Strategic Plan

Vishwakarma Institute of Technology is a well-recognized and highly appreciated Institute imparting Quality Technical Education since last three and half decades. The current decade is termed as the smart age and the fourth revolution in the Industry and Business, often called as Industry4.0 and Business4.0.

The First revolution was the Steam revolution, second was Electricity revolution and third was Computer revolution. This decade has also been dominated by buzz words like Autonomous Cars, Machine Learning and Artificial Intelligence, etc.

Some of the skills required for the current decade are
- Complex Problem Solving
- Critical Thinking
- Creativity
- People Management
- Coordinating with Others
- Emotional Intelligence
- Judgment & Decision Making
- Service Orientation
- Negotiation
- Cognitive Flexibility
- Empathy
- Computer Skills

The Vision and Mission Statement of the Institutes:

After due deliberations in Governing Body, Academic Board, various Board of studies, Industry advisory Boards, amongst the Deans and Heads group, all institute faculty, Industry/IIT/International Mentors, the Vision and Mission of the institute was designed.

Vision

To be Globally Acclaimed Institute in Technical Education and Research for Holistic Socio-Economic Development

Mission

1) To ensure that hundred percent students are employable and employed in Industry, Higher Studies, as Entrepreneurs, in Civil/Defense Services/ Govt. Jobs and other are as likes ports and Theater.

2) To Strengthen Academic Practices in terms of Curriculum, Pedagogy, Assessment and Faculty Competence

3) Promote Research Culture amongst Students and Faculty through Projects and Consultancy

4) To make students Socially Responsible Citizen

In line with the Vision Mission Statement of the Institute the Strategic Plan of the Institute can be envisioned in the four broad areas:

1)   Hundred Percent Employability of the Students

2)   Facilitate Research Culture

3)   Promote Academic Excellence

4)   Use of Technology for Social Contribution

Hundred Percent Placement

Vishwakarma Institute of Technology has a track record of placement above @ 70 percent every year. The plan is to offer hundred percent placements to all the students with more than one job offer.

Job offer includes:

- Placement in Industry
- Recruitment by Universities for higher studies like M.S, M.Tech, MBA
- Recruitment by Defense Services in Army/Navy/Airforce
- Recruitment by Civil Services through IAS, UPSC, MPSC
- Other Finance/Banking and other government jobs
- Students have their own Start-ups and become Entrepreneurs
- Make their career in Sports, Theater, Politics, Administration, Family Business, Government Jobs, Music, Artists, etc.

Action Plan

> **Appointment of Dean–Industry Relations: In** order to strengthen relations with Industry for placement and other Academic activities a Dean – Industry Relations will be appointed.
> **Appointment of Dean–Student Career Counseling and Guidance** in order to give personalized guidance to students wrt their careers.

Goals set
1. At least 500 companies on campus, with @250 plus Companies by first three years i.e., by 2022,
2. 100% on campus placement, with at least 90% placement in first three years i.e., by 2022.
3. Median salary of 10 lakhs and at least 7.5 lacs by the end of first three years i.e., by 2022
4. Highest package of 50 Lacs plus and at least 40 lacs highest package within first three years i.e., by 2022
5. Explore various career actions for students apart from corporate jobs and create awareness amongst students about them. Also prepare students for these Job profile.

Action plan to achieve goals

1. Study the employability requirements of the software and Core industry.
2. Do a systematic study of job market requirement for the next five years. Also find out the market trends
3. Renovation of TPO office with latest state of the art facilities
4. Design internship model to achieve 100% internship for all students. This will help the students to get Job offers through internships (PPO) thus increase placement numbers. This will also enable students to evaluate industry culture, Job Profile, before joining.
5. Study the recruitment process of major industries and find out training needs of students.
6. List down all possible job options to students and take their choices
7. Do SWOC analysis of Job Profiles and SWOC analysis of all the students.
8. Based on students' choices do skill set mapping and training need analysis.
9. Organize Job fairs, career related workshops, seminars and mentoring systems for students
10. Give special attention to Higher studies, in India and abroad for MS, MTech and MBA etc.
11. As there is special reservation to category students like SC/ST students, an eco-system will be evolved to encourage them take up government Jobs.
12. Dean Career Counseling and Guidance will analyze the student profile in terms of following:

    - Student Performance in First Year, Second Year, Third Year and Final Year
    - SWOC analysis for every student
    - Take choices from students in terms of preferences for Placements, Higher Studies, Entrepreneurship, Civil/Defense Services & Other Fields.
    - Study the students' choices/aspirations and their profile and facilitate training to achieve their desired goals. If required personally counsel them to change their aspirations, choices as per their strengths.
    - Tie-up with various International and National universities for Higher Studies, Student Exchange Program, Summer Internship Program, Global Internship Program, U.G. Fellowship, etc.
    - Arrange various session on career counseling in the areas of Higher Studies, Civil/Defense services, Entrepreneurship and other areas by inviting experts in the relevant fields to facilitate and inspire students to perceive their career in the chosen area.
    - Establish Entrepreneurship Development Cell and Strengthen its activities

1.3 Goal : To Achieve Hundred Percent Results

One of the main requirements for Higher Studies, Civil/Defense Jobs is that the student must have all pass results. Therefore, the efforts must be taken to ensure hundred percent results for all the students right from the first year.

