversity of different states. Forums are provided to exhibit the fine music and art forms by groups belonging to different languages and cultures. No effort is spared to achieve the motto "A Place to Learn, and A Chance to Grow" through the holistic development of integrated personality of the students.

To inculcating Constitutional and Social responsibilities the institution organizes various events towards this objective by organising various activities like model United Nation , Voter Awareness program", discussion on Annual Union Budget, etc. The vibrant student clubs undertake discussion on issues for understanding constitutional values of respect for fundamental rights and discharging of duties imposed by the Constitution. Programmes are adopted to promote linguistic and cultural plurality. To promote social commitment, visits are arranged to orphanages and old-age homes and blood donation camps are periodically arranged. The practice of adoptating under the Unnat Bharat Abhiyan (UBA) and working for the development of these villages through the active involvement of students is in place. Awareness about substance abuse is also created.

The institution organizes national and international commemorative days, festivals and events like Thai Pongal, Pahela Baishakh, Bihu, Ugadi, Gudhi Padva, Onam, Navaratri, Eid and Christmas with fervors and joy. Teachers' Day, World Tourism Day, International Women's Day, International Yoga Day, International Day of Happiness, its are celebrated by organising meaningful activities suited to the occasion. The national festivals of Republic Day and Independence Day celebrations with patriotic fervour. To keep the values of freedom struggle alive the 75th year of "Quit India Movement" and 70th year of India's Independence were observed. The institute also celebrates annually, the following birth /death anniversaries of the prominent Indian personalities like Mahatma Gandhi Jawaharlal Nehru Swamy Vivekananda A. P. J. Abdul Kalam Ambedkar Jayanthi Thiruvalluvar Day in the poet's honour Perarignar Anna Thanthai Periyar Thiru K Kamaraj M. G. Ramachandran M. Varadarasanar Shri C. Rajagopalachari and iconic others. The Engineers' day, Vishvakarma day, Ramanujam day are also observed.

1. INDUSTRY INTEGRATION INTO ACADEMIA is an initiative undertaken with the objectives to fill the gaps between the needs of the industry and the curriculum offered; to foster networking and exchange of knowledge between practicing engineers/managers/scientists/technocrats/professionals, faculty members and students; to keep pace with the trends and disruptive changes taking place in industry; to have an exposure to industrial problems and practices; to deploy academic expertise for industrial problem solving. The Context Lack of substantial integration with industry and other stakeholders in India by the adoption of innovative strategies to face the mammoth global challenges. Research is undertaken with an inclination towards industry. However, several basic issues in industry are not adequately addressed. The collaborative and cooperative research with industry has resulted in generation of intellectual Property and its translation into industrial realization. The Practice The inclusion of 8th-Module - Industry Guest Lecture- in all the courses has led to strong interactions between the institute and industry. From the Technical Answers for Real word Problems course, the students are able to apply their subject knowledge to real-world problems of the industry. The project-based internships is a good learning process which brings new perspectives and is up-to-date with the industry trends. Learning is enabled through 15 industry-sponsored labs, through interaction and working methods. Regular industry conclave meetings further strengthen the learning process. Periodic industry visits help students to update their understanding of the subject and the industry practices in each domain. "Preparing and inspiring student minds" (PRISM) is an innovative project experience organized in collaboration with Samsung. Industries like Honeywell, JCI, Microsoft, Texas instruments innovation challenge, Makeathon, Codeathon, Buildathon and Hackathon activities are regularly conducted in VIT to address real-world problems. Industry mentors help our students through various entrepreneurship camps Innovative project collaboration between industry and VIT is done through cooperative knowledge creation and exchange. There is manifest of evidence of success of these programmes in the placement interviews and recruitments; awards received. Industry participation in academics in the form of special lectures has resulted in 169 consultancy projects in the last five years. Industry linkages have paved the way for 1926 project-based internships in prestigious companies. Industry participation in academics has facilitated 298 patents published in the last 5 years. The start-ups that have come up further manifest the success of this activity.

