# VU VISHWAKARMA UNIVERSITY

*Maximising Human Potential*

University Grants Commission (UGC) Approved State Private University
Listed with Association of Indian Universities (AIU)

**www.vupune.ac.in**

# Science & Technology

**B.Tech.** (Mechanical Engineering)

**B.Tech.** (Computer Engineering)

**B.Tech.** (Artificial Intelligence and Data Science)

**M.Tech.** (Mechanical Engineering - Product Design and Development)

**M.Tech.** (Computer Engineering)

**Ph. D.** (Mechanical Engineering)

**Ph. D.** (Computer Engineering)

**B.Sc.** (Computer Science)

**M.Sc.** (Computer Science)

**Ph. D.** (Computer Science)

**B.Sc. Hons.** (Statistics - Big Data Analytics)

**M.Sc.** (Statistics - Big Data Analytics)

**B.Sc.** (Yoga & Naturopathy)

**M.Sc.** (Waste Water & Sanitation Management)

## Programme Brochure

# Vishwakarma University

Vishwakarma University (VU) is a natural offshoot of the Vishwakarma Group of Institutions' educational legacy spanning more than 35 years. The University has been established as a State Private University through Maharashtra Government Act in the year 2017. Being UGC approved, VU is authorized to design and implement its curriculum, conduct examinations, award degrees.

The University focuses on academic excellence, positively impacting the student community and the society at large. The learning model at Vishwakarma University is the combination of knowing, practicing, performing, and reflecting. The "learning by doing" approach practiced through industry participation provides an opportunity for practical and pragmatic learning to students. Through a contemporary curriculum and ecosystem of holistic development, the university aims to prepare learners for fulfilling career paths.

## Vision

Emerge as a Premier University Recognized Internationally for Excellence in Education, Research and Innovation.

## Mission

- To impart contemporary transformative education through research and innovation.
- To develop competent leaders-professionals for life and livelihood.
- To co-create human and socio-economic capital par excellence.
- To inculcate life skills and holistic culture appreciating morals and ethics.

## Values

**We Value... We Believe in...**

- Adaptability
- Compassion
- Diversity
- Excellence
- Innovation
- Responsibility
- Sustainability
- Transparency

## Vishwakarma University Advantage

### Robust Academic Framework
- Choice Based Credit System (CBCS)
- Outcome Based Education (OBE)
- Employability Enhancement Inputs
- Innovative Pedagogy and Assessment

### Vibrant Learning Ecosystem
- Interdisciplinary Approach
- Experiential & Blended Learning
- Industry Projects
- Concurrent Evaluation

### Global Approach to Education
- MoUs with Foreign Universities
- International Projects and Assignments
- Inculcating global mindset in Students
- Global Internships and Placements

At VU students pursue their academic goals in an environment designed to inspire, support, and empower them. Through rigorous teaching-learning, research, innovation, exposures, insights and practice VU aims to prepare students for life and livelihood.

### EXPOSURE
- Conferences and Summits
- Shadowing Professionals
- Online Courses and Webinars
- Research Assignments
- Career Counselling
- Domain Seminars
- Guest Lectures
- Social Immersion Projects

### INSIGHTS
- Psychometric Profiling
- Mentoring by Faculty Team
- Industry Advisory Boards
- Clubs and Forums
- Employability Enhancement Programme
- Interviews of Industry Professionals
- Study Tours to Workplaces
- Mentoring by Industry Professionals

### PRACTICE
- Hands-on Workshops
- Industry Assignments
- Incubation Support
- Competitions
- Internships
- Freelancing
- Live Projects
- Collaborative Initiatives

# Programmes

## B.Tech. (Computer Engineering)
## B.Tech. (Artificial Intelligence and Data Science)

**Duration :** 4 Years – 8 Semesters – Full Time

**Eligibility :** Passed 10+2 examinations | Passed Diploma in Engineering and Technology

**Careers :** Chief Technology Officer, Business Analyst, Data Scientist, Software Engineer, Network Administrator, Webmaster, Technocrat, Database Administrator Opportunities in research and academics.

