# SELF STUDY REPORT

**FOR**

## 3rd CYCLE OF ACCREDITATION

# BANSILAL RAMNATH AGARWAL CHARITABLE TRUST'S VISHWAKARMA INSTITUTE OF TECHNOLOGY

UPPER INDIRA NAGAR, BIBWEWADI, PUNE, MAHARASHTRA.
411037
www.vit.edu

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# 1. EXECUTIVE SUMMARY

## 1.1 INTRODUCTION

**Vishwakarma Institute of Technology, a highly commendable private & self-financing institute, occupies a place of pride amongst the premier technical institutes in the western region of India. Established in year 1983, it is financed and run by Bansilal Ramnath Agarwal Charitable Trust, Pune. It is an Academically Autonomous Institute affiliated to Savitribai Phule Pune University. Within two decades, the institute marched towards the pinnacle of glory through its remarkable achievements and laurels in the field of engineering education of a high caliber.**

**It is the first private unaided institute in Maharashtra state to have taken academic autonomy.**

**Vishwakarma Institute of Technology, Pune campus boasts of lush green lawns that provides an ambience and a serene atmosphere of ancient 'Gurukuls' far from the maddening crowd.**

**It has at present about 6000+ students, 253 faculty members, 70 well equipped laboratories having instruments worth Rs. 13.36 crores and 131 administrative and supportive staff. It has a very strong alumni of students spread all over the world.**

**Institute offers Undergraduate, Postgraduate and Doctoral (Ph.D.) programmes in Engineering. It has nine full-fledged departments offering 15 (9 UG + 3 PG +3 Ph.D.) programmes with faculty who are motivated with a quest to promote engineering and technical education. The faculty members are constantly engaging themselves by participating in research activities.**

**The Institute has been granted autonomous status since the academic year 2008-09 and has autonomous status extended up to 2030.**

**The Institute was accredited ('A++' Grade, Cycle 2) by National Assessment and Accreditation Council (NAAC), Bangalore from November 2018 for the next five years.**

**VIT won prestigious award and trophy for ‘Excellence in Enabling Research Ecosystem’ given by Federation of Indian Chambers of Commerce & Industry (FICCI) in November 2022.**

**VIT won the Best Practice Competition-Making Quality Happen (MQH)-Consecutively three times in a row (June 2020, June 2021, June 2022) organized by Indian Merchant Chambers Ramkrishna Bajaj National Quality Award Trust( IMC RBNQA).**

**VIT is ranked in top 200 in NIRF since inception of the rankings. Institute is also in top 11-50 band in NIRF Innovation (ARIIA) in latest cycle.**

**Vision**

**"To be globally acclaimed Institute in Technical Education and Research for holistic Socio-economic development"**

**Mission**

- **To ensure that 100% students are employable and employed in Industry, Higher Studies, become Entrepreneurs, Civil / Defense Services / Govt. Jobs and other areas like Sports and Theatre.**
- **To strengthen Academic Practices in terms of Curriculum, Pedagogy, Assessment and Faculty Competence.**
- **Promote Research Culture among Students and Faculty through Projects and Consultancy.**
- **To make students Socially Responsible Citizen.**

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

**Institutional Strength**

- **Qualified and Senior faculty members**
- **Meritorious students admitted.**

- **Excellent Faculty retention**
- **Excellent Infrastructure of ICT enabled laboratories and classroom.**
- **Semester long internship to all the final year students**
- **Project based Learning and Project centric Learning approaches implemented in curriculum of Institute.**
- **Award Winning Research ecosystem for achieving the research outcome.**
- **Student centric career guidance and personal mentoring system present in the Institute.**
- **Institute Initiative to inculcate ethics morals and values in the students.**
- **360-degree assessment for ensuring improvement in technical communication skill, technical writing skill, presentation skill of the students.**
- **Vishwakarma Online Learning Platform for effective implementation of Teaching learning process.**
- **Adherence to financial norms and updation**
- **Faculty development schemes**
- **Strong Industry Connect**
- **Focus on Outcome Based Education**
- **ICT Enabled Teaching Learning**
- **Active Student Clubs**

**Institutional Weakness**

- **Dependency on Regulatory bodies for administrative, and regulatory issues.**
- **Due to availability of numerous facilities and ongoing development, fees of student is high.**

**Institutional Opportunity**

- **Enhancing Global exposure to students.**
- **Enhancing Global exposure to faculty.**
- **Enhancing academic tie-ups with Foreign Universities and Industries.**
- **Foreign Faculty as resource person.**
- **Improving Internal Revenue Generation through Industrial Training and Consultancy, and funded projects.**
- **Improving research outcomes from faculty and students for Publication/ Patents/Research Grants/ funds.**
- **Changing to / Making use of New upcoming Technology like AI based teaching learning.**
- **National level profile building by becoming a trend setter in implementation of NEP 2020**

**Institutional Challenge**

- **To become the Deemed University.**
- **Space available with institute is limited and hence a challenge for starting with new programmes.**
- **Increase in options of Institutes (Government and IITs) for Admission available with students.**
- **It is a challenge to retain the Highly Qualified and Experienced staff in the Institute.**

## 1.3 CRITERIA WISE SUMMARY

**Curricular Aspects**

**The foundation of a successful academic program in the Institute lies in its curriculum planning and implementation. In the Institute it is carried out systematically involving deciding the courses, content, and teaching methodologies that will be used to deliver knowledge. Effective curriculum planning ensures that students are exposed to relevant, updated, and comprehensive content. In implementation, it is seen that teaching methods are aligned with the goals set during planning.**

**Academic flexibility is critical in the ethos of an Autonomous Institute. With the rapid evolution of industries and technologies, Pune being an industry and start-up hub, it is essential for the Institute to remain adaptable. Flexibility allows us to introduce new courses, modify existing ones, and at times change teaching methodologies based on current trends and demands. For instance, during the Corona pandemic, this adaptive practice of the faculty and students helped the Institute to migrate to digital platforms seamlessly. Such adaptability ensures that students are always industry-ready and equipped with skills that are in demand.**

**Curriculum enrichment refers to the enhancement of the existing curriculum by integrating additional resources, projects, workshops. For instance, a course on atmospheric instrumentation is enriched by involving Indian Meteorological Department scientists. Such initiatives provide students with practical insights and exposure, enriching their academic experience as a whole.**

**Academic feedback is the backbone of continuous improvement in curriculum planning. Feedback is sourced from various stakeholders, including students, faculty, parent and alumni. Regular feedback sessions have helped the Institute to identify gaps in the curriculum or teaching methodologies. For instance, courses on Project based learning, Engineering design and innovation were introduced accordingly.**

**In conclusion, curriculum planning and implementation are vital for the success of any academic program. By ensuring academic flexibility, Institute remains relevant and adaptable. Curriculum enrichment initiatives provide**

**students with a broader learning experience, and regular academic feedback ensures that the curriculum remains in line with its intended objectives. Together, these elements create a holistic academic environment that fosters growth, innovation, and excellence.**

**Teaching-learning and Evaluation**

**Substantial number of students from various States and countries are admitted to the institute. The demand ratio for all the programs is very high. The institute also hosts differently abled students.**

**The focus of teaching learning process is distinctly student centric. Experiential learning, participative learning and various problems solving methodologies are used for enhancing learning experiences. Students are made to participate in variety of quizzes, group discussions and also in home assignments in the class which are integrated as a part of the assessment along with the established multiple choice as well as paper pen examination components consistent with the national education policy.**

**Online teaching learning is introduced with the help of MOOCs so as to facilitate anytime anywhere learning. All the faculty members use various ICT based tools for their teaching learning. All classrooms are ICT enabled. Academic calendar is also available before the commencement of the semester. Every faculty member plays the role of a mentor to address various problems of students and also gives proper guidance to shape their academic carrier.**

**Complete automation of the examination activities results in fault free and highly efficient processes such as course registration, fees payment, examination schedule, examination results, seating arrangement, attendance monitoring, external evaluation, marks entry, semester examination results, preparation of mark sheets and declaration of results through mail, WhatsApp, SMS etc. The institute declares the semester result within less than 2 weeks of the examination.**

**The course outcomes, program outcomes and program specific outcomes are defined for all courses and are communicated to different stakeholders. The mechanism is established to calculate the attainment of the outcomes.**

**Institute has the best faculty resource which is a genuine blend of experience as well as competence towards adopting new technologies. As per the policy of the institute, senior faculty are motivated for development which in turn helps in the overall institutional growth. Over the years many senior faculty from the Institute have performed excellently as academicians and administrators in various institutions as well as and higher and technical education sector under the government also.**

**Research, Innovations and Extension**

**Vishwakarma Institute of Technology is dedicated to fostering a culture of research and innovation within its academic community. This commitment is reflected in various aspects of the institution:**

**Active Faculty Involvement: VIT's faculty members are deeply engaged in cutting-edge research projects, they have secured funding from prestigious organizations like ISRO, DST, AICTE, RGSTC, and various industries. The funding from a wide spectrum of funding agencies to the tune of 5 crores, and consultancy and corporate training grant of 6 crores during the review period.**

**Student Participation: VIT recognizes the importance of involving students in research activities. VIT has a robust undergraduate program with over 5600 talented and dedicated students spread across ten diverse departments. These students form the backbone of the institution's research workforce, contributing to a rich tapestry of ideas and innovation.**

**Research Outcomes: The institution's research output is impressive, with over 914 research articles published in esteemed international and national journals, coupled with 1244 papers presented at prestigious conferences. VIT has supported the establishment of 18 startups in the last five years, indicating an entrepreneurial spirit among the students and faculty**

**Extension Activities: Beyond its research and academic pursuits, VIT actively engages with the community through an extensive array of extension and outreach initiatives, boasting an impressive 90% student participation rate. The institution has also forged 53 functional MoU, thereby fortifying collaborative ventures and the exchange of knowledge.**

**Plagiarism Check: VIT has been utilizing Turnitin software for plagiarism checks since 2020, underscoring the institution's commitment to maintaining the highest standards of academic integrity.**

**Recognition and Awards: The institution has also received the FICCI Award for "Enabling Research Ecosystem for Excellence in Research 2022," further recognizing its dedication to fostering a thriving research environment.**

**In conclusion, Vishwakarma Institute of Technology is a dynamic hub of academic excellence and innovation, where faculty and students collaborate to push the boundaries of knowledge. Through a commitment to research, a robust undergraduate presence, and initiatives that promote a culture of innovation, VIT continues to excel and make a meaningful impact on the academic landscape.**

**Infrastructure and Learning Resources**

**As a technical institute, infrastructure and other facilities are an essential aspect to carry out the academic processes. VIT,Pune has significant financial investments towards infrastructure. The management of the institute has demonstrated their whole-hearted interest in holistic development of students by providing state-of-the-art infrastructure for academic purposes as well as for inculcating research environment amongst faculty and students. All the departments are having adequate infrastructure with well-equipped laboratories and ICT enabled classrooms as well. As the main source of funds to the institution are tuition and development fees, these funds are utilized for establishment expenses, educational expenses, administrative expenses & capital expenses in terms of infrastructure development and augmentation every year. In any performing institute, the library is always a source of inspiration to get academic updates and related resources in terms of books, and journals to the students. Bajarangdas Lohiya Central Library is best example of it. As this techno savvy generation is interested in e-resources, the library is well equipped with eBooks, e-Journals and digital library management system (ILMS) as well as access to Shodhganga resources in the library along with physical books and journals. Every year the library is updated**

**by updating learning resources and the required expenditure is well taken care by the management. In this era, internet is an essential need of any academic institution. VIT,Pune always adheres to introduce technological changes in the IT infrastructure as and when needed. Many of the laboratories related to Computer and IT related courses are well equipped with computers, internet facility, wi-fi facility to carry out academic and research activities. Also, VIT Pune has well-equipped audio-visual center for e-content development with required software and mixing equipment. The institute has taken appropriate measures to maintain or update the infrastructure with a budgetary provision and the expenses accordingly.**

**Student Support and Progression**

**Vishwakarma Institute of Technology Pune firmly believe in nurturing the talents of our students and providing a conducive environment for their comprehensive growth. We have deployed a robust Student Support System and Progression framework, which revolves around various facets, all dedicated to empowering our students:**

**1. Financial Assistance and Scholarships:**

**Our college acknowledges the importance of supporting students in their academic journey. We help Needy and Bright Students with financial assistance and scholarships.**

**2. Vishwasiddhi – A Career Centric Platform:**

**The cornerstone of our support system is Vishwasiddhi, a unique platform for career counseling and e-guidance. Vishwasiddhi assists students in preparing for competitive exams such as GATE, CAT, GRE, UPSC Civil Services, Defense Services, and MPSC Exams. It provides a structured approach to their career aspirations.**

**3. Capacity Building and Skill Enhancement:**

**We place great emphasis on the development of our students' skills. Our curriculum focuses on soft skills, language, and communication, in addition to**

**technical knowledge. We believe in holistic development, and these life skills are crucial for our students' success.**

**4. Engaging Alumni and Industry:**

**We actively involve our alumni and industry professionals to keep our students updated with the latest industry trends and cutting-edge technologies. This exposure helps our students bridge the gap between theoretical knowledge and practical application, making them industry-ready.**

**5. Student Council's Involvement:**

**We have systematically involved our Student Council in academic and administrative verticals. This ensures effective implementation and dissemination of all our initiatives and practices. It also empowers students to take ownership of their college experience and actively contribute to the campus community.**

**6. Emphasis on Sports and Cultural Activities:**

**We give significant importance to sports and cultural activities as they impart essential life skills. Students learn Time management, stress handling, team spirit, and interpersonal skills through participation in these activities.**

**7. Redressal of Student Grievances:**

**Our college is committed to ensuring that no student faces undue challenges or grievances. We have implemented a Batch Guardian System to understand and address students' requirements and problems promptly. We maintain a zero-tolerance policy on ragging, ensuring a safe and welcoming environment.**

**Governance, Leadership and Management**

**Vishwakarma Institute of Technology has a visionary governance and leadership demonstrating various institutional practices in accordance with its vision and mission for horizontal and vertical growth of the institute. The mission focus is on Employability, strengthening academic practices, Research culture, and Social responsibility. In NEP implementation and before that, Institute had been conducting Ability Enhancement Courses for enhancing**

**essential skills of the students from employability and entrepreneurship development perspective. Well established research culture in the faculty community is now promoting research culture among students. Under the aegis of NEP, and from the previous academic year, courses such as product design and development, fostering the design, creativity aspects of students are created. The deployment of institutional perspective plan is carried out by the institution by implementing well defined policies and procedures along with the decentralized administrative systems. The academic and administrative processes are effectively carried out through e-governance and its operations. The institute is committed to create avenues of career development of the teaching and non-teaching staff. The well-defined performance appraisal system for teaching and non-teaching staff is in place from past many years and well performing employees are appraised every year. The teachers are motivated to attend conferences, FDPs, workshops, etc. by providing financial support. The utilization of financial resources is carried out in the institution very effectively. As the main source of funds to the institution are tuition and development fees, these funds are utilized for establishment expenses, educational expenses, administrative expenses & capital expenses. The Internal Quality Assurance Cell (IQAC) has significantly contributed in institutionalizing the quality assurance strategies and processes. As a result, the institute is in Top 200 of NIRF Ranking and also been awarded by many prestigious awards which includes, 'Excellence in Enabling Research Ecosystem' – FICCI 2022, Best Practice Competition-Making Quality Happen (MQH) - IMC RBNQA three consecutive times.**

**Institutional Values and Best Practices**

**Vishwakarma Institute of Technology aligns core values, ethical standards and operational practices to foster an environment encouraging holistic student development, academic excellence, and social responsibility. A gender audit and implemented measures promote gender equity to ensure equal opportunities and commitment.**

**Dedicated facilities such as biogas plant, solar panels, wheeling to grid and sensor-based energy conservation are available in campus for the management of degradable and non-degradable waste. Say No to plastic, E-Waste**

**management, environmental preservation and responsible disposal practices are used in VIT campus.**

**Water conservation approaches are used to reduce water consumption and minimize wastage. Rain water harvesting, energy-efficient lighting, solar panels for renewable energy are used in VIT campus for green campus initiatives.**

**Waste reduction is done through recycling the papers. Sustainable transportation options such as bicycles and electric vehicles are promoted. Environmental awareness campaigns, green audits, environment and energy audits are conducted regularly. These audits evaluate adherence to environmental regulations and the efficiency of our energy consumption.**

**A friendly barrier-free environment is provided to differently-abled individual. This includes wheelchair, ramps and accessible restrooms. Everyone, regardless of their disabilities can access and navigate campus comfortably and independently. Institute promotes tolerance and celebrating cultural, regional, linguistic, communal, and socioeconomic diversity through the different clubs such as Social Welfare &Development, V-EDC (Entrepreneurship Development Cell), VIT-MUN (Model United Nations), TEDx-VIT Pune, Vishwa Conclave, Student Career Counselling and Guidance. Students actively participates in outreach programs, community service, and partnerships with local organizations. Active civic engagement and a sense of duty towards our nation and its values are promoted.**

**VIT maintains a comprehensive code of conduct for faculty, administrative staff, and students. A respectful and harmonious environment is maintained by upholding professionalism, integrity and accountability among all stakeholders and it contributes to a positive educational atmosphere. Faculties and students are developing social relevance projects that have a positive impact on society.**

**Engineering Design and Innovation and 360 Assessment/Examination Based on Top Professional Skills of this Decade are Best Practices. Ecosystem with the Academic focus, Industry connection, placements, research ecosystem, extracurricular activities alumni networks made VIT as a Career Institute**

# 2. PROFILE

## 2.1 BASIC INFORMATION

| Name and Address of the College | |
|---|---|
| Name | BANSILAL RAMNATH AGARWAL CHARITABLE TRUST'S VISHWAKARMA INSTITUTE OF TECHNOLOGY |
| Address | Upper Indira Nagar, Bibwewadi, Pune, Maharashtra. |
| City | Pune |
| State | Maharashtra |
| Pin | 411037 |
| Website | www.vit.edu |

| Contacts for Communication | | | | | |
|---|---|---|---|---|---|
| **Designation** | **Name** | **Telephone with STD Code** | **Mobile** | **Fax** | **Email** |
| Director | Rajesh Jalnekar | 091-9552544489 | 9822418794 | - | director@vit.edu |
| IQAC / CIQA coordinator | Vijay Gaikwad | 091-8788923835 | 8788923835 | - | vijay.gaikwad@vit.edu |

| Status of the Institution | |
|---|---|
| Institution Status | Private and Self Financing |

| Type of Institution | |
|---|---|
| By Gender | Co-education |
| By Shift | Regular |

| Recognized Minority institution | |
|---|---|
| If it is a recognized minroity institution | No |

| Establishment Details | |
|---|---|
| Date of Establishment, Prior to the Grant of | 01-09-1983 |

| | |
|---|---|
| 'Autonomy' | |
| Date of grant of 'Autonomy' to the College by UGC | 01-01-1970 |

| University to which the college is affiliated | | |
|---|---|---|
| **State** | **University name** | **Document** |
| Maharashtra | Savitribai Phule Pune University | View Document |

| Details of UGC recognition | | |
|---|---|---|
| **Under Section** | **Date** | **View Document** |
| 2f of UGC | 29-06-2007 | View Document |
| 12B of UGC | 17-08-2015 | View Document |

| Details of recognition/approval by stationary/regulatory bodies like AICTE,NCTE,MCI,DCI,PCI,RCI etc(other than UGC) | | | | |
|---|---|---|---|---|
| **Statutory Regulatory Authority** | **Recognition/Approval details Institution/Department programme** | **Day,Month and year(dd-mm-yyyy)** | **Validity in months** | **Remarks** |
| AICTE | View Document | 11-06-2023 | 12 | |
| AICTE | View Document | 11-06-2023 | 12 | |
| AICTE | View Document | 11-06-2023 | 12 | |
| AICTE | View Document | 11-06-2023 | 12 | |
| AICTE | View Document | 11-06-2023 | 12 | |
| AICTE | View Document | 11-06-2023 | 12 | |

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

| Location and Area of Campus | | | | |
|---|---|---|---|---|
| **Campus Type** | **Address** | **Location*** | **Campus Area in Acres** | **Built up Area in sq.mts.** |
| Main campus area | Upper Indira Nagar, Bibwewadi, Pune, Maharashtra. | Urban | 6.55 | 22737 |

# 2.2 ACADEMIC INFORMATION

| Details of Programmes Offered by the College (Give Data for Current Academic year) | | | | | | |
|---|---|---|---|---|---|---|
| **Programme Level** | **Name of Programme/Course** | **Duration in Months** | **Entry Qualification** | **Medium of Instruction** | **Sanctioned Strength** | **No.of Students Admitted** |
| UG | BTech,Computer | 48 | pass HSC with PCM and Non zero Score in MHTCET | English | 240 | 239 |
| UG | BTech,Information Technology | 48 | pass HSC with PCM and Non zero Score in MHTCET | English | 180 | 180 |
| UG | BTech,Electronics And Telecommunication | 48 | pass HSC with PCM and Non zero Score in MHTCET | English | 180 | 167 |
| UG | BTech,Mechanical | 48 | pass HSC with PCM and Non zero Score in MHTCET | English | 180 | 175 |
| UG | BTech,Instrumentation | 48 | pass HSC with PCM and Non zero Score in MHTCET | English | 60 | 56 |
| UG | BTech,Chemical | 48 | pass HSC with PCM and Non zero | English | 60 | 48 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | Score in MHTCET | | | |
| UG | BTech,Artificial Intelligence And Data Science | 48 | pass HSC with PCM and Non zero Score in MHTCET | English | 180 | 170 |
| UG | BTech,Computer Science And Engineering Artificial Intelligence | 48 | pass HSC with PCM and Non zero Score in MHTCET | English | 120 | 120 |
| UG | BTech,Computer Science And Engineering Artificial Intelligence And Machine Learning | 48 | pass HSC with PCM and Non zero Score in MHTCET | English | 120 | 120 |
| PG | Mtech,Computer | 24 | Pass UG and Non zero score iin Gate | English | 6 | 4 |
| PG | Mtech,Electronics And Telecommunication | 24 | Pass UG and Non zero score in Gate | English | 6 | 0 |
| PG | Mtech,Mechanical | 24 | Pass UG and Non zero score Gate | English | 6 | 2 |
| Doctoral (Ph.D) | PhD or DPhil ,Computer | 36 | SPPU PET QUALIFIED | English | 0 | 0 |
| Doctoral (Ph.D) | PhD or DPhil ,Electronics And Telecommunication | 36 | SPPU PET QUALIFIED | English | 0 | 0 |
| Doctoral (Ph.D) | PhD or DPhil ,Mechanical | 36 | SPPU PET QUALIFIED | English | 0 | 0 |