2. SOCIETAL ENGAGEMENT TOWARDS SUSTAINABLE DEVELOPMENT is a practice embarked upon with the objectives to expose the agrarian community to the latest scientific and technological advancements in the field to improve agriculture productivity; to develop technical skills of the youth to enhancing employability; to afford equal opportunity to the economically backward rural students to access higher education; to inculcate a culture of hygiene and cleanliness among the rural population in consonance with the government initiatives; to make Vellore city greener. To contribute to the development of Vellore and it surrounding areas, the institution is implementing various measures to uplift the quality of life of rural mass in and around Vellore. In this direction, the institution has been organizing many programmes including Agri-Expo (Uzhavar Kalanjiyam) every year. A large number of programmes are implemented through its Centre for Sustainable Rural Development and Research Studies and student clubs and chapters. Under "Green Vellore" Project VIT has taken up the task of making Vellore a clean and green city by massive tree planting activities and adopting clean Palar river project involving regeneration and restoration. The Centre for Sustainability Rural Development and Research Studies of VIT mainly aims on skill development training programmes for unemployed youth. In addition, VIT has implemented 67 societal outreach programmes. The evidence of success is reflected in the following stories: (i) So far, 659 students have benefitted through the STARS programme since the inception of the scheme, of which 533 students are first generation graduates. All the benefitted students have been successfully placed and have been reciprocating to the society in return. Several of them have secured covetable positions abroad. (ii) "Green Vellore" project has resulted in a substantial increase in the number of trees throughout the district. (iii) VIT has conducted

35 training programmes in 21 different trades resulting in many of the beneficiaries becoming entrepreneurs. (iv) Farmers are facilitated to become entrepreneurs.

Inculcation of research culture at grassroots level is what VIT has done and can be seen in all their endeavours, right from UG level to sponsored research.

To achieve this the curriculum is reoriented and research bent of mind is inculcated in the graduate and post graduate students by training them to write research proposals as part of program requirements also for the purpose of submitting to funding agencies. The Institution provides appropriate mentorship and provides seed money in this direction. This has resulted in a vibrant incubation centre which is a cradle of application of knowledge for inventing instruments and tools for social, agricultural and industrial application.

Section III:OVERALL ANALYSISbased on Institutional strengths.Weaknesses,Opportunities & Challenges(**SWOC**)(**up to 500 words**)

Strength:

- Student centric teaching learning process.
- Very Good research and innovation environment.
- Qualified and committed faculty with good diversity in specialization.
- State-of-the-art infrastructure.
- Good National and international collaboration

Weaknesses:

- Less number of international and reputed faculty
- Less number of sponsored research and consultancy.
- No coomercialization of IPR
- Limited student incubation.
- Quality of incoming students

Opportunities:

- Academia-Industry joint research and product development.
- Solving Societal problems and issues.
- Alumni engagement.
- Mentoring institutions of the region.
- Implementation of National Education Policy.

Challenges:

- Enhancing international ranking
- More Internatioalization
- Joint programmes wit Industries.
- Resource mobilization for sutained growth.
- Development of Effective Online Programmes.

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Section IV:Recommendations for Quality Enhancement of the Institution

(Please limit to **ten major ones** and use telegraphic language) (It is not necessary to indicate all the ten bullets)

- The design of curriculum and evaluation of teaching and learning should be collective responsibilities of faculty teaching that subject in individual department.

- At least 15-20% of eminent (iconic)faculty world wide should be identified and appointed which will in turn mentor the other faculty so as to improve the quality of Teaching and Research.

- A QIP like facility should be developed in VIT which will give opportunities for the faculty of other institutes to come and get the benefit of VIT learning & Research environment.

- NBA accreditation should be done for at least 50% of departments

- Faculty should develop MOOC courses in their area of expertise. At least two MOOC courses per department should be prepared and made available before the next NAAC visit.

I have gone through the observations of the Peer Team as mentioned in this report

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Signature of the Head of the Institution

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Seal of the Institution

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Sl.No	Name		Signature with date
1	DR. BIBHUTI BHUSAN BISWAL	Chairperson	
2	DR. DINESH CHANDRA RAI	Member Co-ordinator	
3	DR. ANUPAMA SHARMA	Member	
4	DR. SANJAY NALBALWAR	Member	
5	DR. CHIDANANDA REDDY PATIL	Member	
6	Dr. M.S. Shyamasundar	NAAC Co - ordinator	

Place

Date

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