Action Plan

- Arrange extra sessions for such student and involve Parents
- Make divisions wherever possible, based on merit to address the diversified needs of the students.
- Ask students to work on area of their strengths and interests to score higher grades in those subjects to score higher CPI/CGPA
- Arrange training for all the students based on their profile.
- Design assessment to cover various learning objectives

> ### Internships:

It is always seen that the industry requires students who are directly employable. However, many students are not employable. One way to increase the employ ability is to offer Six months long internship to all the students in 7th or 8thsemester.

> ### Project Based/Centric Learning:

In order to give more Hands-on experience to the students Project Based Learning and Project Centric Learning is introduced wherein student will do 2/3 projects per semester under Project Based Learning and one major project under Project Centric Learning.

2 Promote Research Culture

Research is going to play an increasingly important role in the coming decade as creativity is amongst the top three skill sets required for the decade.

In order to promote Research amongst Student and faculty the institute. Would like to do the following:

Promotion of Research Culture amongst Students:

> **Project Based Learning** – Every Semester will have. @ Projects, thus a student is supposed to do 20+projects in four years. These projects. will be course projects for every course offered in a semester.

> **Project Centric Learning** - Student is supposed to do projects every semester which in the form of multidisciplinary nature to be carried out by group of four student of any branch, any year.

The students are expected to do a real-life project, which is of socio-economic importance (normally equivalent to final year at undergraduate level). The project can be selected any of the following domain:

> Agriculture
> Healthcare
> Renewable Energy
> Green Earth
> Smart City
> Weaker Sections (e.g. handicapped)
> Swatch Bharat
> Water, Security, Waste Management

The student is supposed to apply techniques and technology he learned or need to learn to do successful project from any of the above-mentioned areas, which are based on the real Industry World.

This will also help achieve our objective of
"Use of Technology for Social Contribution"

Engineering Design and innovations
Students will be taught concepts like making presentations, paper publication format, H index, Scopus indexed Journals, Impact factor, Citation Index, Filing Patents, writing reports, about Different Funding Agencies, important Referred Journals in the respective areas like IEEE, Thomson Router, writing a paper in a standard format, Presenting Paper, Poster presentation, importance of knowledge creation, how to give references and acknowledgement etc.

Publications and Patents

On the projects done above in 1 and 2 student is expected to file a Patent on their projects and subsequently publish a paper in a referred International Journal.

Promotions of Research Culture amongst Faculty

> **Appointment of Dean Research and Development:** Dean Research and Development will set up systems and create a culture to promote Research Culture amongst Faculty and Students.

> **Appointment of Dean – Faculty Development** – Dean Faculty Development will identify the training need analysis and areas of training for faculty and students in areas like writing Research proposals, giving research Presentations, Consultancy Work, assessment, course/Domain knowledge etc.

> **Writing Research Proposals**

Every Faculty is supposed to write proposals individually or in groups to the funding agencies like DST,ISRO, RGSTC, AICTE, SPPU and other funding agencies. Our long-term dream to see that every faculty have at least one live funded Research Project with him at any given time.

> **Research Forum**

Research Forum will be established with the Director as a Chairman and Dean - Research and Innovation as the Secretary and Assistant Heads Research of all departments as the Members. The activities of the Research Forum are:

- Invite well-known Researchers for inspiring speeches, workshops, seminars, and training program.
- Encourage faculty to do Ph.D., attract Ph.D. Scholars, Review Ph.D. work of Ph.D. Scholars and Faculty (VIT Faculty working in VIT or outside VIT)
- Encourage faculty to write Research Proposal, review Research funded projects, provide seed money to budding Researchers.
- Design Appraisal Policy for Research Promotions

- To arrange Presentations and Ph.D. work of Scholars and Faculty.
- Encourage Consultancy work and faculty Industry Internship
- Organize Faculty Competitions in Research Area

> **Consultancy: It** is expected that every faculty must have Industry Consultancy work

> **Encouragement to Enroll for Ph.D.:** The target is to have at least 50% percent faculty with Ph.D. degree. It is expected that every faculty must enroll for PhD degree.

> **Faculty Training: Faculty** to undergo a training of around 40 hours in areas of Research, academics, admin, and assessment etc.