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

| Teaching Faculty | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Professor | | | | Associate Professor | | | | Assistant Professor | | | |
| | Male | Female | Others | Total | Male | Female | Others | Total | Male | Female | Others | Total |
| Sanctioned by the UGC /University State Government | 0 | | | | 0 | | | | 0 | | | |
| Recruited | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yet to Recruit | 0 | | | | 0 | | | | 0 | | | |
| Sanctioned by the Management/Society or Other Authorized Bodies | 28 | | | | 56 | | | | 201 | | | |
| Recruited | 25 | 1 | 0 | 26 | 17 | 11 | 0 | 28 | 87 | 114 | 0 | 201 |
| Yet to Recruit | 2 | | | | 28 | | | | 0 | | | |

| Non-Teaching Staff | | | | |
|---|---|---|---|---|
| | Male | Female | Others | Total |
| Sanctioned by the UGC /University State Government | | | | 0 |
| Recruited | 0 | 0 | 0 | 0 |
| Yet to Recruit | | | | 0 |
| Sanctioned by the Management/Society or Other Authorized Bodies | | | | 130 |
| Recruited | 104 | 26 | 0 | 130 |
| Yet to Recruit | | | | 0 |

| Technical Staff | | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **Others** | **Total** |
| Sanctioned by the UGC /University State Government | | | | 0 |
| Recruited | 0 | 0 | 0 | 0 |
| Yet to Recruit | | | | 0 |
| Sanctioned by the Management/Society or Other Authorized Bodies | | | | 44 |
| Recruited | 36 | 8 | 0 | 44 |
| Yet to Recruit | | | | 0 |

## 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. | 22 | 1 | 0 | 10 | 10 | 0 | 15 | 16 | 0 | 74 |
| M.Phil. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PG | 3 | 0 | 0 | 7 | 1 | 0 | 71 | 98 | 0 | 180 |
| 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 |

| 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 |

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

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

| Programme | | From the State Where College is Located | From Other States of India | NRI Students | Foreign Students | Total |
|---|---|---|---|---|---|---|
| UG | Male | 1028 | 50 | 48 | 1 | 1127 |
| | Female | 343 | 9 | 27 | 0 | 379 |
| | Others | 0 | 0 | 0 | 0 | 0 |
| PG | Male | 2 | 0 | 0 | 0 | 2 |
| | Female | 4 | 0 | 0 | 0 | 4 |
| | Others | 0 | 0 | 0 | 0 | 0 |
| Doctoral (Ph.D) | Male | 0 | 0 | 0 | 0 | 0 |
| | Female | 0 | 0 | 0 | 0 | 0 |
| | Others | 0 | 0 | 0 | 0 | 0 |

| Provide the Following Details of Students admitted to the College During the last four Academic Years | | | | | |
|---|---|---|---|---|---|
| **Category** | | **Year 1** | **Year 2** | **Year 3** | **Year 4** |
| SC | Male | 84 | 84 | 70 | 71 |
| | Female | 41 | 38 | 34 | 27 |
| | Others | 0 | 0 | 0 | 0 |
| ST | Male | 39 | 31 | 26 | 21 |
| | Female | 13 | 6 | 4 | 6 |
| | Others | 0 | 0 | 0 | 0 |
| OBC | Male | 282 | 269 | 233 | 216 |
| | Female | 84 | 80 | 68 | 59 |
| | Others | 0 | 0 | 0 | 0 |
| General | Male | 551 | 475 | 586 | 648 |
| | Female | 157 | 145 | 162 | 177 |
| | Others | 0 | 0 | 0 | 0 |
| Others | Male | 91 | 95 | 90 | 66 |
| | Female | 33 | 36 | 30 | 22 |
| | Others | 0 | 0 | 0 | 0 |
| Total | | 1375 | 1259 | 1303 | 1313 |

# 2.3 EVALUATIVE REPORT OF THE DEPARTMENTS

| Department Name | Upload Report |
|---|---|
| Artificial Intelligence And Data Science | View Document |
| Chemical | View Document |
| Computer | View Document |
| Computer Science And Engineering Artificial Intelligence | View Document |
| Computer Science And Engineering Artificial Intelligence And Machine Learning | View Document |
| Electronics And Telecommunication | View Document |
| Information Technology | View Document |
| Instrumentation | View Document |
| Mechanical | View Document |

**Institutional preparedness for NEP**

| | |
|---|---|
| 1. Multidisciplinary/interdisciplinary: | The Institute vision statement is - "To be globally acclaimed Institute in Technical Education and Research for holistic Socio-economic development". The Institute Mission statements include 100% students are employable and employed; strengthen Academic Practices; Promote Research Culture and make students Socially Responsible Citizen. The concurrence of the Institute Vision and Mission with NEP objective of developing holistic multidisciplinary institutes is accentuated in consultation with its responsible stakeholders. The Institute imparts knowledge focussed as per industry needs, which is integrated in its curriculum. The English Communication, Logical reasoning and quantitative aptitude related training is given since first year. Career counselling and training from internal and external experts is given from time to time for succeeding in competitive examinations at State and National level. The research ecosystem of the Institute encourages consultancy and research projects for Industry and society. These challenges offered are of truly multidisciplinary nature and are tackled with the help of interdisciplinary knowledge. The institute has been practicing experiential learning for a long time emphasizing multidisciplinary knowledge through project-based learning. Such |

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| | course projects are meant to demonstrate the underlying principles learnt in the course, which also encourage interdisciplinary and multidisciplinary studies for its realization. A student typically is involved in around 25 such course projects during first 3 years of engineering. Another best practice, embedded in the academic roots of the Institute is called project centric learning which is also a credit-based activity in which a student is required to address a social and/or technical issue by using their domain knowledge as well as a workable multidisciplinary and interdisciplinary knowhow. Project Based Learning (PBL) and Project Centric Learning (PCL) practices have yielded laudable outcomes and are some of the best academic practices of the Institute. The institute has been following the pathbreaking ideas of multiple entry and exits from the Undergraduate engineering since the conceptualization of National Education Policy. The academic structure and the curriculum of the Engineering course is designed consistent with such requirements. The Institute plans to implement the NEP compliant components from the AY 2023-24. The Institute has identified Major Mandatory Courses, Major Electives, which are based on the pre-requisite knowledge acquired by the entry level students. The diversity of the multidisciplinary flexible curriculum is captured in some generic entry level open electives. Different skill enhancement courses are also coined. The Institute has also identified a Skill Enhancement Course long before in Mobile Ap development. Under the General Proficiency courses, a channel is provided for diverse ability enhancement of the students. Value education inputs are also consciously imparted through courses on human engineering and ethical and moral grooming through inputs about universal human values. Different co-curricular courses are also designed along with courses identified for giving inputs about our rich Indian knowledge system. For the students to be eligible for exit after getting a Diploma in two years, technical domain courses, some elective courses, skill-based courses and value education courses are planned. |
| 2. Academic bank of credits (ABC): | The institute is registered to NAD Digi locker . All students have been asked to register to ABC. As on date 27 Jun 2023 in our institute’s total 5158 students |

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| | are registered to ABC (ABC account created). The institution has registered under the ABC to permit its learners to avail the benefit of multiple entries and exit during the chosen programme. Institute is in process of uploading results of students on NAD Digi locker . As on date 27 Jun 2023, in total 1806 mark sheets are uploaded. The total ABC credit count is 903. Institute is constantly encouraging students to register under ABC and asking them to create ABC_id. |
| 3. Skill development: | The National Education Policy 2020 has offered many opportunities for skill development of students. There are many Vocational Skill and Skill Enhancement courses (VSEC) recommended as a guideline. The Institute has been conducting courses on soft skills for a few years. Students are taught by soft skill experts about improving their communication skills, interpersonal skills etc. They are given input about problem solving approaches etc. Also, leadership training is imparted. Using a case study-based approach, they are given training in work ethics, time management, teamwork etc. The Institute has hired professional resources that provide scientific inputs regarding English language, Logical reasoning, and Quantitative Aptitude. This synchronizes well with the Ability Enhancement skills as prescribed by the National Education Policy. The student’s employability is enhanced significantly with these courses. This course is made mandatory credit course for all first-year students. Also, students are made to appear for AMCAT examinations, which are up to the standard of recruitment tests carried out by various companies of repute. The Institute has an active student career counseling and guidance cell, which analyses the student performances and links it with company expectations and provides realistic guidance to the students accordingly. Many successful alumni in UPSC, MPSC and competitive examinations, working as successful entrepreneurs guide the students regularly. The student’s language skills are vital for their success in their chosen fields. The acquisition of such skills improves employability. It boosts students’ confidence. Knowledge also broadens their cultural horizons and acceptability of different faiths and practices. This helps them become good team members and work as good leaders in their professional lives. The Institute |

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| | teaches various foreign languages such as German, Spanish, Japanese, French, Chinese etc. The resource persons are qualified faculty in their own domains. |
| 4. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course): | The Institute takes pride in the ancient Indian Knowledge System and teaches its significance to the students in the course on Human Engineering. In this course, the concepts of knowledge, its types, its manifestation in different forms is covered. The different values and virtues practiced by ancient Indians from mythology and history are also covered. The proven Indian principles of Yoga, Asana and pranayama are also taught in this course. The deeper insight into the benefits of asana is given. Pranayama, dhyana helps the body to relax while the mind stays focused and is covered. Different types of pranayama, ancient and heredity owned dhyana techniques are also taught. The focus of the course is to make every student aware of the rich heritage and also make them practice these techniques. It is with this belief that once the student can gain some insight in these formative years, the students would persuade and go deeper into learning these principles. Although it is a self-exploratory journey, the seeds are sown for the masses in these formative years. At present the course and the practice is followed in the offline mode. Soon, it is aimed to record videos of experts, not only in the domain of yoga, but other areas also, which are technically more relevant such as ancient town planning systems, Vedic mathematics, mind body control, biorhythm etc. The recording of such videos would make it possible to percolate this treasure of knowledge in the on-line mode as well. Now, the Engineering courses are taught using English as a language of teaching and learning. However, the Institute has a well-established guardian – student scheme, where issues faced by every student are addressed. Also, the faculty teaching the courses are available for addressing individual issues of the student. Hence if a student is unfamiliar with English, and is unable to understand the concepts, the doubts are sorted out and addressed by the guardian teacher and faculty in an effective manner. At present there is no online course about Indian knowledge system which is used to supplement, however, under the provision of National Education Policy, the Institute plans to explore and develop such resources and make them |

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| | available to the students. |
| 5. Focus on Outcome based education (OBE): | The Institute has been following the outcome-based education approach for many years. Its contents are planned in the manners such that the outcomes are clearly visible and identifiable. The course owner appointed by the head of department along with the other members of the course teachers' detail of the syllabus and provide clarity about the course outcomes. In general, the contents are segregated into 6 units and on the correlation basis each unit is associated with a course outcome. Course outcomes are clearly specified and the degree of difficulty of the course outcomes are linked with the bloom's taxonomy. Such course outcomes are linked with the established program outcomes and program specific outcomes. Good practice/s of the institution pertaining to OBE in view of NEP 2020: The students are submitting their technical reports in the form of IEEE paper format based on their work Engineering Design and Innovation, course projects, major projects, software design projects. Students publish this work in the form of conference/Journal papers, Patents, copy rights, etc. Faculty and students publishes around 500 plus Scopus papers each year, 50 plus patents each year. Through 360-degree assessment model of the institute, student's placement and higher education enrolment is increased. Students also come with start-ups. Consistent with the national education policy, the institute has already been teaching some skill development courses as well as some ability enhancement courses. The institute has been teaching the course on human engineering, which emphasises the importance of Indian knowledge system and the rich and ancient collection of wisdom. Another set of value addition course has been about the vocational skills of the modern era. With every citizen of the globe making use of mobile phones for their day-to-day essentials, it becomes imperative that the engineer of the present and future improves the daily activities. With that spirit in mind, the institute designed developed and has successfully implemented a course on mobile app development. The institute has been teaching foreign languages such as Japanese, Spanish, French, German, Chinese Etc. The institute is in Pune, which is educationally a very advanced part of the country The institute also |

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| | has been teaching number of open electives such as organizational behaviour, project management, resume writing, workforce planning, user experience user interface design, product development, design thinking etc. For the institute it is a seamless change because majority of the recommended practices of the new education policy had already been incorporated by the visionary management ably supported by the faculty and eagerly accepted by the enthusiastic intelligent students at the institute. |
| 6. Distance education/online education: | The practice of Online Distance Learning is not followed by the Institute. However, on-campus vocational education for skill enhancement is given to the students in terms of teaching Mobile Ap development, lathe machine work etc. The institute has been known to be a trendsetter in terms of its administrative and academic practices. The institute had setup the development of the supplementary course contents by setting up its own MOOCS development studio. Many faculty members used their expertise and developed excellent video content which supplemented their content delivery in the classroom. All the classrooms of the institute have LCD projectors and are also Wi-Fi enabled. Many of the times, the faculty members use the online resources to demonstrate and take home the concepts in the classroom. This helps the students understand the ideas very clearly and effortlessly. During the laboratory sessions also, number of simulation packages are used to give experimental consolidation of the concepts with trial and error. This has been found to be the best manner of learning. Doing the things by hand and arriving at the accurate outcome with trial and error gives a fulfilling experience to the students. They tech savvy students and faculty of the institute where partially familiar with the online platforms of assessment even before the corona pandemic. In March 20 20 when corona forced a mass shutdown of the institute physical facilities, the cyber facilities of various online platforms search ads Google meet, zoom, Microsoft Teams, Cisco Webex were used very efficiently by the faculty and students alike. This advanced familiarity with the contents enabled the institute to bring its entire teaching learning on schedule within one week. During that semester and for the 2 subsequent years when no physical teaching learning and assessment could be |

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| | made, precious and important academic years of the students were saved since all teaching learning and assessment activities were conducted online without compromising on rigour. Post pandemic, the trend has continued and blended learning has been incorporated with a bigger effect and impact. Consistent with the national education policy practices of encouraging the use of online platforms for teaching learning purposes, the institute has been using Swayam platform for teaching learning. The role of a modern teacher as envisaged by the national education policy as a facilitator is being shaped up through such practices. The teacher for such blended courses where some concepts are taught by the teacher physically and for some concepts help it sort from such platforms, acts more as a guardian rather than a teacher. |

**Institutional Initiatives for Electoral Literacy**

| | |
|---|---|
| 1. Whether Electoral Literacy Club (ELC) has been set up in the College? | All activities related to Electoral Literacy are jointly undertaken by Social Welfare & Development Committee and Events Planning & Execution Committee. |
| 2. Whether students' co-ordinator and co-ordinating faculty members are appointed by the College and whether the ELCs are functional? Whether the ELCs are representative in character? | Dean – Student Activities is the faculty advisor and Chair Person – SW&D, Social Activities Secretary are coordinators for this purpose. Two major activities are undertaken every year – the first and foremost important activity is registration of eligible first year students as voters in the first two months after joining the institute and the second is organizing awareness camp highlighting the importance of elections in a democratic system and making them aware about voter rights. |
| 3. What innovative programmes and initiatives undertaken by the ELCs? These may include voluntary contribution by the students in electoral processes-participation in voter registration of students and communities where they come from, assisting district election administration in conduct of poll, voter awareness campaigns, promotion of ethical voting, enhancing participation of the under privileged sections of society especially transgender, commercial sex workers, disabled persons, senior | • Initiative by SW&D Committee and EPEC Committee in voter registration of students and their eligible friends outside the institute • Assisting district election administration voter awareness campaigns, promotion of ethical voting. |

| | |
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| citizens, etc. | |
| 4. Any socially relevant projects/initiatives taken by College in electoral related issues especially research projects, surveys, awareness drives, creating content, publications highlighting their contribution to advancing democratic values and participation in electoral processes, etc. | Extensive awareness drives, supporting Election of Commission of India officials in institute and outside institute student voter registrations are the major activities undertaken so far. |
| 5. Extent of students above 18 years who are yet to be enrolled as voters in the electoral roll and efforts by ELCs as well as efforts by the College to institutionalize mechanisms to register eligible students as voters. | Mr Rohidas Tupsoundar, government official of Parvati Vidhan Sabha Constituency is liasoning with the institute since last 5 years. SW&D Committee along with the government authorities undertake a mega student voter registration drive for all eligible students in the first two months of the students joining the institute. Around 500+ students admitted in the first year are registered as voters through this joint initiative. |

# Extended Profile

## 1 Students

### 1.1

**Number of students on rolls year wise during last five years**

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 6195 | 6061 | 5680 | 5121 | 4593 |

| File Description | Document |
|---|---|
| Provide Links for any other relevant document | View Document |
| Institutional data in the prescribed format (data | View Document |

### 1.2

**Number of final year outgoing students year wise during last five years**

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 1625 | 1540 | 1278 | 1093 | 1055 |

| File Description | Document |
|---|---|
| Provide Links for any other relevant document | View Document |
| Institutional data in the prescribed format (data | View Document |

## 2 Teachers

### 2.1

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

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 259 | 254 | 248 | 212 | 190 |

| File Description | Document |
|---|---|
| Institutional data in the prescribed format | View Document |
| Certified list of full time teachers | View Document |

### 2.2

**Total number of full time teachers worked/working in the institution (without repeat count) during last five years:**

**Response: 296**

| File Description | Document |
|---|---|
| Institutional data in the prescribed format | View Document |

# 3 Institution

### 3.1

**Total expenditure excluding salary year wise during the last five years (INR in lakhs)**

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 5704.43 | 5588.27 | 4213.65 | 3506.36 | 2905.60 |

# 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, regional, national, and global developmental needs, which is reflected in the Programme outcomes (POs) and Course Outcomes(COs) of the Programmes offered by the institution**

**Response:**

**The curriculum of Vishwakarma Institute of Technology is the central “powerhouse” of the institute, and all the processes, activities and outcomes are centred around it. It is aimed at development of every student to bring out technological change at National and International level.**

**VIT leads at the forefront by developing curriculum as per the dynamic needs of the engineering community and society at large which includes industry, universities of high repute at National and International level, Civil and Defence services, Entrepreneurship skills. The institute works in collaboration with Industry and other Academic Institutes to revise the curriculum every 2 to 3 years or as and when required, to make it purposeful, progressive, outcome-based, industry-relevant and increase employability of students.**

**The World Economic Forum has reported that, by 2025, automation and machine working will be prominent in all places of work. Data Science, Artificial-Intelligence, Internet-of-Things, content creation and Cloud-Computing are jobs of today and active efforts are taken to integrate these in curriculum.**

**The curriculum designed after careful consideration of stakeholder’s feedback and deliberation by various committees is conglomerated with learning objectives. It is finalized after adding learning objectives in terms of Program-Outcomes, Program-Specific- Outcomes and Course-O utcomes. The POs are in synch with apex accrediting bodies like NAAC, NBA and are also aligned with core Professional Bodies of every program.**

**The Program Specific Outcomes are decided by the Board of Studies committees of individual programs and Course Outcomes are designed by course-owners and finalized in the Board of studies.**

**The following Table illustrates the process of curriculum development and its relevance to the local, national, regional, global developmental needs.**

| Process | Board | Execution Details | Frequency |
|---|---|---|---|
| Structure Design / Development | Academic Board | • Referring curriculum and structure from other institutes of national and international repute to make it compatible with international universities<br>• Consulting a cademicians from IITs -NITs, Alumna, Faculty from Foreign Universities and Industry Advisory Boards, students, | Once in three years |

| | | | |
|---|---|---|---|
| | | parents.<br>• Suggestions from various government bodies, research organizations, employers. | |
| Curriculum Design / Development | Board of Studies | • Considering guidelines from Academic-Board the curriculum is designed aligned with POs and PSOs, Suggestions from Industry Advisory Board, Eminent professors from other institutes, IIT Mentor, Industry, Alumni and Dept faculty are considered for designing | Once in a year |

| | | | |
|---|---|---|---|
| | | the curriculum<br>• Actions for improvement related to non-attainment of COs, POs and PSOs are discussed in BoS. | |
| Course Content Design/Development / Revision | Internal Faculty | • Recommendations from BoS are considered while preparing the syllabus<br>• Faculty designs the course content as per the need of the Academia, Industry and Society.<br>• Referring the syllabus from various universities of national and international | Depending upon the requirement |

| | | | |
|---|---|---|---|
| | | repute is referred while preparing the curriculum to make it compatible with international universities.<br>• Feedback from Students, Parents, Recruiters and Alumni is considered<br>• Discussion with expert faculty working in respective area.<br>• Discussion with department mentors from IITs<br>• Academic Audit reports | |
| | | | |

| | | | |
|---|---|---|---|
| **Revision** | | • **Revision of curriculum is done in case of repeated non-attainment of CO which leads to non-attainment of PO and PSO if observed.** | **Once in a year** |

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

**1.1.2**

**The programmes offered by the institution focus on employability/ entrepreneurship/ skill development and their course syllabi are adequately revised to incorporate contemporary requirements**

**Response:**

**In today's rapidly evolving global landscape, the role of educational institutions extends beyond the traditional transfer of knowledge to equipping students with the skills necessary for successful careers and entrepreneurial ventures. The programs offered by institutes that focus on employability, entrepreneurship, and skill development play a pivotal role in shaping the future workforce. Moreover, the constant revision of syllabi to incorporate contemporary requirements is an essential aspect that ensures graduates remain relevant and competitive in their chosen fields.**

**Employability and Skill Development: The foremost objective of any educational institute is to produce graduates who are not only**

**knowledgeable in their chosen fields but also possess the practical skills required by employers. Institutes that emphasize employability and skill development recognize the dynamic nature of industries and the necessity for graduates to adapt swiftly to changing workplace demands. With those thoughts in mind, the Institute offers a course on English, Logical Reasoning and Quantitative Aptitude. Also dummy tests for recruitment purpose are conducted via established agencies such as AMCAT, CoCube etc. This approach ensures that students not only gain a deep understanding of the requisites but also learn to apply their knowledge effectively in real-world situations.**

**Entrepreneurship and Innovation: In today's age of innovation and start-ups, fostering an entrepreneurial mindset is crucial. Programs that focus on entrepreneurship provide students with the tools, resources, and mindset necessary to create and manage their ventures are run through Entrepreneurship Development Cell. These programs encourage creativity, critical thinking, risk-taking, and adaptability—essential traits for entrepreneurs. By nurturing entrepreneurial skills, institutes empower students to identify opportunities, develop innovative solutions, and contribute to economic growth.**

**Syllabi Revision for Contemporary Relevance: The modern world is marked by rapid advancements in technology, changes in industries, and evolving societal needs. To address these shifts, educational institutions must regularly update their syllabi to reflect current trends and requirements. This revision process ensures that graduates are prepared to tackle emerging challenges and capitalize on new opportunities. Incorporating cutting-edge topics, technologies, and methodologies in the curriculum not only enhances the learning experience but also equips students with relevant knowledge for the ever-evolving job market. In accordance with this, the Institute has introduced Software development project, Design thinking, Design and Innovation projects, Product Design and development amongst many new courses, also syncing with the National Education Policy needs.**

**Thus, the institute integrate employability, entrepreneurship, and skill development into their program, consistent with the social needs,**

**endorsed by the National Education Policy. Also, it is in line with the Vision of the Institute, that while keeping the syllabi current, they provide a holistic educational experience. Graduates emerge not only with academic knowledge but also with practical skills, adaptability, and an entrepreneurial mindset. This comprehensive approach increases their employability, enabling them to transition seamlessly from academia to the professional world or even venture into their entrepreneurial pursuits.**

**The institute produces graduates who are not only academically sound but also equipped with the skills and mindset necessary to thrive in an ever-changing global landscape.**

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

## 1.2 Academic Flexibility

**1.2.1**

**Percentage of new courses introduced out of the total number of courses across all programmes offered during the last five years**

**Response:** 31.29

1.2.1.1 **Number of new courses introduced during the last five years:**

Response: 822

1.2.1.2 **Consolidated number of courses offered by the institution across all Programmes (without repeat count) during the last five years :**

Response: 2627

| File Description | Document |
|---|---|
| Subsequent Academic Council meeting extracts endorsing the decision of BOS | View Document |
| Minutes of Board of Studies meeting clearly specifying the syllabus approval of new courses | View Document |
| Institutional data in the prescribed format (data template) | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

## 1.3 Curriculum Enrichment

**1.3.1**

**Institution integrates cross-cutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability and other value framework enshrined in Sustainable Development Goals and National Education Policy – 2020 into the Curriculum**

**Response:**

**The curriculum at Vishwakarma Institute of Technology Pune is enriched with courses aimed at all round personality development by sensitizing students to cross cutting issues relevant to gender, Environment, sustainability along with ethics and human values and behavioural sciences.**

**We have introduced an audit course at F. Y. B.Tech. level on Environmental Science in order to create awareness about different environmental issues and concerns of modern times. The course is introduced with an objective to highlight the impact of the professional engineering solutions in societal and environmental contexts and to emphasize the need for sustainable development. The learning outcomes fulfilled by the course are:**

**1. Recognize renewable and non-renewable resources and associated problems and plan different activities to create awareness among the people and hence to conserve resources by minimizing degradation of environment.**

**2. Understand concept of biodiversity at national and global level and need to preserve it.**

**3. Understand different types of pollutions and hence to find remedial measures to minimize the ill effects.**

**4. Recognize various disaster and solid waste management techniques.**

**5. Understand and appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems.**

**Along with environmental issues humane values and ethics are also equally important to shape individual life and society at large. They are essential for positive human behaviour and actions in our daily lives which impact everybody around us. They have played important role in not only sociology, but also psychology, anthropology, and related disciplines.**

**Professionals with strong values and ethical principles and are capable of making right judgments, applying their skills, and making correct decisions in difficult situations.**

**Apart from these students learn about cross cutting issues related to gender soft skills and behavioural science making them into engineers with a professional outlook without gender bias and good etiquettes and behaviour in their working lives.**

**In this view two compulsory courses have been introduced for all F. Y. B. Tech. students: 1) Indian Philosophy and Ethics and 2) Behavioural Sciences with following learning objectives**

**Indian Philosophy and Ethics**

1. **Apply the most appropriate tool of acquiring knowledge for a suitable object of knowledge.**
2. **Discern the reasons for the dual model of self & body and effects of the three modes on consciousness.**

3. **Evaluate the purpose of the 8 steps of the Yoga sutras and their consequence on the human mind.**
4. **Argue for the sake of Universal Law of Karma and the differences between monotheistic and polytheistic models.**
5. **Practice ethics in one's personal, professional, and family life.**

**Behavioural Sciences**

1. **Understand and apply psychological principles to personal life and will implement the concepts of Psychology in day-to-day life.**
2. **Get insight into their own personalities and develop it under the guidance of various theories.**
3. **Learn the methods to improve their interfamily relationships.**
4. **Differentiate between intelligence and aptitude and understand about IQ.**
5. **Equipped with various learning methodologies and resolve problems with a creative outlook.**

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

**1.3.2**

**Number of certificate/value added courses/Diploma Programmes offered by the institutions and online courses of MOOCs, SWAYAM/e-PG Pathshala/ NPTEL and other recognized platforms (without repeat count) where the students of the institution have enrolled and successfully completed during the last five years.**

**Response:** 103

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

**1.3.3**

**Percentage of programmes that have components of field projects / research projects / internships during the last five years.**

**Response:** 100

1.3.3.1 **Total Number of programmes that have components of field projects / research projects / internships (without repeat count) during the last five years**

Response: 15

1.3.3.2 **Total Number of programmes offered (without repeat count) during the last five years**

Response: 15

| File Description | Document |
|---|---|
| Sample Internship completion letter provided by host institutions | View Document |
| Sample Evaluated project report/field work report submitted by the students | View Document |
| Provide the relevant information in institutional website as part of public disclosure | View Document |
| Program and course contents having element of field projects / research projects / internships as approved by BOS | View Document |
| Institutional data in the prescribed format (data template) | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

## 1.4 Feedback System

**1.4.1**

**Structured feedback for curriculum and its transaction is regularly obtained from stakeholders like Students, Teachers, Employers, Alumni, Academic peers etc., and Feedback processes of the institution may be classified as follows:**

**Response:** A. Feedback collected, analysed, action taken & communicated to the relevant bodies and feedback hosted on the institutional website

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

# Criterion 2 - Teaching-learning and Evaluation

## 2.1 Student Enrollment and Profile

**2.1.1**

**Enrolment percentage**

**Response:** 90.32

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

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 1162 | 1149 | 1184 | 1230 | 1249 |

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

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 1218 | 1314 | 1356 | 1386 | 1340 |

| File Description | Document |
|---|---|
| Provide the relevant information in institutional website as part of public disclosure | View Document |
| Institutional data in the prescribed format (data template) | View Document |
| Final admission list as published by the HEI and endorsed by the competent authority | View Document |
| Document relating to sanction of intake as approved by competent authority | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

**2.1.2**

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

**Response:** 56.6

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

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 390 | 418 | 381 | 337 | 339 |

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

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 609 | 639 | 684 | 693 | 670 |

| File Description | Document |
|---|---|
| Provide the relevant information in institutional website as part of public disclosure | View Document |
| Institutional data in the prescribed format (data template) | View Document |
| Final admission list indicating the category as published by the HEI and endorsed by the competent authority. | View Document |
| Copy of the letter issued by the State govt. or Central Government Indicating the reserved categories(SC, ST, OBC, Divyangjan, etc.) to be considered as per the state rule (Translated copy in English to be provided as applicable) | View Document |
| Provide Links for any other relevant document to support the claim (if any | View Document |

## 2.2 Catering to Student Diversity

**2.2.1**

**The institution assesses the learning levels of the students and organises special Programmes to cater to differential learning needs of the student**

**Response:**

**The institute recognizes the need to cater the variety of learner mind and the education required to convert an individual into a responsible professional. The curriculum keeps on evolving at an accelerated pace to give students individualised learning experience. The emphasis is on imparting state-of-the-art skill using modest web-based tools rather than conventional information dissemination and transfer. The differential needs are assessed via previous Semester Academic performances, the informal and productive interactions with the students with the guardians.**

**Students getting admitted in the Institute come from very diverse socio-economic, geographical/continental, and ethnical backgrounds. This inherently brings diversity in their perception, interpretation, logic, communication and learning levels. Hence, there is necessity to help students get ready to adapt to the way of learning professional education, visualize the use of education in real life problem solving and distinguish and collaborate soft and technical skills to accomplish professional tasks.**

**Considering this, the institute organizes one-week Induction Program for all newly admitted students. The program is systematically scheduled and executed every year involving all cadre's workforce of the institute i.e. Director, Deans, Department heads, faculty and students. Through this program not only students, but their parents are also made aware about the vivid dimensions of learning through curricular, extra-curricular, experiential, peer-to-peer, research, industry platforms available to them.**

**The institute has well framed 3600 assessment scheme to assess the learning levels of students. Very novel and effective assessment tools help faculty to assess students and notify them about their grey areas where special efforts are necessary. The tools are capable to map the cognitive, affective and psychomotor domains of students. Involvement of subject experts from various other institutes and industry ensure very fair and unbiased assessment of student learning levels. The**

**The students under the various programs in SY B. Tech to Final Year B. Tech also have an individualised learning experience. The students directly admitted to Second year get remedial teaching. They are also given inputs to bridge any gaps and bring them at par with the rest of**

**class.. During Continuous assessment the slow learners are given special attention by giving them extra time in terms of Extra sessions, Re tests and specialized assignments and notes. This careful attention ensures that the learning outcomes are fulfilled for slow learners.**

**The fast learners are also facilitated by engaging them in challenging research projects, and participation in National and international technical competitions and conferences. These activities help the fast learners to realise their full potential enabling them to have promising and progressive careers.**

**Finally Vishwakarma institute of Technology is all set to take on the future by preparing the roadmap of innovative teaching and learning methodology. Innovative pedagogy like flipped classroom and MOOCs are being adopted and scaled up so as to teach as per the learning level of every individual.**

| File Description | Document |
|---|---|
| Upload Any additional information | View Document |
| Provide link for additional information | View Document |

**2.2.2**

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

**Response:** 23.92

| File Description | Document |
|---|---|
| List showing the number of students in each of the programs for the latest completed academic year across all semesters | View Document |
| Certified list of full time teachers along with the departmental affiliation in the latest completed academic year. | View Document |
| Provide Links for any other relevant document to support the claim (if any) | 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 experience and teachers use ICT- enabled tools including online resources for effective teaching and learning process**

**Response:**

**Entire curriculum emphasis more towards project centric and project based courses through which students develops organization skills, think like scientists, work on real science, engineering. Students will demonstrate their abilities and knowledge within the social life to solve real-world socio economic problems.**

**The objectives of Project based learning and Project centric learning are:**

**·To inculcate research and innovation culture amongst the student's to solve real life problems.**

**·To provide opportunity for students to learn and apply latest tools and technologies that can help them to solve real-world issues.**

**·To enhance the self-study culture through use of research papers, peer learning and many more**

**To accomplish the objectives projects are undertaken individually or in small groups. The projects extent a diverse range of topics, including theoretical, simulation and experimental studies, and vary from year to year. The emphasis is necessarily on facilitating student learning in technical, project management and presentation spheres. All project final exams are evaluated by industry/academic expert as an external examiner.**

**Institute follows the outcome-based assessment mechanism. Theory evaluation and Laboratory assignments are designed with the outcome based philosophy. The mechanism of examination conduction is in terms of Group Discussions, Course Presentation, Course VIVA, Course Project, Lab assessments, Home assignments, etc. All these modes of**

**assessments evaluate a student in a comprehensive manner (360 degrees evaluation) and help them develop their different abilities and skills improvising their professional competencies. The entire assessment is of formative / continuous type through which students can regularly seek the feedback of their performance.**

**Dean Academics provides the academic calendar which is designed at Institute level at the beginning of the academic year. It includes a detailed schedule for conducting exams, co-curricular activities, and extracurricular activities. The academic calendar serves as a source of information and a planning tool. VIERP software system is used for student attendance, student Exams, all types of mark entry. Each course is created on VOLP software by course owner, where faculty uploads the material and student can access it. Course owner is assigned for each course at the beginning of semester and subjects are assigned to the faculty well ahead of time to prepare course plans. Through VOLP/Google classroom course plan is shared with the students. Faculty delivers the curriculum as stipulated in course plan and assesses the student as per the identified course assessment. Student feedbacks are conducted on the course delivery and self- appraisal scheme is designed on which performance of each faculty in terms of Publications, Patents, administrative responsibilities, etc. is evaluated.**

**Faculty members are motivated to conduct various innovative teaching learning practices, e.g. video lectures, role play, industry visit, virtual lab, etc. ICT enabled teaching learning practices are implemented by faculty to maintain the excellence in teaching learning. Various ICT Tools are incorporated in the teaching learning process such as projectors in every classrooms/labs, desktop and Laptops, printers, scanners, smart board, auditorium-digitally equipped, Online sessions through Zoom, Google Meet, Microsoft Team, MOOC Platform (NPTEL, Coursera, Udemy, etc.), Seminar and Conference room are digitally equipped.**

| File Description | Document |
|---|---|
| Upload any additional information | View Document |
| Provide Link for Additional Information | View Document |

**2.3.2**

**The institution adopts effective Mentor-Mentee Schemes to address academics and student-psychological issues**

**Response:**

**In the realm of higher education, the transition from junior college to higher educational institute is observed to be overwhelming for many students. This transition brings with it not only academic challenges but also psychological adjustments. The Institute consciously recognizes the multifaceted needs of the students admitted to the Institute from diverse backgrounds and have justifiably turned to mentor-mentee scheme as a means of providing comprehensive support. These schemes offer a structured platform for fostering academic growth and addressing psychological concerns, ultimately enhancing the overall student experience and achieving fulfillment of their desired career goals.**

**Mentor-mentee scheme offers a unique avenue for academic and personal guidance beyond traditional classroom settings. By pairing experienced mentors with newer students, Institute provides a valuable source of knowledge, advice and direction. The Institute faculty as mentors, assist mentees in understanding complex academic subjects, connecting them with subject experts if need be, improving study habits and navigating intricacies of coursework, as well as trying to deeply understand the young student as a person. The personalized approach not only improves academic performance but also cultivates a sense of belonging, as students feel that their success and accomplishments matters not only to themselves but also to the Institute.**

**It is observed that beyond academic challenges, students often have to deal with psychological pressures, such as homesickness, stress and social anxieties. For some students coming from mofussil and rural areas, this transition into a metro life style is a bigger challenge than academics itself. Mentor-mentee relationships extend beyond academics, offering 'safe hub' for students to discuss their emotional wellbeing. Mentors, through their own experiences, do empathize with these struggles and efforts and**

**provide a supportive environment for students to express their concerns. This emotional connection can alleviate feelings of isolation and help students cope up with the pressures of college life. Wherever need be, the mentors seek professional guidance for the mentee students and connect needy students to these professionals.**

**Mentor-mentee relationships have a profound impact on students' confidence and self efficacy. There are many success stories that have emerged out of strong and supportive mentor-mentee relationships. These are not the laurels won by the students, but these happen to be the silent, behind the scenes efforts of mentors that have led to saving many disoriented lives or giving their careers and personal lives a twist for the better, when they were on the fork of uncertainty. When students receive guidance and encouragement from their mentors, they develop a greater belief in their abilities to succeed academically and personally. As mentees receive the valuable guidance, they introspect about their challenges and triumphs and become more motivated to set and pursue their own goals, enhancing their overall sense of purpose and direction.**

**Regular meetings are conducted amongst the mentee students and the mentoring faculty. Issues as applicable are discussed as a group in public or as an individual on private basis as per its sensitivity and secrecy. Parents are also invited for such one-on-one meetings, if required.**

| File Description | Document |
|---|---|
| Upload any additional information | View Document |
| List of Active mentors | View Document |
| Provide Link for Additional Information | View Document |

**2.3.3**

***Preparation and adherence of Academic Calendar and Teaching plans by the institution***

**Describe the Preparation and adherence to Academic Calendar and Teaching plans by the institution.**

**Response:**

**Curriculum is designed in-line with guidelines provided by AICTE, ABET and SPPU, UGC. Based on the inputs of academia, industry experts and outcome of meetings, courses are finalized and entered in to the structure designed by Dean Academics. Course wise syllabus preparation is done by respective faculty members. Syllabus includes course objectives, course relevance, content in two sections, course outcomes, future mapping of the course, Job mapping. It also includes the list of lab assignments, home assignments, Course Presentation topics, GD topics, text books and reference books. During the process of curriculum design each course is set with 6 COs (Course Outcomes) with 12 POs (Program Outcomes) and program wise PSOs (Program Specific Outcomes).**

**Course plan is designed for every course and delivery of course plan is verified. Assessment pattern is designed keeping in mind blooms taxonomy and students are assessed as per identified course of Assessment. Every course has Course Objectives, CO and same are discussed with students. Faculty delivers the curriculum as stipulated in course plan and assesses the student as per the identified course assessment. To maintain the quality of teaching learning audits are conducted on various academic platforms, such as ISO audit, Question paper audit, etc.**

**To run the entire academic process smoothly and to increase the improvement in the quality of Teaching-Learning process, Dean Academics provides the academic calendar which is designed at Institute level in the beginning of the academic year. It includes a detailed schedule for conducting exams, co-curricular activities, and extracurricular activities at the Department and Institute level. For course instructors, students, and staff of the Department, the academic calendar serves as a source of information and a planning tool. The academic calendar is strictly followed in all the Department's academic and extracurricular activities. Subjects are assigned well ahead of time to prepare course plans and soft and hard copies of course materials at the start of each semester. The academic calendar is helpful in timely completion of educational and other allied activities entire academics, examinations, assessments guidelines which has to follow by each faculty. Summer and winter breaks are known to students well in advance. These breaks are effectively**

**utilized by students for Internships, Training programs, summer training programs etc. Planning and Execution of academic activities like Assessment, Examination, for Students as well as for faculty are executed as per calendar.**

**Sample Record: Adherence to Academic Calendars**

| Calendar | Parameter | Execution | Verifiable Indicator |
|---|---|---|---|
| 2nd January 2023 | Start of semester | Semester commenced on the said date | Mail, website , attendance record |
| 13th March to 17th March 2023 | Mid Semester Reviews | EDI/Maj proj/ internship reviews is scheduled in the given slot | Mail by Dean Academics and academic calendar on the website.<br>Mailed to students. |
| 3rd May to 26th May 2023 | ESE, CVV, Project exams | Question paper setting, Audits, External examiners appointments, etc<br>Time table for ESE exam circulated by Dean exam. | Mail by Dean Academics and academic calendar on the website.<br>Mailed to students. |

| File Description | Document |
|---|---|
| Upload any additional information | View Document |
| Provide Link for Additional Information | View Document |

## 2.4 Teacher Profile and Quality

**2.4.1**

**Average percentage of full time teachers appointed against the number of sanctioned posts year wise during the last five years**

**Response:** 100

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

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 259 | 254 | 248 | 212 | 190 |

| File Description | Document |
|---|---|
| Sanction letters indicating number of posts sanctioned by the competent authority (including Management sanctioned posts). | View Document |
| Provide the relevant information in institutional website as part of public disclosure | View Document |
| Institutional data in the prescribed format (data template merged with 2.4.3 and 2.4.4) | View Document |

**2.4.2**

**Percentage of full time teachers with Ph.D./D.Sc. / D.Litt./ L.L.D during the last five years**

**Response:** 26.01

2.4.2.1 **Number of full time teachers with *Ph.D./D.Sc. / D.Litt./ L.L.D* during the last five years**

Response: 77

| File Description | Document |
|---|---|
| List of faculty having Ph.D./D.Sc. / D.Litt./ L.L.D along with particulars of the degree awarding university, subject and the year of award per academic year. | View Document |
| Institutional data in the prescribed format (data template merged with 3.2.3 and 3.4.2) | View Document |
| Copies of Ph.D./D.Sc. / D.Litt./ L.L.D awarded by UGC recognized universities | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

**2.4.3**

**Average teaching experience of full time teachers (Data to be provided only for the latest completed academic year, in number of years)**

**Response:** 15.4

2.4.3.1 **Total teaching experience of full-time teachers as of latest completed academic year**

Response: 3988

| File Description | Document |
|---|---|
| Institutional data in the prescribed format (data template merged with 2.4.1 and 2.4.4) | View Document |

**2.4.4**

**Percentage of full time teachers working in the institution throughout during the last five years**

**Response:** 86.84

2.4.4.1 **Number of full time teachers worked in the institution throughout during the last five years:**

Response: 165

| File Description | Document |
|---|---|
| Institutional data in the prescribed format (data template merged with 2.4.1 and 2.4.3) | 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 last date of declaration of results during the last five years**

**Response:** 6.6

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***

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 7 | 8 | 6 | 8 | 4 |

| File Description | Document |
|---|---|
| Result Sheet with date of publication | View Document |
| Policy document on Declaration of results (if any) | View Document |
| Institutional data in the prescribed format (data template) | View Document |
| Exam timetable released by the Controller of Examination | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