> **Reviews:** Ph.D. Review will be conducted for the following:

- Funded Research Projects
- Review of VIT Ph.D. Scholars
- Review of Ph.D. Work of faculty working with VIT or outside VIT
- Consultancy Work

> **Appraisal Schemes:** Design Appraisal scheme with 30% weightage for Research Outcomes/contribution of the faculty.

> **Recruitment of Faculty with Ph.D. degree:** Faculty with Ph.D. degree from IIT and International Universities will be recruited so as to create and promote Research Culture in the Institute.

> **To Organize Seminars, Workshops, STTPS-Every year the Institute will organize:**
- International Conference every alternate year
- One National Conference
- Ten Workshops
- Ten Seminars
- Two STTPs

3 Academic Excellence

Vishwakarma Institute of Technology is known for its Academic rigor and excellence. The Institute is committed to:
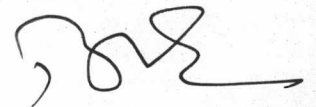
- o Design a Curriculum which is Industry relevant and futuristic.
- o Academic Rigor through holistic 360 – degree assessment of the student
- o Give freedom to student to design his own degree
- o Give Industry Exposure to the students
- o Hands on to have more weightage in the curriculum
- o Innovations in Pedagogy

The Academic Excellence would be achieved through the following:

➢ Curriculum Design:

The curriculum would have the following features designed:

- Industry aligned curriculum in consultation with Industry, Academicians, IITians, Academicians from International Universities

- An Industry Advisory Board will be established in each department with around twenty members. The purposefor Industry Advisory Board would be:
  - o Curriculum Design
  - o Adjunct Faculty
  - o Sponsored Projects
  - o Internships
  - o Industry Visits
  - o Sponsorship
  - o Assessment
- The Curriculum would be futuristic
- The curriculum would be designed in such a way that student will earn technology of the future.
- The curriculum would comply to the modern curriculum given by AICTE (Emerging areas)
- The curriculum would good number of electives and open electives.

➢ **Assessment**

Assessment is the key to learning and is the impetus to learning. Assessment at VIT would be based on the following:

- Memorizing
- Understanding
- Analysis
- Synthesis
- Evaluation
- Applications
- Design
- Knowledge creation

The Assessment would be mostly based on hands on and will be holistic where close book written theory examination will be kept to minimum and the emphasis would be given on:

- Assignments
- Projects
- VIVA
- Quizzes/seminars/Interactions
- Theory Written Examination
- MCQ Examination in online format
- Group Presentations, group Discussions
- Surveys, case studies, design and blog writing

- Group activities like discussions, Presentations, Quizzes, Posters, paper Presentations, Paper Publications, Market place, Field work, Industry visits, seminars, etc.

- Involvement of external examiners to ensure transparency and dynamic learning

> ## More Emphasis on Hands On and Employability

- **Project Based Learning** – Every Semester will have Course Project for every course, thus a student is supposed to do 20+projects in four years.

- **Project Centric Learning** – Student is supposed to do projects every semester which can be in the form of multi-disciplinary nature to be carried out by group of our students of any branch, any year.

- **Industry Internships**:

  o Six months Industry Internship
  o Summer Internship of eight weeks
  o Global Internship in India or abroad in an University
  o Exchange Program with Indian or International Universities (six months, etc.)
  o U.G. Fellowship (6-8weeks) in India or Abroad.
  o Summer Internship (in India or Abroad)
  o International Industry Internships

> ## Design your own Degree

This era is of multi-disciplinary and Transdisciplinary nature, therefore student is expected to contribute in such a diverse environment. The boundaries between engineering branch becoming are thinner and thinner. Here at VIT, we want to give the flexibility to students under Choice Based Credit System to design their own degree in such a way that the student would be able to:

- Get jobs in the Core Engineering areas of his discipline
- Develop a super specialty to perceive his dream job in core areas.
- Perceive his career in IT Industry along with core Engineering
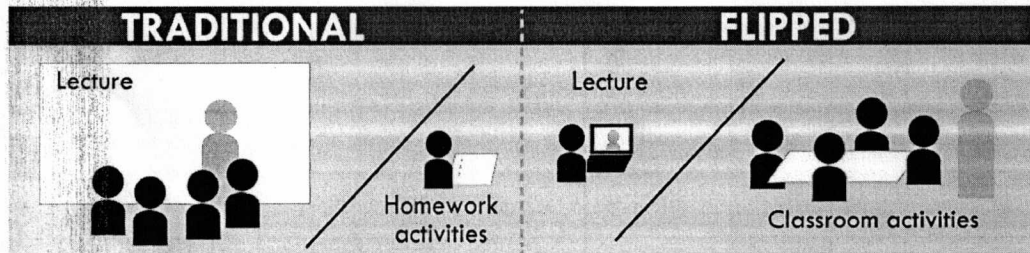- Become an entrepreneur

> ## Pedagogy

No matter how strong the Curriculum is, it will be ineffective without a proper Pedagogy. VIT would like to be the leaders in designing and implementing futuristic ways of learning which would make learning process enjoyable. Some of the innovative ways we will be adopting are:

- MOOC's–Every faculty would design his own MOOCs with a duration of 5-7 minutes per topic around 30-40 hours per course.