**2.5.2**

**Percentage of student complaints/grievances about evaluation against total number appeared in the examinations during the last five years**

**Response:** 0.18

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

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 8 | 9 | 11 | 10 | 11 |

2.5.2.2 **Number of students appeared in the examination conducted by the institution year wise during the last five years**

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 6106 | 5990 | 5680 | 5107 | 4559 |

| File Description | Document |
|---|---|
| List of students who have applied for re-valuation/re-totaling program wise certified by the Controller of Examinations year-wise for the assessment period. | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

**2.5.3**

**IT integration and reforms in the examination procedures and processes including Continuous Internal Assessment (CIA)/Formative Assessment have brought in considerable improvement in Examination Management System (EMS) of the Institution**

**Describe the examination reforms with reference to the following within a minimum of 500 words**

- **Examination procedures**
- **Processes integrating IT**
- **Continuous internal assessment system**

**Response:**

**The rationalization for examination reforms arises from academic considerations and to ensure fulfillment of learning objectives. Therefore, at Vishwakarma Institute of Technology (VIT); the objective of examination reform; is to make it an instrument of good education. Examination reforms are as follows.**

- **Formative assessment: The Institute has adopted a method of assessing the academic performance of the students on a continuous basis. 360-degree holistic assessment scheme is offered for the multidimensional growth of students. The evaluation comprises many assessment components like Theory examinations, Multiple choice questions, seminars, Group discussions, lab exams, course projects and home assignments, Case studies, surveys, design and**

**technical blog writing for each and every subject. Formative assessment at VIT is designed in such a way that it imparts various types of skills. Complex Problem Solving. Critical Thinking. Creativity. Project Management. Judgment & Decision Making, Communication, teamwork, Technical Writing etc.**

- **Experiential learning: In addition to the regular practicals, other components that evaluate student's performance in experiential learning activities such as internships, project and seminars are provided. At the final year B.Tech level our students are interns for an entire semester in industry, which is evaluated on various parameters to ensure experiential learning.**
- **We have involved external examiners in various stages of examination process: evaluation of project work , Group discussion exam ,presentation exam ,course project exam , major project final review, internship review .**
- **Requests for re-evaluation have become negligible once we started showing corrected answer sheets to students. Greater transparency breeds more accountability.**
- **One of most important reform is to declare semester result within 8 days of examination. This quick result processing is achievable because of exam automation software.**
- **Question paper Audits facilitated ease of mapping of course outcomes to program outcomes, checking of implementation of Bloom's taxonomy and ensuring quality of question papers.**
- **Institute has one unique concept of "consolidated statement of grades" in this , all 8 semester result is printed on one sheet and this result is issues to students .**
- **IT integration in examination processes: Technology is effectively used in the examination management process. Complete automation of examination helped in the successful execution of examination processes. Exam automation has following steps.**

- **Exam Prerequisites: Exam automation software takes input from subject master, and student master files.**
- **Exam setting at beginning of semester: At the beginning of every semester Assessment schemes are defined and implemented though Exam automation software, examiners are appointed for all subjects.**
- **Pre-Exam work: This defines exam schedule preparation, exam seating arrangement, exam room details. various types of reports like student attendance for exam, room wise Envelop label, junior supervisor reports, Issue receipt register reports etc are generated through software.**
- **Result processing and Result declaration: Branchwise and yearwise SGPA and CGPA of students is calculated. Result is declared on student portal.**
- **Various types of result reports are generated and Result analysis is performed on various aspects.**
- **University Gazette preparation : Passout batch data is submitted to university, this gazette data is generated for exam automation software**

| File Description | Document |
|---|---|
| Upload any additional information | View Document |

## 2.6 Student Performance and Learning Outcomes

**2.6.1**

**The institution has stated learning outcomes (programme and course outcome)/graduate attributes which are integrated into the assessment process and widely publicized through the website and other documents and the attainment of the same are evaluated by the institution**

**Response:**

**Abiding to the list of 12 standard Program Outcomes (POs) ,every program has defined their Program Specific Outcomes (PSOs) well complying to the blend of the respective programs. All courses have been framed with Course Outcomes (COs) that are finally mapped with POs/PSOs. Various competent bodies like Academic Board (AB), Board of Studies (BoS), Industrial Advisory Board (IAB) play instrumental role in suggesting and approving those vital statements of the program.**

**The institute has a mechanism to communicate/disseminate the POs/PSOs of the program to its various stakeholders like students, parents, staff members, industry, alumni, employers etc. The PO/PSO statements are published in the structure and syllabus of the Engineering curriculum, which is available on the webpage of each Department of the Institute website (www.vit.edu). It is prominently displayed at the entry points and laboratories of various departments. It is communicated to students through emails and Learning Management System platforms like Google Classroom, VOLP etc. The question papers also display questions to CO mapping so that student may have an idea as exactly which outcome is being assessed by a particular question.**

**Since few years, Institute uses own ERP software for recording, assessing and evaluating the attainments for easy access and retrieval.**

**The course outcomes are defined for all courses. The course outcomes are measured by students' performance in In-semester, and End-Semester assessments. For the courses such as seminar, course project, EDI project and major project, the work is reviewed in two stages in a semester.**

**COs for all courses have been assigned different attainment levels from 1 to 5. Level 5 is the most challenging level while the degree of difficulty progressively reduces to level 1. Accordingly, the threshold levels are set to measure the attainment of the COs. POs and PSOs attainment is measured by both the direct and indirect assessment tools. In-semester and end-semester examinations are used as direct tools. The proportion of Direct and Indirect assessment of the POs and PSOs attainment is 80% and 20% respectively.**

**Based on the attainment of the COs, the attainment of POs and PSOs is**

**determined. The attainment of each PO and PSO is determined as the sum of weights (correlation level) of the affected (non-attained) COs (m) and the sum of weights of all COs influencing a particular PO or PSO (M). The attainment for all POs and PSOs is calculated as:**

**% Attainment = [(M-m)/M]*100**

**The target level for all POs and PSOs is set as 80%. When the attainment is equal to or above the set target level, the said PO or PSO is attained. The software also facilitates the analysis of such data.**

**Indirect assessment (20%) is measured through various feedbacks. It is conducted online and the data is recorded in the software.**

**The final attainment of each PO and PSO is calculated as:**

**Final attainment = (Direct Attainment*0.8) + (Indirect Attainment*0.2)**

| File Description | Document |
|---|---|
| Upload POs and COs for all courses (exemplars from Glossary) | View Document |

**2.6.2**

**Pass percentage of students (excluding backlog students) (Data for the latest completed academic year)**

**Response:** 98.28

2.6.2.1 **Total number of final year students who passed the examination conducted by Institution during the latest completed academic year:**

Response: 1597

| File Description | Document |
|---|---|
| Institutional data in the prescribed format (data template) | View Document |
| Certified report from the COE indicating the pass percentage of students of the final year (final semester) eligible for the degree program-wise / year wise | View Document |
| Annual report of Controller of Examinations ( COE) highlighting the pass percentage of final year students | View Document |

## 2.7 Student Satisfaction Survey

**2.7.1**

**Online student satisfaction survey regarding teaching learning process**

**Response:**

# 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 are well defined policy for promotion of research which is uploaded on the institutional website and implemented**

**Response:**

**Vishwakarma Institute of Technology is committed for promoting a culture of research and innovation. Our faculty members are actively involved in cutting-edge research projects and have received funding from prestigious organizations such as ISRO, DST, AICTE, RGSTC and various Industries. As part of our commitment to faculty and student development, we offer opportunities such as industry internships in India / Abroad, seed money, FDP sponsorship, policy for ethics, plagiarism software, collaborative research projects, Ph.D. encouragement, knowledge creation facilitation, training, and various competitions. We encourage each faculty member to leverage their individual expertise to generate funds through consultancy, research projects, training, and patents. This helps to support and promote the Institution’s research initiatives by providing opportunities for faculty and students to advance their professional growth and development.**

**Reserach Initiatives:**

**During the period of evaluation, the Institute has undertaken several new initiatives to promote research such as**

- **Arranging expert lectures by eminent personalities from Industry and reputed institutes**
- **Developing training modules for faculty and students for capacity building**
- **Arranging conferences and workshops**
- **Submitting quality research proposals for government and non-**

**government funding agencies**

- **Pursuing consultancy work sponsored by industry.**
- **Earmarked yearly Research budget including seed money for budding researchers.**
- **Identification of research thrust areas.**
- **Guidance and sponsorship for writing patents**
- **Having a research mentor from reputed institutes like IIT, Industry and foreign universities.**
- **Providing incentives, awards for excellent performance in research activities such as research grants, consultancy projects, Internal Revenue Generation, publication in quality journals and conference etc.**
- **Research Appraisal Scheme for faculty members**

**Our Research Appraisal Scheme for faculty members ensures that their research activities are regularly evaluated and recognized. To accelerate research activities, we have developed 12 centres of excellence in emerging fields of engineering, like Artificial Intelligence, Machine learning, Cyber Security, Data Science, 3 D printing, etc. These centres provide platforms for faculty and students to explore new research areas, collaborate with industry partners and share their findings with the academic community.**

**Project Based and Project Centric Learning: To survive in today's competitive world and achieve high employability skills. The PBL make our students future ready rather than industry ready. It means they are competent enough to take challenges and find best solutions to complex problems.**

**Our Strategic Plan for Research & Innovation is focused on creating and supporting clusters of researchers that build upon the strengths of our Institute. The success of this Plan is based on the outcomes delivered, which include highly cited journal papers with high impact factor,**

**patents, and publications in highly reputed conferences.**

**Vishwakarma Institute of Technology, Pune bagged the FICCI Higher Education Excellence Award for "Excellence in Enabling Research Environment" in the year 2022. This bears testimony to the commitment of the institution for continuously upgrading the research facility and promoting quality of research.**

**Our commitment to research and innovation is unwavering and we are confident that our efforts will contribute to the advancement of knowledge, development of our community and broader national research agenda.**

| File Description | Document |
|---|---|
| Upload any additional information | View Document |

**3.1.2**

**The institution provides seed money to its teachers for research**

**Response:** 35.7

3.1.2.1 **Amount of seed money provided by institution to its teachers for research year wise during last five years (INR in lakhs)**

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 17.6 | 18.10 | 0 | 0 | 0 |

| File Description | Document |
|---|---|
| Sanction letters of seed money to the teachers is mandatory | View Document |
| List of faculty who have been provided with seed money for research along with the title of the project, duration and amount year-wise | View Document |
| Institutional data in the prescribed format (data template) | View Document |
| Audited Income-Expenditure statement highlighting the expenditure towards seed money endorsed by the Finance Officer | 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:** 14.19

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

Response: 42

| File Description | Document |
|---|---|
| List of teachers who have received the awards along with nature of award, the awarding agency etc. | View Document |
| Institutional data in the prescribed format (data template) | View Document |
| E-copies of the award letters of the teachers | View Document |

## 3.2 Resource Mobilization for Research

**3.2.1**

**Total Grants research funding received by the institution and its faculties through Government and non-government sources such as industry, corporate houses, international bodies for research project, endowment research chairs during the last five years (INR in Lakhs)**

**Response:** 176.79

| File Description | Document |
|---|---|
| List of Extramural funding received for research, Endowment Research Chairs received during the last five years along with the nature of award, the awarding agency and the amount | View Document |
| Institutional data in the prescribed format (data template is merged with 3.2.2) | View Document |
| Copies of the letters of award for research, endowments, Chairs sponsored by non-government sources | View Document |

**3.2.2**

**Number of research projects per teacher funded by government, non-government , industry, corporate houses, international bodies during the last five years**

**Response:** 0.06

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

Response: 19

| File Description | Document |
|---|---|
| List of project titles with details of Principal Investigator, amount sanctioned and sanctioning agency etc | View Document |
| Institutional data in the prescribed format (data template merged with 3.2.1) | View Document |
| Copies of the grant award letters for research projects sponsored by government agencies | View Document |

**3.2.3**

**Percentage of teachers recognised as research guides as in the latest completed academic year**

**Response:** 13.13

3.2.3.1 **Number of teachers recognised as research guides as in the latest completed academic year:**

Response: 34

| File Description | Document |
|---|---|
| Upload copies of the letter of the university recognizing faculty as research guides | View Document |
| Institutional data in the prescribed format (data template merged with 2.4.2 and 3.4.2) | View Document |

## 3.3 Innovation Ecosystem

**3.3.1**

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

**Response:**

**Vishwakarma Institute of Technology (VIT) aims to make students future ready including being industry ready. This enforces institute to impart strong research and innovation approach in our students considering societal needs. Implementation of future ready approach has impelled us to have strong research ecosystem at VIT for undergraduate students. All research of our Institute aims to be of a high standard. The goal of creating technological and social innovations has emerged alongside R&D-based activities. Technological innovation is one of the primary forces driving economic growth of the Institution. Apart from this, it is impacting on the research outcomes in the form of increase in the number of publications and patent. Further, the research funding and consultancy grants involves many students, which improves their complex problem-solving ability as well as lifelong learning ability. The purpose of research activities is to give platform for student to present their creative thinking ability & innovations.**

**Project Based and Project Centric Learning: Future ready means they are competent enough to take challenges and find best solutions to complex problems. Solving highly complex problems requires that students have both 21st century skills (Critical thinking, Problem solving, research aptitude, cognitive thinking, emotional intelligence, time management, information synthesizing, strong communication skills, both**

**for interpersonal and presentation needs, utilizing modern technology tools).**

**The major benefits that we are receiving from this methodology are improvement in academic content knowledge and foster deeper learning. It helps students develop 21st century skills like critical thinking, problem solving, communication, collaboration, creativity, innovation, etc and build student agency when it comes to their own academic, personal, and social development. This methodology teaches students how to approach new challenges with confidence, resilience, and a growth mindset.**

**Research Strategy of Institution to Enable High Quality Research:**

- **Focus on socially relevant multidisciplinary applied research for socio economic development.**
- **Focus on Socially relevant areas- Health care, smart city, defence, green earth, energy, agriculture, pollution, space, and waste management etc.**
- **Faculty and student capacity building and capacity development**
- **Initiatives to establish collaborative relations with national, international, and private research institutions.**

**Engineering Design and Innovation (EDI) Project: The major objective behind EDI project- is a semester long work by students to practice and apply engineering technologies for the socially relevant issues and find cost effective solution for the same. The student group uses immersive design experience which integrates creativity, innovation, and an ambitious system design for improvisation students' professional skills. It engages team of 4 to 5 students to work across the various spectrums engineering like materials, devices, circuits, systems, software, and designs. After the approval of the synopsis from project approval committee, the team requires to develop a concrete plan for the project and successfully executing it are also important parts of the experience as is second stage planning for how this new technology demonstration could be turned into a new product line.**

| File Description | Document |
|---|---|
| Upload 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.**

**The institution has a stated Code of Ethics for research and the implementation of which is ensured through the following:**

1. **Inclusion of research ethics in the research methodology course work**
2. **Presence of institutional Ethics committee (Animal, Chemical, Bio-ethics etc.)**
3. **Plagiarism check through software**
4. **Research Advisory Committee**

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

| File Description | Document |
|---|---|
| Institutional data in the prescribed format (data template) | View Document |
| Copy of the syllabus of the research methodology course work to indicate if research ethics is included | View Document |
| Constitution of the ethics committee and its proceedings as approved by the appropriate body | View Document |
| Constitution of research advisory committee and its proceedings as approved by the appropriate body. | View Document |
| Bills of purchase of licensed plagiarism check software in the name of the HEI | View Document |

**3.4.2**

**Number of candidates registered for Ph.D per teacher during the last five years**

**Response:** 2.68

3.4.2.1 **Number of candidates registered for Ph.D during the last 5 years:**

Response: 91

| File Description | Document |
|---|---|
| Ph.D. registration letters/Joining reports of candidates. | View Document |
| Letter from the university indicating name of the Ph.D. student with title of the doctoral study and the name of the guide. | View Document |
| Institutional data in the prescribed format (data template merged with 2.4.2 and 3.2.3) | View Document |

**3.4.3**

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

**Response:** 2.96

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

Response: 877

| File Description | Document |
|---|---|
| Institutional data in the prescribed format (data template) | View Document |
| Link to the uploaded papers, the first page/full paper (with author and affiliation details) on the institutional website | View Document |
| Links to the paper published in journals listed in UGC CARE list | View Document |
| Link re-directing to journal source-cite website in case of digital journals | View Document |

**3.4.4**

**Number of books and chapters in edited volumes published per teacher during the last five years**

**Response:** 4.31

3.4.4.1 **Total Number of books and chapters in edited volumes published during the last five years**

Response: 1276

| File Description | Document |
|---|---|
| List of chapter/book along with the links redirecting to the source website | View Document |
| Institutional data in the prescribed format (data template) | View Document |
| Copy of the Cover page, content page and first page of the publication indicating ISBN number and year of publication for books/chapters | View Document |

**3.4.5**

**Bibliometrics of the publications during the last five years based on average Citation index in Scopus/ Web of Science**

**Response:** 0

**3.4.6**

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

**Response:** 0

## 3.5 Consultancy

**3.5.1**

**Revenue generated from consultancy and corporate training during the last five years**

**Response:** 453.78

3.5.1.1 **Total Amount generated from consultancy and corporate training year wise during last five years (INR in lakhs)**

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 22.51 | 33.05 | 14.83 | 224.87 | 158.52 |

| File Description | Document |
|---|---|
| Letter from the corporate to whom training was imparted along with the fee paid. | View Document |
| Letter from the beneficiary of the consultancy along with details of the consultancy fee | View Document |
| Institutional data in the prescribed format (data template) | View Document |
| CA certified copy of statement of accounts as attested by head of the institution | View Document |
| Audited statements of accounts indicating the revenue generated through corporate training/consultancy. | View Document |

## 3.6 Extension Activities

**3.6.1**

**Outcomes of extension activities in the neighbourhood community in terms of impact and sensitizing the students to social issues and holistic development, and awards received if any during the last five years (Showcase at least four case studies to the peer team)**

**Describe the impact of extension activities in sensitising students to social issues and holistic development with four case studies within a maximum of 500 words**

**Response:**

Vishwakarma Institute of Technology Pune (VIT) has a variety of clubs catering to technical and social aspects of society. Committees address various needs of individuals and communities, focusing in areas such as digital literacy for senior citizens, women empowerment, voter ID registration, application of technology for social upliftment, mental health, economic crisis, environmental issues, securing future of orphans and specially-abled children, aiding animals in distress, promoting sustainable development and creating awareness about cleanliness. There are specific technical activities as technical fest to cater to skill upgradation of non-vit college students and Model united nation for international geo-political scenario awareness to students. These activities targets overall development of students skill viz. Empathy, management, team work, leadership, social responsibility, social awareness etc.

The VIT has carried out several social services projects throughout the year under the General Proficiency Audit Course which is compulsory for all second year students. Under this course, every second year student has to perform 30 hours of social service. The social services projects are identified in certain areas in which individuals/communities need help and support. The various initiatives in the form social service projects includes Digital Literacy for Senior Citizens, House Wives (ATMABODH,1352 students&1689 Participants), Women Empowerment (UDAAN, 157 students,347participants), Voter ID registration (MATADHIKAR 39 students, 210 participants). Application of Technology for social upliftment, addresses poverty and illiteracy by providing

underprivileged children with a chance to learn various subjects in a joyful and stress-free environment(UTKARSH 155 students, 908 participants), Amidst the prevailing challenges of negativity and uncertainty, the activity emerged as a forward step to tackle Mental Health, Economic Crisis, and Environmental Issues. (REJUVENATING RASHTRA15 students, 100 participants), AAVISHKAR(35 students, 210participants) is event which concerns securing the future of the nation by guiding the orphans' and specially-abled children, event to aid animals in distress, The volunteers provide medical treatment to wounded strays, rescue trapped animals, and ensure food for the hungry, aiming to restore their well-being and offer them a chance at a better life. SOCIO-TECH is an initiative taken by the committees which encourages students to invent new things, taking a step ahead towards sustainable development. SWACCHA PUNE is not a campaign but the expedition to clean the iconic spots of the city to create awareness to maintain its beauty. LILIPUT aims at interacting with the kids from red light area and spending time with them so that they don't feel avoided from the society. The sessions are conducted in collaboration with NGOs in red light areas.

Training Session on Safety Measures (SAKSHAM), Engaging Sessions, camps; Career Guidance for Orphans, Support to Farmers, Teachers and Small Businesses, Tree Plantation, Literacy programs for Students in ZP schools, Elocution Competition, Blood Donation Camps, Cleanliness Drives at Publics Places, Assist Police Officers - Night Patrol & Police Mitra, etc. All these programs inculcate social responsibilities amongst engineering students. The efforts of VIT towards engineers contribution to society is covered by newspapers and few students have also received awards from different NGO and other welfare bodies for conducting such activities.

| File Description | Document |
|---|---|
| Upload any additional information | View Document |

**3.6.2**

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

**Response:** 91

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

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 44 | 16 | 11 | 8 | 12 |

| File Description | Document |
|---|---|
| Photographs and any other supporting document of relevance should have proper captions and dates. | View Document |
| Institutional data in the prescribed format (data template) | View Document |
| Detailed report for each extension and outreach program to be made available, with specific mention of number of students participated and the details of the collaborating agency | View Document |

## 3.7 Collaboration

**3.7.1**

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

**Response:** 43

| File Description | Document |
|---|---|
| Summary of the functional MoUs/linkage/collaboration indicating start date, end date, nature of collaboration etc | View Document |
| List of year wise activities and exchange should be provided | View Document |
| List and Copies of documents indicating the functional MoUs/linkage/collaborations activity-wise and year-wise | View Document |
| Institutional data in the prescribed format (data template) | View Document |

# Criterion 4 - Infrastructure and Learning Resources

## 4.1 Physical Facilities

**4.1.1**

**The Institution has adequate infrastructure and other facilities for**

1. **teaching – learning, viz., classrooms, laboratories, computing equipment etc**
2. **ICT – enabled facilities such as smart class, LMS etc.**
3. **Facilities for Cultural and sports activities, yoga centre, games (indoor and outdoor), Gymnasium, auditorium etc.**

**Response:**

Vishwakarma Institute of Technology (VIT) Pune, aims at the overall personality development of the student through all round growth in the areas of social, cultural, technical and sports activities along with the academics. The institute provides a plethora of opportunities, platforms and avenues to students through sports and cultural activities in order to explore and nurture their innate talent, creativity and inculcate the ethical, social, cultural values along with team spirit, sportsmanship and leadership qualities in student to evolve into a strong and responsible character.

1. Teaching – learning, viz., classrooms, laboratories, computing equipment etc.

Vishwakarma Institute of Technology (VIT) has made significant investments in developing outstanding physical facilities to enhance the teaching and learning experience within the institution. In the institute, each department has an adequate provision for class rooms; mostly equipped with multimedia teaching aids along with laboratories which are also well furnished with relevant laboratory equipment’s as per the curriculum and also for research.

2. ICT – enabled facilities such as smart class, LMS etc.

To make well versed with cutting edge technological developments, research and knowledge the students and faculties are well availed with a well-maintained Library which is comprised with an exhaustive collection of library resources like text books, reference books, research journals, e-books and e-journals. The institute also has ample of computer labs with internet facility. All class rooms are ICT enabled. The institute has a policy to provide WiFi facility to the students

3. Facilities for Cultural and sports activities, yoga centre, games (indoor and outdoor), Gymnasium, auditorium etc.

Vishwakarma Institute of Technology (VIT) has excellent facility for sports, gymnasium and yoga centre. Typically, college gymnasiums are equipped with a wide range of fitness equipment, such as treadmills, stationary bikes, weightlifting machines and free weights, catering to diverse workout preferences. Besides providing opportunities for individual workouts and team sports, college gyms often offer fitness classes, such as yoga, aerobics, and spinning, led by certified instructors. The institute has

Table Tennis tables, Volleyball court, Carrom boards, and Chess boards. The institute also has outside ground and court which is being used by the college for practicing purpose on chargeable basis. But, all the necessary other equipment's for these sports such as bats, balls, shuttles, rackets, etc. are owned by the college in sufficient numbers. The institute further has a Kho Kho ground for students.

VIT annual cultural festival that span over several days, features a wide range of activities. These festivals often include music concerts, dance performances, fashion shows, art exhibitions, theater plays and various competitions.

Following are numbers of ICT enabled classrooms and laboratories and other facilities.

| Sr. No. | Room Type | Number of Room |
|---|---|---|
| 1 | Class Room | 40 |
| 2 | Laboratories | 83 |
| 3 | Seminal Hall | 1 |
| 4 | Conference Hall | 1 |
| 5 | Gymnasium facility | 1 |
| 6 | Sports facility | 1 |
| 7 | Yoga centre | 1 |
| 8 | Workshop | 1 |
| 9 | Placement office | 1 |
| 10 | Central Library | 1 |
| 11 | Canteen facility | 1 |

| File Description | Document |
|---|---|
| Upload any additional information | View Document |
| Provide the link for additional information | View Document |

**4.1.2**

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

**Response:** 21.44

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

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 1116.55 | 1632.06 | 1062.40 | 632.12 | 256.62 |

| File Description | Document |
|---|---|
| Institutional data in the prescribed format (data template is merged with 4.2.2 and 4.4.1) | View Document |
| Audited income and expenditure statement of the institution to be signed by CA and counter signed by the competent authority (relevant expenditure claimed for infrastructure augmentation should be clearly highlighted) | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

## 4.2 Library as a Learning Resource

**4.2.1**

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

**Response:**

The B. B. Lohiya Central Library of Vishwakarma Institute of Technology was established in 1984. The main objective of B. B. Lohiya Central library is to support the educational & research programmes of the Institute by providing physical and intellectual access to information in consistent with the present and the anticipated educational and research functions of the institute.

This Central library consists of Reference Section, Journal Section, Reading Hall and Stack-Room. The library has unique collection of Encyclopedia, Handbooks, Textbooks, Reference books, ‘e’Journals, Video Cassettes, CD'S, B. I. Standards, Video courses etc.

The Central library uses SLIM 21 software. This software consists of modules of Acquisitions, Cataloguing, Circulation, Serial Control, Article Indexing and WEB OPAC. Circulation system of books is based on Bar-Code.

Salient features of library:

- Open Access System for all our students and staff
- Bar – Code based Issue / Return facility
- Internet / Multimedia / Scanning / CD Write facility
- Reprographic facility.
- CD Server facility.

- Book Bank facility for reserve category students.
- On line Public Access Catalogue facility (also available on intranet).
- NPTEL 120 Video Courses on various subjects.
- Support to Online Learning Platform such as SWAYAM-NPTEL MOOCs Courses.
- DELNET Membership, J-GATE Subscription, NDLI Club Membership.
- iThenticate Plagiarism checking software available for all library users.
- Institutional Library Membership of Jayakar Library SPPU, VIIT & Vishwakarma University.
- Vishwakarma Institute of Technology Library offers membership to Industries, Corporate Houses and Organization in public and private sector on request
- High speed computing and internet facilities with Wi-Fi connectivity are available for research. (We have 1.2 Gbps Internet Leased line in our Institute i.e. 1 Gbps from Paradise Telecom + 200 Mbps from Reliance Jio).
- Working hours of library: Monday to Friday: - 10.00 a.m. to 06.00 p.m.
- Reading Hall Timing: - Monday to Saturday: - 08.00a.m. to 09.00p.m.

Central library also arranges book exhibition to know the latest books related to their curriculum.

4.2.1 Library is automated using Integrated Library Management System (ILMS)

The institute has been using SLIM 21EX (System for Library Information and Management) software since 2003 to give better quality of service to the students in terms of issue counter turnaround time and throughput. This software consists of modules of Acquisitions, Cataloguing Circulation, Serial Control, Article Indexing and WEB OPAC. Circulation system of books is based on Bar-Code & QR-Code.

The initial facilities available on the software included circulation with barcode, Web OPAC, uploading of digital material. The software was first upgraded in 2010. In 2012, two additional modules were generated: DCOLL Module and News clipping. Students are reminded through E-mail about the due date of the material borrowed from library.

| No. | Particulars | Information | Remark |
|---|---|---|---|
| 01 | Name of the ILMS software | SLIM-21EX | |
| 02 | Nature of automation (fully or partially) | Partially | Circulation with barcode, Data entry of Books & Journals, SMS Service, |

| | | | |
|---|---|---|---|
| | | | Web OPAC, news clipping, Digital collection. |
| 03 | Version | SLIM-21 EX(3.9.0)with SQL server backend RDBMS | |
| 04 | Year of automation | 2003 | Software upgraded Version 3.9.0 is install on the date 06/07/2022. |

| File Description | Document |
|---|---|
| Upload any additional information | View Document |
| Provide the link for additional information | View Document |

**4.2.2**

**Percentage of expenditure for purchase of books/ e-books and subscription to journals/e-journals year wise during the last five years**

**Response:** 22.47

4.2.2.1 **Expenditure for purchase of books / e-books and subscription to journals/e-journals year wise during last five years (INR in lakhs)**

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 1418.70192 | 1147.7256 | 813.7172 | 806.57957 | 739.08248 |

| File Description | Document |
|---|---|
| Institutional data in the prescribed format (data template merged with 4.1.2 and 4.4.1) | View Document |
| Audited income and expenditure statement of the institution to be signed by CA and counter signed by the competent authority (relevant expenditure claimed for purchase of books/ e-books and subscription to journals/e-journals should be clearly highlighted) | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

## 4.3 IT Infrastructure

**4.3.1**

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

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

**Response:**

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

**Systems Department in the institute is looking after facility of IT infrastructure. It includes Computers and Laptops, Internet and Wi-Fi facilities, Firewall, Servers, LCD Projectors, Interactive panel and other related support in various classrooms, Laboratories, Libraries, Common central facilities, Sports ground. Dedicated technical staff is looking after this infrastructure, these staff look after Installation of OS and different software's in computer laboratories, antivirus and other updates, username, password and IP address updates according to requirement.**

**Systems Department further handles all IT infrastructures, Maintenance of Office, Library, Classrooms, Internet Lab and individual PCs for the entire faculty. Daily administration of Firewall, Antivirus server, ERP server, Wi-Fi setup is done by them. Computer peripherals maintenance in the campus, LCD projectors setup, any network related issues and other related IT support is majorly provided by this department. There is separate budget allocated for purchase of IT facilities includes Computers, Laptops, Firewall and various software purchase and renewal, Internet Leased line agreement, LCD projectors and related peripheral purchase is also done through this budget.**

**Internet Connection: The institute regularly updates the internet connection every year and as of now in 2022 - 23 updated total internet bandwidth of 1000 MBPS provided by Paradise Telecom Pvt. Ltd. And 200 mbps by Reliance Jio Infocomm.**

**No. of Systems: Institution has a total of 1324 computers and laptop for**

**students & staff.**

**Firewall/Security: Institution uses firewall service from Seqrite Endpoint security and the support license is latest renewed in 27/January/2023.**

**Licensed version of OS: The institute has license copies of Windows Operating System and also works with open-source operating systems like Ubuntu OS and other software tools.**

**I/O Devices: The institute purchases printers as per the requirements given by the departments. The institute has in all 110 laser printers.**

**Media Lab/Video Lecture making Facility: The institute has a well-equipped media lab where faculties can prepare their video lectures. This has been very useful during the initial phases of pandemic.**

**LCD Projectors: Upgrading of IT is seen in teaching learning process LCD**

**Legal system software: Windows 10 Enterprise, Windows 11 Enterprise, Windows 19 server and Windows 22 system.**

**Microsoft licence.**

**Application software:**

**1. Turnitin iThenticate - High Stakes Subscription**

**2 Smart Plant Instrumentation software (SP3D)**

**3 EduGrievance - Online Grievance Redressal Software Licence and Online**

**Training Suite**

**4. MathWorks licenceMaster License 31634329.**

**5. Gsuite Google Meet | Licenses | Education Plus**

**6. Catia software product.**

**7. ANSYS software**

**8. ERP System: The institute is also in the process of automating all its manual work in various departments like Academic, Accounts, Administration, Library, Admission, Record room etc.**

| File Description | Document |
|---|---|
| Upload any additional information | View Document |
| Provide the link for additional information | View Document |

**4.3.2**

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

**Response:** 4.68

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

Response: 1324

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

**4.3.3**

**Institution has dedicated audio visual centre, mixing equipment, editing facility, media studio, lecture capturing system(LCS) and related hardware and software for e-content development**

**Response:**

**The teachers in the Institute are academically upright and alert. They are always on the look-out for various ICT enabled tools that support conventional teaching-learning practices. With the Corona Pandemic, it became imperative to use the ICT enabled tools. Therefore, the institute conducts the faculty development programs systematically to create**

**awareness and importance of such practices amongst the faculty.**
**Various effective sessions were conducted from time to time, regarding the use of various online teaching learning platforms such as Zoom, Google Meet, Microsoft Teams, Webex etc. This was primarily done to encourage faculty to Webex etc. in order to proactively learn and start using these tools to blend with their conventional teaching learning practices.**

**College has equipment and software that are commonly found in audiovisual centers, media studios, and e-content development facilities:**

## Audio Visual Centre:

**The Audio Visual Centre at VIshwakarma Institute of Technology is well equiped with the following:**

**Projectors and screens, Sound systems (speakers, microphones, amplifiers) Audio mixers**

**Video switchers, Document cameras, Interactive whiteboards or touch displays, Video conferencing equipment, Streaming devices and encoders Video playback devices**

**Mixing Equipment:**

**Audio mixing consoles (analog or digital) Microphones (various types: dynamic, condenser, lavalier) Headphones and monitoring systems Audio processors (equalizers, compressors, effects) Digital audio workstations (DAWs) for mixing and production**

**Editing Facility:**

**Video editing software (Adobe Premiere Pro, Final Cut Pro, DaVinci Resolve) Audio editing software (Audacity, Adobe Audition, Pro Tools) Graphics and animation software (Adobe After Effects, Blender) Computer workstations with high-performance specs Graphics tablets for digital design and illustration High-resolution monitors for accurate visual editing**

**Media Studio:**

**Professional cameras (DSLRs, mirrorless, video cameras) Studio lighting equipment (softboxes, LED panels, key lights) Green screens or backdrop systems Teleprompters for scripted presentations Acoustic treatment (soundproofing and sound-absorbing materials)**

**Lecture Capturing System (LCS):**

**High-definition cameras (fixed or PTZ) Microphone arrays for capturing clear audio Lecture capture software (Panopto, Kaltura, Mediasite) Video streaming and distribution platforms Automated recording and scheduling systems**

| File Description | Document |
|---|---|
| Upload any additional information | View Document |
| Provide the link for additional information | View Document |

## 4.4 Maintenance of Campus Infrastructure

**4.4.1**

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

**Response:** 46.75

4.4.1.1 ***Expenditure incurred on maintenance of physical facilities and academic support facilities of DDE and total expenditure excluding salary, year - wise, over the last five years (INR in lakhs)***

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 2692.92 | 2272.45 | 1858.84 | 1760.90 | 1661.77 |

| File Description | Document |
|---|---|
| Institutional data in the prescribed format (data template merged with 4.1.2 and 4.2.2) | View Document |
| Audited income and expenditure statement of the institution to be signed by CA and counter signed by the competent authority (relevant expenditure claimed for maintenance of physical facilities and academic support facilities should be clearly highlighted) | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

**4.4.2**

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

**Describe policy details of systems and procedures for maintaining and utilizing physical, academic and support facilities within a maximum of 500 words**

**Response:**

**Vishwakarma Institute of Technology (VIT), Pune is an ISO 21001:2018 certified Institute. The Institute policy believes and emphasizes not only on imparting quality education but also in imbibing and grooming a quality centric work culture within the institute, though the incorporation of international quality management system, standards and best academic practices.**

**At VIT Pune, there exit standard established procedures and well-placed systems for smooth functioning maintenance and utilization of various physical, academic and support facilities such as civil and electrical maintenance, housekeeping, system, library etc.**

## 1.Procedure for Maintaining of IT facility:

**Systems Department in the institute is looking after maintenance of IT infrastructure. It includes Computers and Laptops, Internet and Wi-Fi**

**facilities, Firewall, Servers, LCD Projectors, Interactive panel and other related support in various classrooms, Laboratories, Libraries, Common central facilities, Sports ground. Dedicated technical staff is looking after this infrastructure, these staff look after Installation of OS and different software's in computer laboratories, antivirus and other updates, username, password and IP address updates according to requirement.**

**Also, majorly they handle all IT infrastructure Maintenance of Office, Library, Classrooms, Internet Lab and all individual PCs for all Entire faculty. Daily administration of Firewall, Antivirus server, ERP server, Wi-Fi setup is done by them. Computer peripherals maintenance in the campus, LCD projectors setup, any network related issues and other related IT support is majorly provided by this department. There is separate budget allocated for purchase of IT facilities includes Computers, Laptops, Firewall and various software purchase and renewal, Internet Leased line agreement, LCD projectors and related peripheral purchase is also done through this budget.**

## 2.Procedure for Maintaining of electrical supply and equipment:

**The support staff of electrical maintenance looks after all aspects to electricity consumption, new installation, repair, up gradation and compliance to the requisition at earliest within the campus. They also keep all electrical equipment's as well as stand by systems like Inverter, generator in working conditions.**

## 3.Procedure for Maintaining library:

**The institute has been using SLIM 21EX (System for Library Information and Management) software since 2003 to give better quality of service to the students in terms of issue counter turnaround time and throughput. This software consists of modules of Acquisitions, Cataloguing Circulation, Serial Control, Article Indexing and WEB OPAC. Circulation system of books is based on Bar-Code & QR-Code.**

**The initial facilities available on the software included circulation with barcode, Web OPAC, uploading of digital material. The software was first upgraded in 2010. In 2012, two additional modules were generated:**

**DCOLL Module and News clipping. Students are reminded through E-mail about the due date of the material borrowed from library.**

**To summarize, for all the support facilities mentioned above, there is call lock provision for every on line requisition of work which is done through vit.net (Intranet facility) whose follow up an redressal is accounted through by the concerned support staff who also maintain its statistical record and analysis and further provides necessary feedback to competent authority.**

| File Description | Document |
|---|---|
| Upload any additional information | View Document |
| Provide the link for additional information | View Document |

# Criterion 5 - Student Support and Progression

## 5.1 Student Support

**5.1.1**

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

**Response:** 57.05

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

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 4081 | 3662 | 3126 | 2776 | 2129 |

| File Description | Document |
|---|---|
| Year-wise list of beneficiary students in each scheme duly signed by the competent authority. | View Document |
| Upload Sanction letter of scholarship and free ships (along with English translated version if it is in regional language). | View Document |
| Upload policy document of the HEI for award of scholarship and freeships. | View Document |
| Institutional data in the prescribed format (data template) | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

**5.1.2**

**Efforts taken by the institution to provide career counselling including e-counselling and guidance for competitive examinations during the last five years**

**Response:**

# Efforts taken by the institution to provide career counselling including e-counselling and guidance for competitive

**examinations during the last five years:**

**Our institution recognizes the importance of providing career counselling including e-counselling and guidance for competitive examinations.**

**Our institution conducts numerous workshops, seminars, guest lectures, Student Training Programs for guiding the students for their career counselling. Also, our institution conducts various events for guidance related to competitive examinations.**

**Support and Counselling Programs: Counselling and mentorship programs are conducted to address the unique challenges faced by students from diverse backgrounds. These programs provide emotional and academic support to ensure the students success in career.**

**Diversity Training and Workshops: Students participate in diversity and inclusion workshops to enhance their awareness and understanding of different backgrounds and perspectives. Training programs promote empathy and inclusivity.**

**Our institute conducts variety of events, competitions throughout the year such as Training Programs like several entrepreneurial development programs such as motivational programs, inspirational talks, interaction with successful entrepreneurs and alumni, events related with innovations, various LinkedIn courses such as Critical Thinking, Writing a proposal, Communication Skills improvement, Problem Solving techniques, Learning Data Analytics, Design thinking - data intelligence. Over and above, the institute promotes several student activities.**

**Competitive Examinations: Institute hosts AMCAT (Aspiring Minds Computer Adaptive Test) for students every semester. AMCAT is an AI-based computer adaptive test which evaluates job applicants on critical areas like communication skills, logical reasoning, quantitative skills, and job-specific domain skills thus helping recruiters identify the suitability of a candidate for different job roles. Institute hosts various career-oriented courses for students like LinkedIn Courses, Campus To Corporate-Ready seminars.**

**The institution hosts the speakers for the career counselling events from**

**various domains. Alumni also contribute in various aspects to address, guide the students to develop and groom their career.**

**Students get benefited from the career counselling including e-counselling and guidance given for competitive examinations in terms of on campus placement, progression to higher studies, etc.**

**Students are trained on English Language, Logical, Reasoning, Quantitate Aptitude and Coding competency. It is assessed by AMCAT test every semester. Students' employability skills are assessed using the assessment platform by AICTE Parakh. This ensures self-development in students.**

**Students are encouraged to participate in Application Oriented Technological Training by offering open elective courses conducted by Industry and LinkedIn Learnings. Our students undertake E-Learning courses by IIRS, ISRO, Swayam and other reputed training institutes for development of personalised skills in the Business, Creative and Technology domain.**

| File Description | Document |
|---|---|
| Upload any additional information | View Document |
| Provide the 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, self-employment and entrepreneurial skills)**
4. **Awareness of trends in technology**

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

| File Description | Document |
|---|---|
| Report with photographs on programmes conducted for awareness of trends in technology | View Document |
| Report with photographs on programmes/activities conducted to enhance soft skills, Language & communication skills, and Life skills (Yoga, physical fitness, health and hygiene, self-employment and entrepreneurial skills) | View Document |
| Institutional data in the prescribed format (data template) | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

**5.1.4**

**The institution adopts the following for redressal of student grievances including sexual harassment and ragging cases**

1. **Implementation of guidelines of statutory/regulatory bodies**
2. **Organisation wide awareness and undertakings on policies with zero tolerance**
3. **Mechanisms for submission of online/offline students' grievances**
4. **Timely redressal of the grievances through appropriate committees**

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

| File Description | Document |
|---|---|
| Proof w.r.t Organisation wide awareness and undertakings on policies with zero tolerance | View Document |
| Proof related to Mechanisms for submission of online/offline students' grievances | View Document |
| Proof for Implementation of guidelines of statutory/regulatory bodies | View Document |
| Details of statutory/regulatory Committees (to be notified in institutional website also) | View Document |
| Annual report of the committee monitoring the activities and number of grievances | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

## 5.2 Student Progression

**5.2.1**

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

**Response:** 81.35

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

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 1238 | 1303 | 1053 | 895 | 873 |

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

**5.2.2**

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

**(eg: NET/SLET/ Civil Services/State government examinations etc.)**

**Response:** 7.53

5.2.2.1 **Number of students qualifying in state/ national/ international level examinations (eg: NET/SLET/Civil Services/State government examinations etc.) year wise during last five years**

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 94 | 95 | 90 | 104 | 113 |

| File Description | Document |
|---|---|
| List of students qualified year wise with details of examination and links to Qualifying Certificates of the students taking the examination | View Document |
| Institutional data in the prescribed format (data template) | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

## 5.3 Student Participation and Activities

**5.3.1**

**Number of awards/medals for outstanding performance in sports/cultural activities at University / state /national / international Level events during the last five years**

**Response:** 57

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

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 13 | 20 | 0 | 15 | 9 |

| File Description | Document |
|---|---|
| list and links to e-copies of award letters and certificates | View Document |
| Institutional data in the prescribed format (data template) | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

**5.3.2**

**Presence of an active Student Council & representation of students on academic & administrative bodies/committees of the institution.**

**Describe the Student Council activity and students' role in academic & administrative bodies within a maximum of 500 words**

**Response:**

# Student Council of the institute is divided into Event Planning and Execution Committee and Social Welfare and Development Committee.