- Flipped Classroom:

TRADITIONAL	FLIPPED
Lecture ... Homework activities	Lecture ... Classroom activities

- **ICT Enabled Teaching Learning:**
  - o 24/7connectivity between teacher and student.
  - o Online sharing of presentations and study material.
  - o Online assignment submission and assessment
  - o Quick analysis
  - o One to One student interaction

> **Project based and Project Centric Learning as discussed before**

> **Group Activities**–discussions, Presentations, Quizzes, Posters, paper Presentations, Paper Publications, Market place, Field work, Industry visits, seminars, etc.

4 To Make Student Socially Responsible Citizens

The all-round development of the student or the perfection is achieved when he develops and perfects his life in the following area:

- Academics/Professional
- Spiritual
- Personal
- Family
- Social
- Cultural
- Recreation

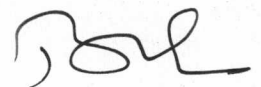The development of the student at VIT is aimed at:

> ## The Academic and Professional life

> ## Spiritual Development

By teaching them courses on Indian Philosophy, Behavioral Sciences along with Yoga, Personality Development Clubs, Spiritual Clubs,etc. We aim that student should understand values, ethics, morals, Business ethics. Teach the student fundamental Philosophy of life like purpose of life, importance of character, good habits, and refrain from bad habits alcoholism, Womanizing, drug addiction, suicidal tendencies, so that they contribute to the holistic development of the society.

> ## Family Life

Family plays a central role in Indian Society and for that matter the human society in general. The Family provides encouragement, support and care. However, it is equally important for an individual to have healthy and reciprocal relations with family members and friends. For this course like Indian Psychology and Sociology would be taught to make the students understand importance of family. Student activities like Gathering and Mélange will give them opportunity to jell and share good bonds with fellow colleagues as a part of VIT. Various sports, Cultural, Technical activities will also provide / provides such Opportunities.

➤ Social Life

We want to make the student socially responsible and thus understand his role in the society. The course like Sociology and activities under NSS will be emphasized. Every student of VIT is expected to have at least seven days of social activity during their stay at VIT.

Social Activities

- Blood Donation
- Organ Donation Drives
- Tree Plantation
- Pathanatya
- Vasundhara
- Go Green
- Walkathon
- Atmabodh
- NSS

➤ Cultural Development

Provide Opportunity to students to participate in Cultural Programs like:

- Firodiya
- Purushottam
- Milange
- Vishawakarandak
- SakalKarandak
- SarpotdarKarandak

In their Cultural Development and application of cultural values.

➤ Sports & Recreation

Provide Opportunity to students to participate in Sports activities/events like:

- Volleyball
- KhoKho
- Swimming
- Shooting
- Badminton
- TableTennis
- Cricket
- Basketball
- ess

Entrepreneurship Development Cell

VIT has a devoted Entrepreneurship Development Cell that imbibes the spirit of entrepreneurship in young engineers. It teaches them the value of leadership and entrepreneurial ventures to solve real world problems.

Events like Internship Mela is organized under ED Cell:

Internship Mela: Is a unique opportunity for pursuing Internship with start-ups is a flagship event of EDC Cell. The Cell also organizes a variety of training programs such as Entrepreneurship Awareness Drive, Business plan Workshop, Inspirational talks by successful entrepreneurs, etc.

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Target Achieved

Prof. Karthick Subramanian, senior faculty from Computer Engineering dept with 22 years of experience is appointed as **Dean Industry Relations**. He will also work as Training and Placement Officer (TPO). Prof. Karthick has worked on various key leadership positions in the institute like Head, Computer Engineering, and Dean Examinations. He was one of the performing faculty based on appraisal and student feedback. Prof. Karthick is working in the institute since 2001 with 21 years of experience in the institute. With good PR and communication skills coupled with sound academic background and base from computer engineering, the institute is confident that he will be a good resource person for the Job description.
Prof. Dr. Swati Shilaskar, Senior faculty from Electronics and Telecommunication engineering is appointed as **Dean–Student Career Counseling and Guidance.** She is one of the. Senior performing faculty of the institute with more than 25 years of experience years of experience out of which 16 years of experience is in VIT.