- **Event Planning and Execution Committee** or EPEC is a crew in VIT Pune which manages the planning and execution of all institute level events/festivals held in the college such as Vishwakarandak (inter-department competition), Melange (inter-collegiate competition) including fresher's party are overseen by EPEC. While planning any of the events, students' interests are taken into the consideration and hence there is a huge engagement of students when it comes to fests. EPEC adages of doing each and everything related to planning and execution very efficiently.

- **Social Welfare and Development Committee** of the institute is a part of the student council working for the betterment of society. The college students, operate this committee and aim to work towards sustainable development while inculcating social values among the college students. This is done through the various events that are conducted. The flagship events include NSS Camp, Aatmabodh, Blood Donation Camp. In NSS Camp, a group of our college students live in a village for a week as they work for the development of the village in any small or big way possible. They spread awareness about various social and environmental issues while bonding with the villagers and learning something from them too. Aatmabodh is a digital literacy program where the college students teach women and elderly people the use of computers and mobile phones to bridge the gap between technology and them. It mainly focuses on those who are enthusiastic to learn but may have no means to do so. Committee holds a blood donation camp, Blood-D, twice a year where blood banks from AFMC and Sassoon Hospital come. Some of other events include Bus Swacchata, a bus cleaning activity, and Swachha Pune, where students clean the monuments and some public areas around Pune. The committee has activities to literate, liberate, and support the underprivileged children, elderly people from old age homes, children from orphanages, and the specially-abled. Students carry out night patrolling to help the police in reducing crimes and accidents. Overall, the committee makes sure the students serve society and make it better. Other institute level student committees include **Abhivriddhi (Student Training & Development Cell)VIT-MUN (Model United Nations)**, **V-EDC (VIT-Entrepreneurship Development Cell)**, **TEDxVITPune**, **VishwaConclave** each comprising a team of more than 50 students per committee.

- These student committees conduct variety of events, competitions throughout the year such as Training Programs - Resume Writing, Mock Group Discussions, Mock HR & Technical Interviews; Model United Nations (Replica of United Nations Committees), several entrepreneurial development programs such as motivational programs, inspirational talks, interaction with successful entrepreneurs, B-Plan workshops, TEDx event related with innovations. Over and above the institute promotes several student activities in form of more than 30 clubs.

- Students’ representations are considered for following academic and admin bodies of the institute

- Anti-ragging Committee.
- College Development Committee.
- Internal Complaint Committee.
- Internal Quality Assurance cell.
- Student Grievance cell.

| File Description | Document |
|---|---|
| Upload any additional information | View Document |
| Provide the link for additional information | View Document |

**5.3.3**

**The institution conducts / organizes following activities:**

1. **Sports competitions/events**
2. **Cultural competitions/events**
3. **Technical fest/Academic fest**
4. **Any other events through Active clubs and forums**

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

| File Description | Document |
|---|---|
| Report on Sports, Cultural competitions/events, Technical/academic fests, Any other events through active clubs and forums along with photographs appropriately dated and captioned (whichever is applicable) | View Document |
| List of students participated in different events year wise signed by the head of the Institution | View Document |
| Institutional data in the prescribed format (data template) | View Document |
| Copy of circular/brochure indicating such kind of activities. | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

## 5.4 Alumni Engagement

**5.4.1**

**Total Amount of alumni contribution during the last five years (INR in lakhs) to the institution through registered Alumni association:**

**Response:** 129.87

5.4.1.1 **Total Amount of alumni contribution during the last five years (INR in lakhs) to the institution year wise through registered Alumni association:**

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 6.91350 | 0.7 | 21.65573 | 100.6 | 0 |

| File Description | Document |
|---|---|
| List of alumnus/alumni with the amount contributed year-wise | View Document |
| Annual audited statements of accounts of the HEI highlighting the Alumni contribution duly certified by the Chartered Accountant/Finance Officer | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

**5.4.2**

**Alumni contributes and engages significantly to the development of institution through academic and other support system**

**Describe the alumni contributions and engagements within a maximum of 500 words**

**Response:**

**Vishwakarma Institute of Technology Pune Share a Cordial and Strong Bond with Alumni. This Bond has evolved into a strategic partnership, enabling remarkable contributions towards academic enrichment and student development. Here, we outline the contributions of our alumni and the systematic methods of engagement that have made them an indispensable part of our educational ecosystem:**

**#1. Bridging the Gap between Academics and Industry:**

**Alumni, with their extensive industry experience, play a pivotal role in aligning our academic curriculum with the dynamic needs of the industry. Their involvement in curriculum design ensures that students are equipped with the latest skills and knowledge.**

**#2. Delivering Cutting-Edge Technology Sessions:**

**Alumni conduct regular sessions to impart knowledge of cutting-edge technologies. These sessions empower students with practical insights that extend beyond textbooks.**

**#3. Curriculum and Assessment Design:**

**Alumni actively participate in the design of the curriculum, making it industry relevant. Their contributions to assessment schemes ensure that evaluations are rigorous and aligned with industry expectations.**

**#4. Real-World Project Opportunities:**

**Alumni provide a platform for students to work on real-world projects. These projects, spanning all academic years, offer invaluable experience and skills development. This hands-on experience is invaluable in preparing students for the challenges they will face in their professional**

**careers.**

**#5. Guidance and Mentorship:**

**Our alumni act as mentors, imparting guidance on recent technology topics and projects. Their industry insights help students navigate complex challenges and hone their problem-solving abilities. This mentorship is a source of inspiration and helps students for Time-Bound Solutions.**

**#6. Internship Opportunities:**

**Alumni generously offer semester-long and year-long internships to our students. These internships provide students with vital industry exposure and the confidence to transition smoothly into the real technology world.**

**#7. Examiner Roles in Assessments:**

**Alumni contribute to the institution by serving as examiners in practical exams, viva voce exams, and project assessments. Their industry expertise ensures that assessments are rigorous and truly reflect the skills needed in the field.**

**#8. Financial Assistance During COVID-19:**

**In a time of crisis, our alumni stepped up by sponsoring the college fees of our students. Their generosity helped those in need continue their education during the COVID-19 pandemic. Our needy students received laptops and internet services, a testament to our alumni's dedication to reducing educational inequalities. Their support allowed underprivileged students to participate in online learning.**

**#9. Global Support for Higher Studies and Job Search:**

**Alumni studying at foreign universities and those settled abroad extend their support. They guide students seeking opportunities for higher studies and job placements, making the transition smoother.**

**#10. Methodical Engagement for Comprehensive Development:**

**Our institution has designed a methodical approach to engage alumni for**

**the comprehensive development of students, academics, and the institute. This systematic engagement ensures that their contributions are well-coordinated and impactful. Our initiative, a Talk show 'The Learning Curve' is aimed get inspired by our leading alumni. 'The Cradle of Achievers', our second initiative covers the incredible journey of our alumni and a space to share their journey.**

| File Description | Document |
|---|---|
| Upload any additional information | View Document |
| Provide the link for additional information | View Document |

# Criterion 6 - Governance, Leadership and Management

## 6.1 Institutional Vision and Leadership

**6.1.1**

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

**Response:**

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

**Linkage of governance and leadership in accordance with Vision and Mission of the Institute as**

**demonstrated in NEP implementation –**

**Mission Focus is on –**

**1. Employability**

**2. Strengthening academic practices**

**3. Research culture**

**4. Social responsibility**

**In NEP implementation and before that, Institute had been conducting Ability Enhancement Courses (AEC) such as English, Logical Reasoning and Quantitative Aptitude for enhancing essential skills of the students. The Institute has also been having partnership with agencies such as AMCAT, CoCube which run professional tests for recruiting companies. The institute conduct these tests for F.Y., S.Y. and T.Y. students twice in every Academic Year.**

**The Academic practices with a bigger emphasis on experiential learning through projects have been in practice over the past few years. Under the ESC – Engineering Science stream, courses such as applied Robotics, Concepts of Computer Science have been taught. Also under the BSC – Basic Science courses and Courses such as mathematics to strengthen the base of Engineering students across all disciplines are conducted. Many skill based courses such as Mobile App development, soft skill development are in practice, consistent with the NEP needs.**

**For promoting research culture among students, course projects are mandatory for the courses, there by giving basic research inputs to the students. Under the aegis of NEP, and from the previous academic year, courses such as product design and development, fostering the design, creativity aspects of students are created. The students are also encouraged to choose a socially relevant issue and propose engineering solutions to the same, under Engineering Design and Innovation activity.**

**As a social responsibility, the Institute believes in preparing competent Engineers imbibed with the spirit of professionalism. In the era of extreme competition, a greater emphasis on Emotional Quotient of a technocrat is as vital as the Intelligence Quotient. With that Value Education concept in mind, over the last 5 years, Institute conducts a course on Human Engineering giving the desired value background to the budding Engineers. Also under the Cocurricular Activity segment, many activities such as Blood donation, plantation, educational briefing to the illiterate community around the Institute under the title 'Atmabodh' are also carried out regularly. Besides this there are many student clubs which work for increasing the social awareness. In this manner, consistent with it's Vision, the Institute produces Engineers which contribute in the holistic socio-economic development.**

| File Description | Document |
|---|---|
| Upload any additional information | View Document |

## 6.2 Strategy Development and Deployment

**6.2.1**

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

**Response:**

## Effective deployment of Perspective Plan :

**The perspective plan of the Institute for 5 years, effective from AY 2018-19 to AY 2022-23 focuses on the following aspects.**

- **100% Employability**

**Industry Advisory Board is formed for every program to design curriculum as per industry needs. These industries also provide internships to students. To improve the percentage of employability of the students, the Institute has implemented semester long internship. Semester Long internship for final year students gives the necessary boost to the employability skills of the students. It helps us build trust with the industry. The diverse and personalized training provided to individual student during internship is unmatched to the traditional fixed skillset that the regular academics imparts to each student. It results in improvement of job placements of individual departments. This activity is taken care through our Training and placement office. Industries like VMWARE, AVAYA, TCS, KPIT, CREDIT SUISSE, CADENCE, BERKLEY came forward to offer internships and many Internships have been converted into job offers. Many entrepreneur alumni also help in making this model successful by offering internship to students. As result of this planned and rigorously implemented activity, it is observed that the associated industry pool expands every year. The students have got preference for selection of industry for internship and placement.**

- **Facilitate Research Culture:**

**Institute has inculcated the research culture among faculty members and students through innovative academic practices like Engineering Design**

**and Innovation projects and Project base and Project centric learning. Institute provides financial support to faculty members and students for publishing papers in renowned journals/conferences and for filling patents. This has resulted into more number of publications and patents in an academic year.**

- **Promote Academic Excellence:**

**The institute has designed and developed 360-degree assessment Scheme which includes components like group discussions, innovative home assignments, presentation, course project etc. This has resulted in increased participation of the students in various technical competitions and winning prizes also. Apart from this, it has helped students in campus recruitment and getting internship.**

- **Use of Technology for Social Contribution:**

**Effective use of technology for social contribution is addressed through EDI projects, course projects, home assignments related to blogs, case studies and surveys where the real world problems related to social need and in the areas of agriculture, healthcare environmental studies are addressed. Institute has the club named Atmabodh which is established specifically for spreading awareness about technology in society. Free of cost program is designed exclusively for elder citizens so as to familiarize them with the use of technology like MS Office, UPI, Internet etc. which help them in their day to day life.**

| File Description | Document |
|---|---|
| Institutional perspective Plan and deployment documents on the website | View Document |

**6.2.2**

**Institution implements e-governance in its operations. e-governance is implemented covering the following areas of operations:**

1. **Administration including complaint management**
2. **Finance and Accounts**
3. **Student Admission and Support**
4. **Examinations**

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

| File Description | Document |
|---|---|
| Screen shots of user interfaces of each module reflecting the name of the HEI | View Document |
| Institutional expenditure statements for the budget heads of e-governance implementation ERP Document | View Document |
| Annual e-governance report approved by the Governing Council/ Board of Management/ Syndicate Policy document on e-governance | View Document |

## 6.3 Faculty Empowerment Strategies

**6.3.1**

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

**Response:**

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

**Vishwakarma Institute of Technology, Pune (VIT Pune) strongly believes in teaching and non-teaching staff empowerment to cultivate a health and positive work environment. A happy and positive workforce will help the college achieve its goals. For this, the institute has various welfare measures that enrich the working environment at VIT.**

1. **Salary: Provided to faculty, staff members is as per Government norms of 7th pay commission. Employee Provident Fund (EPF), and after retirement Gratuity is given.**

2. **Performance appraisal system: Faculty and staff are always encouraged to excel in academic, research and administration areas through the award-winning research ecosystem. The Appraisal system consist of distinct parameters which includes Conduction of Theory and Laboratory Load, Exam Duties, Innovative Teaching Learning, Ph.D. registration by Faculty, Research Paper Publication, Patent filed, Research Proposal submission, Capacity Development/ Enhancement, Consultancy, Fellow/ Awards, Organisations of FDP and conferences, development of e-content, Services to community, Extension activities, administrative Responsibility, etc. Internal auditors regularly conduct performance appraisal audit to provide counselling, support, guidance to Teaching and non-teaching staff members to bring better outcomes. Necessary training is given to the faculties as identified by internal auditors and HOD through the internal experts and external training programme such as FDP, STTP, workshops and MOOCs.**

3. **Appreciation/Reward for remarkable work/outstanding contribution: Awards are given to faculty and staff based on appraisal system. Awards and recognitions are given on the Foundation Day of the Institute. The awards categories comprise of VIT Shri award with cash prize of ? 11000/-, Researcher of the Year award, Woman Researcher of the Year award, Young Researcher of the Year award, M.R. Khadilkar award with cash prize of ? 11000/-, Technical Staff of the Year, Clerical Staff of the Year, Supporting Staff of the Year.**

4. **Support for higher studies and skill upgradation: Institue motivate the faculty and staff for going to higher education. Meritorious faculty are deputed with full sponsorship to M. Tech and Ph. D. in IITs.**

5. **Medical insurance and Accidental and group insurance scheme: The Faculty and staff have a group Mediclaim policy, Accidental and Group Insurance, Karmachari Kalyankari Yojana, Institute provides help for medical needs for economically weak staff.**

6. **Admission to the wards of teaching and non-teaching staff:**

**Admission to the wards of faculty and staff of institutions is provided as per norm. Concession in the tuition fees of the ward of the faculty and staff from any institution affiliated with parent society is provided as per norms.**

7. **Credit Co-operative Society: Institute has its Credit Co-operative Society names 'Vishwakarma karmachari sahakari Patsanstha, Pune' which provides support to teaching and non-teaching staff members in their financial needs.**

8. **Motivational sessions: Motivational sessions are also arranged regularly. Yoga sessions are arranged for physical and mental health. Various sessions such as finance, parenting, emotional intelligence, and societal wellbeing are conducted for faculty to give them valuable input to improve their personal life. Programs for women empowerment are also arranged.**

| File Description | Document |
|---|---|
| Upload any additional information | View Document |
| Provide the link for additional information | View Document |

**6.3.2**

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

**Response:** 40.41

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

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 240 | 153 | 6 | 31 | 40 |

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

**6.3.3**

**Percentage of teachers undergoing online/ face-to-face Faculty Development Programmes (FDPs)/ Management Development Programmes (MDPs) during the last five years**

**Response:** 25.54

6.3.3.1 **Total number of teachers who have undergone online/ face-to-face Faculty Development Programmes (FDP)/ *Management Development Programs (MDP)* during the last five years**

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 51 | 66 | 66 | 69 | 45 |

| File Description | Document |
|---|---|
| Refresher course/Faculty Orientation or other programmes as per UGC/AICTE stipulated periods, as participated by teachers year-wise. | View Document |
| Institutional data in the prescribed format (data template) | View Document |
| Copy of the certificates of the program attended by teachers. | View Document |
| Annual reports highlighting the programmes undertaken by the teachers | View Document |

## 6.4 Financial Management and Resource Mobilization

**6.4.1**

**Institutional strategies for mobilisation of funds other than salary and fees and the optimal utilisation of resources**

**Describe the resource mobilisation policy and procedures of the Institution within a maximum of 500 words**

**Response:**

## Institutional strategies for mobilisation of funds other than salary and fees and the optimal utilisation of resources:

**The institute receives the funds mainly from the tuition & development fees of the students. These funds are further utilized for establishment expenses, educational expenses, administrative expenses & capital expenses.**

**The establishment expenses mainly consist of salary component of teaching & nonteaching staff, provident fund contribution, gratuity contribution, honorarium to visiting staff, staff training & welfare expenses.**

**The educational expenses mainly consist of e-journals, software license fees, internet & networking facility, student activities, student welfare, study tours, laboratory consumables, industrial visits, seminar & workshops, training & placement etc.**

**The administrative expenses mainly consist of building rent, maintenance, electricity, water, telephone, security, housekeeping, insurance, property & water tax, audit fees, office expenses etc.**

**The capital expenditure mainly consists of expenses towards procurement of equipments, computers, furniture, library books etc. All these expenditures can also be categorized in the fields indicated by the NAAC such as Salary, Academic, Infrastructure (Physical facilities, library & learning resources, IT infrastructure, maintenance of campus infrastructure), Research & consultation etc. During every financial year an institutional budget is prepared based on the above income & expenditure elements. The institutional budget is a consolidation of**

**various departmental requirements & common institutional expenses. The funds received through various sources such as tuition and development fees, consultancy and research grants are further utilized in line with the planned budget. Every year a statutory financial audit is carried out based on the above-mentioned income & expenditure elements. Various resources such as land & building, human resources, equipments, library, I T infrastructure, sports facilities etc. are utilized in an effective manner by the institute. Various means adopted for this purpose are as follows: -**

**1. Implementation of modular pattern in the academic structure for balancing the faculty workload and laboratory workload.**

**2. Flexibility offered to teaching & non teaching staff in their work timings to suit the work needs.**

**3. Laboratories / workshops are used for various mini projects, major projects , research projects, technical competitions , cultural competitions , social activities etc apart from the regular practical workload .**

**4. Establishment of institute level maintenance cell for maintaining Electrical, Electronics, Computer, Mechanical equipments of all departments.**

**5. Library ,Gymnasium , auditorium , seminar hall ,conference rooms Wi-Fi facility , workshop**

**facilities are open to the students beyond the regular working hours of the institute.**

**6. Central Computing facilities.**

**6.4.2**

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

**Response:** 27.33

6.4.2.1 **Total Grants received from government/non-government bodies, philanthropists year wise**

**during last five years *(not covered in Criterion III and V)* (INR in Lakhs)**

| 2022-23 | 2021-22 | 2020-21 | 2019-20 | 2018-19 |
|---|---|---|---|---|
| 3.12 | 10.57 | 3.79 | 6.41 | 3.44 |

| File Description | Document |
|---|---|
| Institutional data in the prescribed format (data template) | View Document |
| Copy of the sanction letters received from government/ non government bodies and philanthropists | View Document |
| Annual audited statements of accounts highlighting the grants received | View Document |

**6.4.3**

**Institution regularly conducts internal and external financial audits regularly**

**Enumerate the various internal and external financial audits carried out during the last five years with the mechanism for settling audit objections within a maximum of 500 words**

**Response:**

## Institution regularly conducts internal and external financial audits regularly

**Internal audit: Financial reports covering various elements such as cash & bank book, salary & statutory payments, journal & ledger entries, accounts registers & resolutions, university & scholarships etc. are monthly verified by internal auditing team.**

**External audit: A financial audit is carried out two times in a financial year by an external chartered accountant. The first audit is for the period from 1st April to 30th Sept. & the second audit is for the period from 1st Oct. to 31st March. The audit consists of verification of cash book, bank book, reconciliations of fees & bank accounts, journal entries, ledger, income tax returns etc. The financial audit statements of last five years are available with the institute for reference purpose.**

**Audits are carried out to ensure.**

1. **Financial transparency**
2. **Accuracy**
3. **Compliance with accounting standards and regulations**
4. **Trustworthiness**

**External / Internal financial audits undergo the following processes –**

1. **Planning and preparation: define financial areas to review, study previous reports, policies, and standards (current), set objectives.**
2. **Risk assessment: Identification of vulnerable area, potential impact**
3. **Activity: Collection of relevant financial documents, sample selection for transaction reviews, sample interviews with some business parties**
4. **Analysis and Findings: Compare collected data with standards, identify deviations, recommend corrective actions.**
5. **Reporting: Provide a report covering objectives of audit, methods, findings, and recommendations.**
6. **Follow-up: Monitor progress of recommended actions**
7. **Continuous improvement: Collection of feedback for the refinement of audit process.**

**Difference in Internal and External audits**

**Objective: Internal audits - to improve operations and controls.**

**External audits – to provide confirmation of financial trustworthiness.**

**Scope: Internal audits can extend their scope to link the financial with**

**academic, admin**

**activities. External audits focus specifically on financial accuracy.**

**Independence: Internal auditors are Institute employees. External auditors are chartered**

**experts not on the payroll of institute.**

**Frequency: Internal audits can be conducted as many times as desired by management. External audits are as per contract.**

**Reporting: Most of the times internal audit reports are confidential and submitted to management. External audit reports are available to stakeholders in public domain.**

| File Description | Document |
|---|---|
| Upload any additional information | View Document |

## 6.5 Internal Quality Assurance System

**6.5.1**

**Internal Quality Assurance Cell (IQAC)/ Internal Quality Assurance System (IQAS) 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**

**Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes visible in terms of –**

- **Incremental improvements made for the preceding five years with regard to quality (in case of first cycle)**
- **Incremental improvements made for the preceding five years with regard to quality and post accreditation quality initiatives (second and subsequent cycles)**

**Describe two practices institutionalized as a result of IQAC initiatives within a maximum of 500 words**

**Response:**

# Best Practice 1

## Title: Engineering Design and Innovation.

**The primary aim of implementing Engineering Design and Innovation (EDI) is to inculcate research and innovation among the engineering students of our institute. It focuses on identifying the project domain and technology to be implemented to solve the problem and finalizing the tool to be utilized to get the solution. Multi-Disciplinary approach is used for the effective implementation of EDI. Recent and emerging technologies such as data analytics, robotics, machine learning, etc. are selected to solve real-world problems.**

## Implementation of the Best Practice:

**EDI implementation relies on meticulous and comprehensive planning, effective communication, teamwork, and a commitment to continuous improvement. Students can identify projects relevant to societal needs and map the technologies learned with project needs. Technical knowledge is applied to design and develop best solution to solve the problem.**

**It is observed that the implementation of EDI has ensured students learn teamwork, communication skills, and connecting with people. Students' Self-confidence has improved, resulting in enhanced Design and Programming Skills. Based on the EDI, conference has been organized every semester wherein 1800+ papers are presented in 192 parallel sessions along with 200+ industry experts.**

**Table 1. Possible Domains for EDI**

| | | | |
|---|---|---|---|
| **Agriculture** | **Healthcare** | **Defense** | **Smart City** |
| **Automobiles** | **Energy Sector** | **Green Earth** | **Home Security** |
| **Waste Management.** | **Clean Water** | **Food Technology** | **Smart Vehicle** |
| **Intelligent Transportation** | **Renewable Energy** | **Security And Surveillance** | **Rural Development** |

**Research publications are an outcome of EDI, SDP, and Course Project as shown in Tables 2 and 3.**

**Table 2. Best Practice Outcomes- Incermental Improvement**

| Sr No | AY | Scopus/SCI/UGC Publications | Patents Published | Patents Granted |
|---|---|---|---|---|
| 1 | 2022-23 | 1041 | 61 | 21 |
| 2 | 2021-22 | 900 | 39 | 32 |
| 3 | 2020-21 | 405 | 16 | 10 |
| 4 | 2019-20 | 377 | 20 | 2 |
| 5 | 2018-19 | 404 | 20 | 1 |

**Table 3. Research Eco system**

| Sr No | Particulars per Year | Approximate Number of Projects |
|---|---|---|
| 1 | Engineering Design and Innovation | 1456 |
| 2 | Course Projects | 5168 |
| 3 | Software Development Projects | 2380 |
| 4 | Major Projects | 1660 |

**Conclusion:**

**Students design and implement around 1456 EDI projects, 2380 SDP projects, 5168 Course projects, 400 Major and 55 Research projects per year. This helps in enhancing research and innovation culture amongst the students to make them industry ready.**

## Best Practice 2

## Title : Assessment Based on Top Professional Skills of this Decade

**As per industry, the student is likely to select their profession in any domain. Institute has recognized the importance of developing skills and has developed a 360-degree assessment model after due discussions and deliberations with all the VIT stakeholders. Few of the top skills required to be successful in any profession are listed below:**

- **Critical thinking**
- **Complex problem-solving ability**

- **Creativity / innovation**
- **Team management**
- **Carrying out Surveys**
- **Design of systems**
- **Case studies**
- **Blogs**
- **Hands-on ability**
- **Emotional Quotient**
- **Judgement, decision making**

## Implementation of Best Practice:

**Assessment components are distributed amongst various significant factors. Each factor is assigned the marks based on its implication. The final score of that component is the summation of all marks obtained for each factor given by internal and external examiners.**

## Conclusion:

**Students can make their career irrespective of job market, as important skills such as innovation, creativity, critical thinking, complex problem-solving ability, research ability, etc. are emphasized in this best practice.**

| File Description | Document |
|---|---|
| Upload any additional information | View Document |
| Provide the link for additional information | View Document |

**6.5.2**

**The institution reviews its teaching learning process, structures & methodologies of operations and**

**learning outcomes at periodic intervals through IQAC set up as per norms**

**Describe any two examples of institutional reviews and implementation of teaching learning reforms facilitated by the IQAC within a maximum of 500 words each.**

**Response:**

# Review of Teaching Learning Process

**The review is carried out by means of structured feedback and regular audits. Students give feedback regarding teaching-learning process carried out in classroom and laboratories. The feedback activity is carried out 4 times in an Academic year. There are established quantitative metrics for the measurement of faculty performance. Based on the same, training needs are identified. The faculty performance measured in terms of faculty performance index is also considered as a part of faculty appraisal.**

**Apart from the feedback, academic audits are carried out by external experts of repute, such as professors from IITs, industry experts with academic exposure etc. During the audit, syllabus, examination papers answer scripts depth add checked. Constructive suggestions are given by experts that are implemented in successive cycles.**

**Every department has Board of Studies, constituted as per UGC guidelines comprising of subject experts, nominees from university, industry experts, alumnus with at least a Masters degree. This group under the chairmanship of the Head of the Department periodically reviews of existing structures syllabus, current trends in teaching practices and suggests changes in the course contents, revision of courses and changes in the structure as well. These efforts are taken to ensure concurrence of the program with global developments as well as industry relevance. All these aspects are recorded as BOS minutes, which are audited for detailing as well as concise coverage of the entire activities.**

**Through the Quality Management System, methodologies of operation such as attendance records, remedial teaching for weak learners, external examiner feedback, results and outcomes etc. are monitored.**

**Norms are set up for learning outcomes and attainment of its levels. These are recorded and monitored on the semester wise basis. For the attained outcomes higher benchmarks are set up and corrective outcome corrective actions are enforced for the non attained outcomes. It is on the basis of discussion of the faculty with academic experts.**

**IQAC reviews are carried out periodically, typically every 6 months. The management of the institute has an active participation in these reviews. The audit outcomes are reported opportunities for improvement are also noted and accordingly the college activities are steered in the appropriate direction.**

**The example for the IQAC is review are the periodic Management Review Committee meetings that are carried out every 6 months. All the major internal stakeholders such as the Head of Departments, Dean examination, Dean academics, Dean Quality Assurance, Dean Administration provide the academic profile for due consideration and constructive criticism and suggestions of the management. Proactively the management considers the resource needs, pedagogical trends and supports the academic initiatives systematically.**

**The institute also has a unique best practice of having set up an Industry Advisory Board in all Departments and their meetings are also focused towards laboratory strengthening, giving industry exposure to the students as well as faculty and giving internship opportunities to the students.**

**6.5.3**

**Institution has adopted the following for Quality assurance*:***

1. **Academic and Administrative Audit (AAA) and follow up action taken**
2. **Conferences, 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 and other recognized ranking like Shanghai Ranking, QS Ranking Times Ranking etc**
6. **Any other quality audit recognized by state, national or international agencies**

**Response:** A. Any 5 or more of the above

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

# Criterion 7 - Institutional Values and Best Practices

## 7.1 Institutional Values and Social Responsibilities

**7.1.1**

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

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

**Response:**

# Promotion of Gender Equity

**The institution ensures equal concern for girls and boys in all curricular and co-curricular activities to promote gender equity. Gender-sensitive features are carefully observed in every corner of the college system by forming various committees to provide adequate facilities to female students and faculty members. At the beginning of the academic year, during the induction program, the students are made aware of various committees to communicate any issues they may face. These committees address concerns, complaints, or disputes that may arise among employees, students, or stakeholders. The institute has an online grievance redressal mechanism https://www.vit.edu/grievance.**

**The Gender Equity and Promotion Committee is constituted in the institution to ensure a safe working environment.**

## Diva Club Activities

**Various activities and awareness sessions are organized in the institution to ensure women's safety by the Diva Club. Sessions on self-awareness, rational thinking, beliefs, stress management, coping with failures, etc., are conducted regularly by the DIVA club.**

## Express to Empower Events

**These initiatives aim to identify and address gender disparities, foster a more welcoming environment, and ultimately enhance the educational experience. To promote gender equity, such as women's health and**

**personality development and creative movement sessions are organized. The "Express to Empower" events are frequently organized to inspire, empower, and have fun. Different events such as International Women's Day and health campaigns are conducted to increase participants' understanding of women's concerns.**

**Women's health and personality development events are organized by the DIVA club to empower female students with essential life skills. The objectives of these events are to equip the participants with essential life skills, including confidence building, effective communication, interpersonal skills, and grooming. Additionally, the event aims to raise awareness about personal hygiene and build self-confidence in any situation.**

**Education and Awareness: Gender inclusivity events educate female students and faculty about the importance of gender equality and provide insights into the challenges faced by underrepresented groups in engineering fields.**

**Skill Development: Workshops and training sessions equip participants with the tools and skills to create inclusive environments, promote diversity, and combat bias.**

**Networking and Support: These events facilitate networking opportunities for students and faculty from diverse backgrounds. Building a supportive community can be instrumental in overcoming gender-related obstacles.**

## The following facilities are provided primarily for women on campus:

**Safety and Security: The Institution is committed to providing a safe and secure environment. A 24-hour working CCTV Surveillance system is available on the campus.**

**Security Guards: Overall security of the campus is ensured by security agencies duly appointed by the institution. The institution has professionally trained security personnel on campus to make secure entry.**

**Entry to the campus is ensured by verifying I-cards at the security check.**

**Mentor-Mentee System: This system addresses students' academic, professional, and personal issues. Each department has a Mentor-Mentee system.**

**Girls Common Room: Separate and well-maintained restroom and changing facilities for females, including appropriate provisions for hygiene and privacy.**

**Sanitary Napkin Incinerator: It is used to provide hygienic and convenient disposal.**

| File Description | Document |
|---|---|
| Upload any additional information | View Document |
| Provide the link for additional information | View Document |

**7.1.2**

***The Institution has facilities for alternate sources of energy and energy conservation measures***
**1. Solar energy**
**2. Biogas plant**
**3. Wheeling to the Grid**
**4. Sensor-based energy conservation**
**5. Use of LED bulbs/ power efficient equipment**
**6. Wind mill or any other clean green energy**

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

| File Description | Document |
|---|---|
| Permission document for connecting to the grid from the Government/ Electricity authority | View Document |
| Geo-tagged photographs of the facilities. | View Document |
| Bills for the purchase of equipment’s for the facilities created under this metric | View Document |
| Provide Links for any other relevant document to support the claim (if any) | 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:**

# Management of degradable and nondegradable waste

**The institution has state-of-the-art facilities for efficient waste management, catering to various waste types. The institute maintains a comprehensive solid waste management system. Segregation bins recycling units are strategically placed across the campus to ensure proper disposal, reducing environmental impact. The solid wastes of all these places are collected by sweepers and dispatched through garbage collecting, where dry and wet garbage are separated and subjected to the solid waste management plan of the municipality. The trash other than the solid waste is also collected by housekeeping personnel and transported to a disposal site. The Biogas Plant (Home biogas model HB 2.0) is used on campus to convert waste into energy. Solid waste from college premises is collected by sweepers daily and subjected to the municipality garbage collecting van.**

**Waste papers, old records, and scripted answer sheets from VIT are sent to the paper mill to produce pulp and used for manufacturing papers.**

**The college optimizes paper usage per the green protocol by maintaining e-copies for documentation purposes. Single-sided documents are utilized for printing and documentation work. Sewage treatment plants and effluent disposal systems manage liquid waste. Stringent purification processes ensure that discharged water meets environmental standards, minimizing pollution.**

## Say "No" to plastic

**The institution is committed to making the campus plastic-free. 'Say "No"**

**to plastic' events were arranged. A minimal e-waste generation is ensured by optimal and periodic maintenance of computers and other electronic peripherals. The institution has regular practice to safely dispose of non-working computer spare parts and other non-working electronic equipment through recognized vendors.**

**E-waste collection centers and partnerships with certified recycling agencies facilitate proper electronic waste disposal. Waste papers are collected and sold to vendors to encourage responsible e-waste recycling among the campus community. By using paper pulp in recycling, less new wood fiber needs to be harvested, which helps conserve natural resources.**

**The institute does not generate any hazardous chemical and radioactive waste. Most of the departments do not use any chemical or radioactive material for any laboratory research activities. Hazardous chemical storage facilities, safety protocols, and trained personnel ensure the safe handling and disposal of hazardous materials. Radioactive waste is managed according to stringent government guidelines. The chemicals used in the laboratory experiments of the Chemical Engineering Department are used in diluted form, and the quantity of chemicals handled is also very low. The faculty members also guide the students in chemical handling.**

**All agreements and Memoranda of Understanding with government bodies and approved waste management agencies are accessible on our website. Our institution remains dedicated to minimizing its environmental footprint through efficient and responsible waste management practices.**

**The institution has the management for the following types of degradable and non-degradable waste.**

**1. Solid waste management**

**2. Liquid waste management**

**3. E-waste management**

**4. Waste recycling system**

## 5. Hazardous chemicals waste management

| File Description | Document |
|---|---|
| Relevant documents like agreements/MoUs with Government and other approved agencies | View Document |
| Geo-tagged 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 more of the above

| File Description | Document |
|---|---|
| Green audit reports on water conservation by recognised bodies | View Document |
| Geo-tagged photographs of the facilities | View Document |
| Bills for the purchase of equipment’s for the facilities created under this metric | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

**7.1.5**

**Green campus initiatives include**

**Describe the Green campus initiative of the institution including Restricted entry of automobiles, Use of Bicycles/ Battery powered vehicles , Pedestrian Friendly pathways , Ban on use of Plastic, landscaping with trees and plants etc in 500 words**

**Response:**

## Green campus initiative of the institution

**Pedestrian-friendly pathways**

**Roads inside the campus are well maintained. Pedestrian-friendly pathways are designed that prioritize pedestrians, with wide sidewalks. Traffic-calming measures are used to reduce vehicle speed and ensure pedestrian safety. Pedestrian-friendly pathways encourage physical activity, while the use of bicycles and walking reduces stress and promotes well-being.**

**Bicycle racks and designated parking areas for bicycles are made available to encourage its use.**

**The use of bicycles and battery-powered vehicles produces fewer emissions than traditional gasoline-powered vehicles, contributing to reduced carbon footprint as well as helping to reduce carbon emissions. A complete ban on plastics on campus, including plastic bags. Encourage the use of reusable containers, water bottles, and cloth bags by providing alternatives. Promote awareness and education about the environmental impacts of plastic. Banning plastics reduces plastic waste and its harmful environmental impacts.**

**Green spaces with a variety of trees and plants are created that serve as both educational and recreational spaces. The planting of trees and plants helps purify the air by absorbing carbon dioxide and releasing oxygen which helps to improve air quality. Landscaping with trees and plants adds aesthetic value to the campus, creating a more pleasant and inviting environment**

**Eco-friendly practices**

**Different initiatives are taken to promote sustainability awareness and encourage students and staff to adopt eco-friendly practices. The institute regularly monitors and assesses its progress toward achieving a plastic-free and green campus. To assess our energy usage and measure its impact on the environment. The institute monitors and responds to emerging environmental and energy issues**

**Employees' and students' environmental knowledge and skills to improve our environmental performance are strengthened by different**

**activities. We prioritize waste reduction through responsible consumption and recycling practices. Recycling bins for paper, glass, plastics, and other materials will be strategically placed and marked across the campus. A systematic waste management mechanism is developed.**

**Educational programs**

**Educational programs and awareness campaigns are organized to engage students, faculty, and staff in sustainable practices. Workshops, seminars, and events on environmental topics are conducted will be held regularly. Different opportunities are offered for employees and students to engage in initiatives that contribute to environmental protection.**

**Go Green**

**Employees and students are trained to make them Go Green to plant trees each year. Green campus policies are communicated to the students and employees via internal communication channels and made available to all the stakeholders on the institutional website. The environment and energy policy, objectives, and targets are reviewed regularly. Plastic-free events are hosted by the institution to be plastic-free, with a focus on using compostable or reusable materials. Landscaping with trees and plants are excellent strategy for making a campus more sustainable and environmentally friendly.**

**Green Audit: The objective of carrying out Green Audit is to secure the environment and cut down the threats posed to human health, ensure that rules and regulations are taken care of, and avoid interruptions in a climate that are more difficult to handle, and their correction requires high cost.**

| File Description | Document |
|---|---|
| Policy document on the green campus/plastic free campus | View Document |
| Geo-tagged photographs/videos of the facilities | View Document |
| Circulars and report of activities for the implementation of the initiatives document | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

**7.1.6**

**Quality audits on environment and energy are regularly undertaken by the institution**

**The institutional environment and energy initiatives are confirmed through the following**

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

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

| File Description | Document |
|---|---|
| Report on environmental promotion and sustainability activities conducted beyond the campus with geo-tagged photographs with caption and date. | View Document |
| Policy document on environment and energy usage Certificate from the auditing agency | View Document |
| Green audit/environmental audit report from recognized bodies | View Document |
| Certificates of the awards received from recognized agency (if any). | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

**7.1.7**

***The Institution has Differently-abled (Divyangjan) friendly, barrier free environment***

***Write description covering the various components of barrier free environment in your institution in***

*maximum of 500 words*

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

**Response:**

## Differently-abled (Divyangjan) friendly, barrier-free environment

**Provisions related to accessibility and support for individuals who may need assistance due to various disabilities, such as visual impairment. These provisions are important to ensure that all individuals have equal access to information and educational materials. Institute is committed to fostering an inclusive and accessible environment that caters to the needs of all individuals, including those with disabilities. Our institution has implemented a comprehensive barrier-free infrastructure and policies to ensure that differently-abled individuals can fully participate in all aspects of campus life.**

**Wheelchair Accessibility: The campus features ramps and elevators in all buildings to facilitate easy movement for individuals using wheelchairs or mobility aids.**

**Accessible Restrooms: The Institute has specially designed restrooms with wider doors and grab bars to accommodate wheelchair users comfortably.**

**Accessible Pathways: All outdoor pathways are wide and smoothly paved to allow easy navigation for individuals using mobility devices.**

**Ramp/Lift: Physically handicapped students/staff in wheelchairs can make use of them. With the help of wheelchairs and elevators, they can get easily accessible to get into another part of campus.**

**Tactile Flooring: We have incorporated tactile flooring with raised patterns to aid those with visual impairments in navigation.**

**Emergency Preparedness: Comprehensive emergency evacuation plans are in place, considering the needs of differently-abled individuals.**

**Sensitization Programs: Regular sensitization programs are conducted to educate the campus community about the needs and rights of differently-abled individuals.**

**Training Workshops: Faculty and staff receive training on inclusive teaching and accessible service provision.**

**Grievance Redressal: We have established a mechanism for reporting accessibility issues and promptly address any concerns raised.**

**Text-to-voice assistance software is used for Divyanan. It is a technology that converts written text into spoken words. These tools have a range of features and can be incredibly helpful for various purposes. It is used in education to assist students with reading difficulties, language learning, or comprehension of complex texts.**

**Library facilities provide accessible textbooks and study materials to all students with disabilities. The guidelines and regulations have been issued by the examination department for the use of scribes in exams. Sensible convenience is made to meet the necessities of the considerable number of Students with disabilities. The visually impaired students will be provided with scribes to write their exams. The college provides counseling for students with disabilities on the types of courses they can study in higher education. Special Toilet is available in an easy-access area for students, employees, and Visitors. Awareness programs are conducted for teachers about the approaches to teaching, evaluation procedures, etc, which they should adopt in the case of students with disabilities. Regular remedial coaching classes are conducted for persons with disabilities. The institute provides a barrier-free environment for differently-abled individuals, which is unwavering. True inclusivity extends beyond physical infrastructure, encompassing policies, services, and a culture that respects and supports diversity. Ramps are made to ensure the free movement of students, employees, and visitors.**

| File Description | Document |
|---|---|
| Upload any additional information | View Document |
| Provide the link for additional 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 such other diversities (within 500 words).**

**Response:**

## Institutional efforts/initiatives in providing an inclusive environment

**Our institution recognizes the importance of promoting tolerance, harmony, and understanding among individuals from diverse cultural, regional, linguistic, communal, and socioeconomic backgrounds. Organization and student-led clubs, focus on cultural, regional, linguistic, and other diversities. These groups provide a platform for students to engage in discussions, celebrate their heritage, and collaborate on projects that promote diversity. Following are different clubs of students who take the initiative to provide an inclusive environment.**

## Social Welfare & Development

**Numerous initiatives were taken by the Social Welfare and Development Committee to promote inclusion in diverse fields. All these activities stood for a social cause, whether it be the inclusion of underprivileged, uneducated people or minor communities. SW&D Committee has organized a wide range of national and international days, events, and festivals, fostering connections among students from diverse backgrounds. These celebrations serve as a platform for inclusivity, allowing students to share their joy with a larger community.**

## V-EDC (Entrepreneurship Development Cell)

**To cater to an audience that is young yet alert and aims to get better with community support and is interested in cultural activities, V-EDC partnered with Campus Times, Pune, to reach out within their interests to**

**grab their attention. This partnership ensured regional support to cater to the young audience so that it could potentially increase awareness and enthusiasm among the young leaders.**

**VIT-MUN (Model United Nations)**

**For a country like India, where you can find a rich cultural heritage, diverse communities spread across the length and breadth, and people with numerous dialects spread across every corner, a well-defined constitution becomes necessary in governance. MUN has always contributed to raising awareness about basic human rights, by organizing conferences every year. By conducting debates and discussions on several humanitarian issues, constitutional obligations are introduced. These activities have not only sensitized the youth about their constitutional rights, duties, and values but also helped them to become responsible citizens.**

**TEDx-VIT Pune**

**It has been TED's mission of 'Ideas Worth Spreading', within its local community. Community is one of the three pillars of TED, wherein the other two are Ideas and Experience. Community is a significant part of TEDx. With constant engagement throughout the year, the local community partakes in novel initiatives, taken to share striking ideas.**

**Cultural and Regional Activities: Vishwa Conclave**

**Transcending Horizons hosted a variety of speakers who came from diverse backgrounds, this bridged the cultural, linguistic, age, and communal differences. The speakers hailed from various domains, namely, Defence, Entertainment, Health care, Space and Technology, and Entrepreneurship. Various initiatives were taken to celebrate Independence Day, Blood donation, and International Women's Day.**

**Socioeconomic: Student Career Counselling and Guidance Activities**

**The primary goal of career counseling and guidance is to support students in identifying and pursuing a career path that aligns with their interests, skills, and aspirations. The sessions are conducted to empower the**

**students in all aspects. Some of the key areas covered are: Opportunities in the Government Sector, Higher study opportunities, Profile building Workshops, and Live with leaders.**

| 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***

**Describe the various activities in the Institution for inculcating values for being responsible citizens as reflected in the Constitution of India within 500 words.**

**Response:**

## Sensitization of students and employees of the Institution

**The institute arranges different workshops and seminars to promote the significance and importance of community outreach. These events can feature legal experts, scholars, and policymakers who explain the Constitution's key provisions inviting eminent personalities to deliver guest lectures that provide valuable insights and practical examples.**

**Community Outreach Programs encourage students and employees to participate in community service and outreach programs emphasizing the importance of civic responsibility and fulfilling duties towards society. Republic Day and Independence Day celebrations inspire a sense of respect and responsibility among the audience. Promote ethical leadership and responsible citizenship through structured leadership development programs integrating constitutional values. Keep the institution's community informed about recent legal developments, landmark judgments, and changes in constitutional interpretations through newsletters and seminars. Significant emphasis on sensitizing**

**students and employees to their constitutional obligations, values, rights, and responsibilities as citizens of India. A deep understanding of the Constitution is crucial in developing responsible and socially aware individuals.**

**V-EDC (Entrepreneurship Development Cell)**

**EDC ensures there is digital celebration of various festivals as well as awareness days such as New Year, Makar Sankranti, National Start-up Day, Republic Day, International Women's Day, Holi, World Health Day, Ram Navami, Akshay Tritiya, Eid-ul-Fitr, Friendship's Day, Raksha Bandhan, Independence Day, Janmashtami, World Entrepreneur's Day, Ganesh Chaturthi, Teachers' Day, Engineer's Day, Navratri, Gandhi Jayanti, Dussehra, Milad-un-Nabi, Diwali, Children's Day, Christmas and other such.**

**Vishwa Conclave**

**Vishwa Conclave took various initiatives to share experiences and to celebrate Independence Day, a refreshing quiz on the occasion of National Sports Day, creating awareness about World Mental Health Day and blood donation, Republic Day, and International Women's Day. Christmas, Makar Sankranti, Eid-un-Nabi, and Diwali were celebrated too apart from sharing information about how Dussehra is celebrated in various parts of the country.**

**Social Welfare and Development**

**SW&D committee has celebrated a myriad of national as well as international days, events, and festivals. These celebrations are a means of connecting students from diverse backgrounds. These instill a sense of inclusion amongst students and provide them with an opportunity to share happiness with a larger group of people. The committee has also wished and commemorated people through its official social media handles on various social media platforms. Celebrating such occasions also increases the synergy of our team.**

**Research projects related to constitutional law, allowing students and employees to delve deep into specific aspects of the Constitution.**

**Incorporating these activities into the institution's curriculum and extracurricular programs can foster a culture of responsible citizenship and instill a deep appreciation for the values, rights, duties, and responsibilities enshrined in the Constitution of India. By doing so, the institution plays a vital role in shaping individuals who are aware of their constitutional obligations and actively contribute to the betterment of society and the nation as a whole. Through these multifaceted initiatives, the institute aims to nurture responsible citizens who not only understand their constitutional rights but also actively uphold their constitutional duties and responsibilities.**

| File Description | Document |
|---|---|
| Details of activities that inculcate values necessary to nurture students to become responsible citizens | View Document |
| Any other relevant information | View Document |

**7.1.10**

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

1. **The institutional Code of Conduct principles are displayed on the website**
2. **There is a committee to monitor adherence to the institutional Code of Conduct principles**
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 |
|---|---|
| Report on the student attributes facilitated by the Institution | View Document |
| Policy document on code of ethics. | View Document |
| Handbooks, manuals and brochures on human values and professional ethics | View Document |
| Document showing the Code of Conduct for students, teachers, governing body and administration as approved by the competent authority. | View Document |
| Constitution and proceedings of the monitoring committee. | View Document |
| Circulars and geo-tagged photographs with date and caption of the activities organized under this metric for teachers, students, administrators and other staff | View Document |
| Provide Links for any other relevant document to support the claim (if any) | View Document |

## 7.2 Best Practices

**7.2.1**

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

**Response:**

# Best Practice 1

# Engineering Design and Innovation

## 1. Objectives of the Practice

1. **To emphasize Experiential Learning and to Enhance problem-solving ability.**
2. **To inculcate Research Aptitude/ Culture among the students.**
3. **To enhance Socio-Economic Development through an Ecosystem**

**that promotes Entrepreneurship and Research Culture among students by collaborating with industries.**

4. **To develop expertise in Technology tools, and Engineering design methodologies**
5. **To provide every student with an opportunity to get involved individually or as a group to develop team spirit with professionalism.**
6. **To emphasize on start-up and research as a career alternatives.**

## 2. The Context

**The primary aim of implementing Engineering Design and Innovation (EDI) is to inculcate research and innovation among the engineering students of our institute. The focus is on Project-Centric Learning. Outcomes of EDI are that students should be able to**

- **Identify projects relevant to societal needs**
- **Map the technologies learned with the project needs**
- **Apply the technological knowledge to design various feasible solutions**
- **Select the best possible solution to solve problem**
- **Develop/ Fabricate a working model of proposed solution**
- **Testing and validating product performance.**
- **Convert to a product as a startup.**

**Students choose the domains from Table 1**

**Table 1. Possible Domains for EDI**

| | | | |
|---|---|---|---|
| **Agriculture** | **Healthcare** | **Defense** | **Smart City** |
| **Automobiles** | **Energy Sector** | **Green Earth** | **Home Security** |
| | | | |

| | | | |
|---|---|---|---|
| Waste Management | Clean Water | Food Technology | Smart Vehicle |
| Intelligent Transportation | Renewable Energy | Security And Surveillance | Rural Development |

**The technology selected to solve the problem is shown in Table 2.**

**Table 2. Possible Technology used for EDI**

| | | | |
|---|---|---|---|
| Data Analytics | Robotics | Machine Learning | Artificial Intelligence |
| Cloud Computing | MEMS | Zigbee | IOT |
| Industrial Automation | Cyber Security | Data Science | Robotics |
| 3D Printing | Additive Manufacturing | Blockchain | Virtual Reality |

**Students choose one or more tools from Table 3.**

**Table 3. Possible Tools Used for EDI**

| | | | |
|---|---|---|---|
| Java | C++ | MATLAB | SCILAB |
| NS-2 | Python | Lab view | Simulink |
| Open CV | CCS | 3D Printing | DSP Processor |
| ESP 8266 | R-Pi | Ardueno uno | Nvidia Jetson |

## 3. The Practice

- **Multi-Disciplinary approach is used for the effective implementation of EDI.**
- **Project groups are allotted to faculty, with 4-5 students in each group based on the student's choice and the faculty expertise.**
- **Dean Research and Innovation provides valuable guidance to students and faculty on quality.**

## 4. Evidence of Success

**Outcome of EDI-Best Practice is in terms of UG Research outcome. Students publishes papers in reputed journals and conferences as shown in Table 4 & 5**

**Table 4. Best Practice Outcomes**

| AY | Scopus/ SCI/UGC Publications | Patents Published | Patents Granted |
|---|---|---|---|
| 2022-23 | 1041 | 61 | 21 |
| 2021-22 | 900 | 39 | 32 |
| 2020-21 | 405 | 16 | 10 |
| 2019-20 | 377 | 20 | 2 |
| 2018-19 | 404 | 20 | 1 |

**Table 5. Research Eco system**

| Particulars per Year | Approx Number of Projects |
|---|---|
| EDI | 1456 |
| Course Projects | 5168 |
| SDP | 2380 |
| Major Projects | 1660 |

**5. Problem encountered and resources required.**

- **Students abilities of Teamwork, Design, Programming and Communication skills, Faculty provide guidance to the students for above skill.**
- **Timely completion and outcome. Monitoring mechanism.**

**6. Conclusion:**

**This helps in enhancing research and innovation culture amongst the students to make them industry and future ready.**

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## Best Practice 2

## 360 Assessment / Examination Based on Top Professional Skills of

**this Decade.**

**1. Objectives of the Practice**

- **To bridge the gap between industry needs and academic education.**
- **To improve students' employability by focusing on the skills required by industry and to perceive dream careers based on students' interests and strengths.**
- **To emphasize on start-ups and research as a career alternative that will support societal benefits.**

**2. The Context**

**As per the industry need, the student is likely to select their profession in any of the domains. The institute has recognized the importance of developing skills along with domain knowledge and values and has come out with a 360-degree assessment model after due discussions and deliberations with all the stakeholders. A few of the top skills required to be successful in any profession are listed below:**

- **Critical thinking**
- **Complex problem-solving ability**
- **Creativity/innovation**
- **Team management**
- **Presentation of ideas**
- **Brainstorming Discussions/deliberations**
- **Carrying out Surveys**
- **Design of systems**
- **Work on case studies**
- **Technical writing/blogs**

- **Hands-on ability**
- **Emotional Quotient**
- **Judgment and decision-making**

**Students can have the choice of making their career in civil services, defense services, start-ups, or politics. They may take up the role of researcher, programmer, developer, system analyst, business analyst, quality assurance, etc. in the industry.**

**3. The Practice**

**Assessment components are finalized through deliberations with various stake holders. Each assessment factor is assigned the marks based on its implication. The final score of that component is the summation of all marks obtained for each factor given by internal and external examiner. The distribution of various components is mentioned below:**

- **Seminar Assessment (G-PPT)**
- **Group Discussion (GD)**
- **Design Assignment**
- **Survey Assignment**
- **Blog Assignment**
- **Comprehensive Viva-voce (CVV)**
- **Theory Examination- MCQ, Closed / Open Book Examination.**

**4. Evidence of Success**

1. **Overall result of the student has been improved due to this type of assessment as shown in Table 6.**

2. **Performance of the students is also increased in the GD and interviews during the placement scrutiny. As a result, placement has also increased in last three years as shown in Table 7.**

3. **Students can work in a planned manner to achieve their career aspirations by improving the relevant skills which are improved through the assessment mechanism.**

**Table 6. Students Result**

| Year | Passing Percentage | Percentage of First Class | Percentage of Distinction |
|---|---|---|---|
| 2022-23 | 97.63 | 37.75 | 59.01 |
| 2021-22 | 97.98 | 24.41 | 70.72 |
| 2020-21 | 97.17 | 32.08 | 63.33 |
| 2019-20 | 94.60 | 51.79 | 42.41 |
| 2018-19 | 92.13 | 45.10 | 33.47 |

**Table 7. Students Placements and Higher Study**

| Year | Percentage of (Placement + Higher study) |
|---|---|
| 2022-23 | 76.18 |
| 2021-22 | 84.61 |
| 2020-21 | 82.39 |
| 2019-20 | 81.88 |
| 2018-19 | 82.75 |

## 5. Problem encountered and resources required.

- **Faculty faced challenges about assessment tools: Relative weightage for assessment are decided by senior faculty.**
- **GD, article/ Blog writing.: Faculty guidance and expert sessions.**
- **Technical writing.: Subscription of IEEE Explorer, Science-Direct, J-gate, Plagiarism Detection Software.**

## 6. Conclusion

**All round growth of the student by improving.**

- **Critical thinking through design assignments / projects**
- **Communication, active listening, leadership, and through seminar, GD, CVV**
- **Time management, project planning through project work.**
- **Writing ability through blog writing, publications**
- **Design abilities, problem solving ability through EDI.**

### 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:**

# Institutional Distinctiveness: VIT as a Career Institute

**Vishwakarma Institute of Technology, Pune (VIT, Pune), is rightfully regarded as a career institute because of its unwavering commitment to**

1. **Academic Excellence,**
2. **Industry Integration,**
3. **Research And Innovation,**
4. **Global Exposure,**
5. **Student Career Counselling and Guidance**

## 6. Co-curricular and Extracurricular Activities

## 7. Alumni Network

**It has consistently produced graduates who have gone on to excel in various fields, making it an attractive choice for students aspiring to build successful careers. VIT's holistic approach to education ensures that its students are well-prepared to face the challenges of the rapidly evolving professional world and contribute to the nation's development.**

**Institute has following factors and ecosystem for making the career of students:**

**1. Academic Excellence: It tailors to the intellectual resources and experiences of diverse students and is responsive to culture, race, and gender. Collaborative and experiential learning is achieved through project-based learning and project-centric learning, wherein students develop solutions for complex engineering problems under the guidance of faculties. This makes students future-ready, along with industry-ready. Future-ready means they are competent enough to take on challenges and find the best solutions to complex problems. Solving highly complex problems requires that students have 21st century skills.**

**Table 1. Academic Excellence- Projects Completed**

| Sr No | Particulars | Approx Number of Projects |
|---|---|---|
| 1 | Engineering Design and Innovation | 1456 |
| 2 | Course Projects | 5168 |
| 3 | Software Development Projects | 2380 |
| 4 | Major Projects | 1660 |

**Table 2. Students Results**

| Year | Passing Percentage | Percentage of First Class | Percentage of Distinction |
|---|---|---|---|
| 2022-23 | 97.63 | 37.75 | 59.01 |

| | | | |
|---|---|---|---|
| 2021-22 | 97.98 | 24.41 | 70.72 |
| 2020-21 | 97.17 | 32.08 | 63.33 |
| 2019-20 | 94.60 | 51.79 | 42.41 |
| 2018-19 | 92.13 | 45.10 | 33.47 |

**2. Industry Integration: The institute maintains robust relationships with industry partners to provide internships, practical training, and exposure to real-world projects. Institute has an Industry Academia Board (IAB) with 100+ industrial experts whose inputs are used to bridge the gap between academia and industrial needs from students. These industry connections often result in successful campus placements for graduates.**

**The institute has the best track record of campus placements, internships, and PPOs through MNCs.**

**Table 3. Students Placements and Higher Study**

| Year | Percentage of Placement + Higher study |
|---|---|
| 2022-23 | 76.18 |
| 2021-22 | 84.61 |
| 2020-21 | 82.39 |
| 2019-20 | 81.88 |
| 2018-19 | 82.75 |

**3. Research Ecosystem: Institute emphasizes research and innovation culture through research ecosystem which creates research mindset amongst students to make the career in research institutes, industries, startups, entrepreneurs.**

**Table 4. Research Outcomes**

| Sr No | AY | Scopus/SCI/UGC Publications | Patents Published | Patents Granted |
|---|---|---|---|---|
| 1 | 2022-23 | 1041 | 61 | 21 |
| 2 | 2021-22 | 900 | 39 | 32 |
| 3 | 2020-21 | 405 | 16 | 10 |
| 4 | 2019-20 | 377 | 20 | 2 |
| 5 | 2018-19 | 404 | 20 | 1 |

**4. Global Exposure: Global Exposure to the students is provided. The details are as given in Table 5.**

**Table 5. International Exposure to students**

| Sr No | Academic Year | International Internship | International Student Exchange program |
|---|---|---|---|
| 1 | 2022-23 | 10 | 15 |
| 2 | 2021-22 | 7 | 15 |
| 3 | 2020-21 | 1 | 8 |
| 4 | 2019-20 | 3 | 15 |
| 5 | 2018-19 | 39 | 3 |

**6. Student Career Counselling and Guidance (SCCG) cell: Every faculty plays a role of counsellor /mentor to give career guidance to the students. The SCCG cell coordinates this activity and helps students with mentoring and corporate training, along with the Training and Placement office.**

- **2243 research articles by students and faculty in various Journal and conferences (In Last 5 Years)**
- **Research Grant received from Government and Non-Government Organizations: More than 5.03 Cr (2018-till date). Students work on these research projects.**
- **Revenue generated from consultancy and corporate training: 8.73 Cr (2018-till date)**
- **Patents : published 161 and granted 69 in last 5 years.**
- **Organized 310 workshops, seminars training programs and conferences.**

**Table 6 shows the number of students appearing in state/national/**

**international level examinations during the last five years.**

**Table 6. Competitive Exams appeared by students**

| AY | Total Qualified Students | NET | SLET | GATE | GMAT | CAT | GRE | JAM | IELTS | TOEFL | Civil Services | State govt | Other exams |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2018-19 | 947 | 137 | 137 | 51 | 4 | 15 | 43 | 4 | 17 | 24 | 10 | 3 | 5 |
| 2019-20 | 967 | 181 | 181 | 54 | 3 | 22 | 54 | 1 | 12 | 30 | 9 | 2 | 2 |
| 2020-21 | 1151 | 90 | 3 | 23 | 1 | 12 | 31 | 90 | 10 | 20 | 90 | 1 | 90 |
| 2021-22 | 1365 | 113 | 113 | 26 | 1 | 15 | 47 | 113 | 11 | 18 | 113 | 113 | 113 |
| 2022-23 | 1543 | 135 | 135 | 32 | 1 | 16 | 24 | 135 | 35 | 17 | 5 | 135 | 7 |

**7. Co-curricular and Extracurricular Activities: The institute encourages students to participate in technical clubs, societies, cultural events, and sports activities for personal growth, leadership, and teamwork skills.**

**Other outcome institute which show the development of Students' career are as follows.**

- **First Prize: MHRD-Samadhan Hackathon : Students developed prototype to fight against Coronavirus epidemic and other such calamities.**
- **First Prize project competition organized by IEEE and AISSMS IIOT Pune**
- **First Position in Wie Hack 2.0 - all women 36-hour online hackathon**
- **First prize Ideathon - NIE IEEE Student Branch**
- **First Prize in International Virtual Design Course on e-Tourism,**

**organized by Binus University, Jakarta, Indonesia.**

- **First Prize in Abhikalp Competition, organized by SPPU Pune**
- **First runner up in One Million Seconds Non-Stop Online Hackathon organized by the Telangana State Innovation Cell, Telangana Information Technology Association, and Publishsutra.**
- **Second Prize Hackathon conducted by Principal Global Services**
- **Second Prize at CAS Open Day 2020 Data Science Hackathon conducted by IISc Bangalore**
- **Runner up in 2 days online Hackathon - Robo Hack**
- **Top 15 winning team in HackTech Covid19**
- **Second prize HackRx by Bajaj Finserv**
- **Second Prize at Technospark - Competition PCCOE, Pune**

**7. Alumni Network: Institute has a registered Alumina association, in which 16000+ registered alumina members are present. Alumni provide mentorship and career guidance which helps students in identifying career opportunities.**

| File Description | Document |
|---|---|
| Any other relevant information | View Document |
| Appropriate webpage in the Institutional website | View Document |

# 5. CONCLUSION

## Additional Information :

- **The Institute was accredited ('A++' Grade, Cycle 2) by National Assessment and Accreditation Council (NAAC), Bangalore from November 2018.**
- **The Institute has been granted Autonomous status since the academic year 2008-09 and has autonomous status extended up to 2030.**
- **The institute received the status of "Empowered Autonomy" from the Government of Maharashtra, in 2023.**
- **VIT won prestigious award and trophy for ‘Excellence in Enabling Research Ecosystem’ given by Federation of Indian Chambers of Commerce & Industry (FICCI) in November 2022. This is the first award constituted by FICCI for the organizations demonstrating excellence in establishing the Research Ecosystems with Innovations, Best Practices, and Excellence in Higher Education.**
- **VIT won the Best Practice Competition-Making Quality Happen (MQH)-Consecutively three times in a row (June 2020, June 2021, June 2022) organized by Indian Merchant Chambers Ramkrishna Bajaj National Quality Award Trust( IMC RBNQA).**
- **VIT is ranked in Top 200 in NIRF since inception of the NIRF rankings.**
- **Institute is in Top 11-50 band in NIRF Innovation (ARIIA) in the latest completed cycle.**
- **The Institute is awrdrd with "AICTE Utkrisht Sansthan Vishwakarma Award" with 2nd Rank in Category 9 and with Rank 3 in Category 11 under the theme “INDIA FIGHTS CORONA” in 2020.**
- **The Institute attains ISO 21001:2018 Certification for its Educational Organizations Management system (EOMS).**
- **The Institute attains ISO 14001:2015 Certification for its Environmental Management System.**

**Concluding Remarks :**

**Curriculum planning and implementation: The institute ensures academic adaptability through flexible programs and enriched curricula. Regular feedback maintains curriculum relevance and alignment with objectives, fostering a holistic environment for growth and innovation.**

**Innovation-Centered Teaching and Learning: The institute boasts experienced faculty skilled in both traditional methods and modern technologies. They utilize ICT tools and flip classroom concepts, enhancing student learning through experiential and participative methods.**

**Research, Innovations, and Extension: The Institute is a dynamic hub for academic excellence and innovation, with collaborative efforts between faculty and students pushing the boundaries of knowledge. Committed to research and fostering innovation, the Institute has made a significant impact on the academic landscape. This focus has resulted in impressive outcomes, including numerous funded projects, consultancy work, 914 research articles, 1244 research papers, and the incubation of 18 startups in the last five years.**

**The Infrastructure and Learning Resources Institute provides advanced infrastructure and resources for academic and research excellence. The institution's management invests significantly in holistic student development, ensuring well-equipped departmental facilities, a tech-savvy library, and modern IT infrastructure, including computer labs and Wi-Fi. The institute’s commitment to a modern learning environment emphasizes its dedication to academic excellence and research.**

**Student Support and Progression: The institute allocates funds for modern infrastructure, prioritizing academic excellence and research. It has implemented a comprehensive Student Support System, including financial aid, career-centric programs, skill development, alumni and industry engagement, and sports and cultural activities, nurturing students' holistic development.**

**Governance, Leadership, and Management: The institute shows strong leadership and governance aligned with its vision, emphasizing employability,**

**academic practices, research culture, and social responsibility. This includes skills development, fostering a research culture, efficient administration, staff development, and accolades, such as a top position in the NIRF rankings for research and quality.**

**Institutional Values and Best Practices: The Institute is committed to holistic student development, ethical practices, and social responsibility, including gender equality, waste management, and water conservation. It emphasizes inclusivity with barrier-free facilities and encourages civic engagement. The institute maintains a code of conduct for professionalism while also focusing on academic excellence, innovation, industry connections, and career-oriented goals.**