**Highlights:** State of the art curricula designed and executed in collaboration with IBM.

## M.Tech. (Computer Engineering)

**Duration :** 2 Years – 4 Semesters – Full Time

**Eligibility :** B.E./B.Tech in Computer Engineering / Information Technology.

## B.Tech. (Mechanical Engineering)

**Duration :** 4 Years – 8 Semesters – Full Time

**Eligibility :** Passed 10+2 examinations | Passed Diploma in Engineering and Technology

**Careers :** Executive Engineer, Design Engineer, Quality assurance Engineer, Production Engineer, R&D Engineer, Project manager, Scientific officer. In IT&ES, one can work as functional consultant, Domain expert. In armed forces one can join as an officer in any of the three wings for various roles

**Highlights:** Blended mix fundamental knowledge with modern and interdisciplinary technologies.

## M.Tech. (Mechanical Engineering- Product design and development)

**Duration :** 2 Years – 4 Semesters – Full Time

**Eligibility :** B.E./B.Tech in Mechanical Engineering

## B.Sc. (Computer Science)

**Duration :** 3 Years – 6 Semesters – Full Time

**Eligibility :** H.S.C. (10+2) Level Examination in science with Mathematics/ Three Years Diploma Course, after S.S.C.

**Careers :** Programmer, Software Developer / Engineer, Computer Application Specialist, etc.

**Highlights:** Value added electives in emerging trends in the IT industry like data science, game development, mobile computing, cyber security, design thinking, AI/ML. Blend of Statistics with specialization in Big Data Analytics in collaboration with TCS-iON ( Industry Honour Program)

## M.Sc. (Computer Science)

**Duration :** 2 Years – 4 Semesters – Full Time

**Eligibility :** Bachelor of Computer Science and Engg. / IT / E&Tc

## B.Sc. Hons. (Statistics - Big Data Analytics)

**Duration :** 3 Years – 6 Semesters – Full Time

**Eligibility :** HSC (10+2) or its equivalent Examination

**Careers :** Data Analysts, Data scientists, Analytics Programmers, Analytics Managers, Analytics Consultants, Market Research Analysts, Financial Consultant,Private and public Sector Companies.

**Highlights:** Blend of Statistics with specialization in Big Data Analytics, Blend of Statistics with specialization in Big Data Analytics in collaboration with TCS-iON ( Industry Honour Program)

## M.Sc. (Statistics - Big Data Analytics)

**Duration :** 2 Years – 4 Semesters – Full Time

**Eligibility :** B. Sc. in statistics / Mathematics / Actuarial Science

## M.Sc. (Waste Water and Sanitation Management)

**Duration :** 2 Years – 4 Semesters – Full Time

**Eligibility :** Bachelor degree (12+3)/(12+4) including B.Tech. / B.E. / B.Sc. / B.Com / B.A.

**Careers :** International Human Resources / Training Manager • Sanitation Manager • Design Engineer • Consultant • Research Manager • Executive Production Incharge • Environment Officer.

**Highlights:**
• Association with Global Sanitation Graduate School (GSGS), IHE Delft, Netherlands.
• Association with Asian Institute of Technology, Thailand.

## B.Sc. (Yoga and Naturopathy)

**Duration :** 3 Years – 6 Semesters – Full Time

**Eligibility :**
Passed 10+2 Examination (45% marks for open category and 40% marks for reserved category students)

**Careers :** Yoga Teacher | Yoga Trainer

**Highlights:** Detailed insights of Yoga & Naturopathy with specialization in Ancient & modern style of Yoga..

**Karan Jagtiani** (B.Tech. Computer Engineering)
*I have always been given a lot of opportunities by Vishwakarma University time and time again, whether it be to start a new software club, be an intern at an international research project, or lead the coordination of various events. The teachers here truly value the students who put in the efforts and never cease to help them when in need*

**Isha Kulkarni,** VU Student, FY. M.Sc. (Wastewater and Sanitation Management)
*My passion towards water and its treatment was thriving me to join for further studies. It was my immense luck and fortune that I'm part of this unique program Wastewater and Sanitation Management in VU. The faculties are a package of knowledge box that help us in shaping our future to become a hard core water professional. A special mention about the HoD, who is such a wonderful and inspiring mentor I have ever seen in my experience. This journey is helping me in molding my leadership skills, time management skills and learning new things every day. I feel great studying here at Vishwakarma University as it gives great opportunity as well as support from faculties."*

**Husain Mahadik** (B.Sc. Computer Science)
*The faculty members worked so hard on our overall development and conducted workshops and seminars for us to enhance our technical and interpersonal skills. The placement cell has helped us before and during the placement season by providing training for Aptitude, Communication and Technical aspects to make sure we are ready for the placements. The training helped me to gain confidence for the placement.*

## GOVERNANCE

Vishwakarma University is governed by Bansilal Ramnath Agarwal Charitable Trust (BRACT). VU has Well-established Governance Mechanism defined by its Governing Council, Board of Management, Academic Council, Board of Examination, Board of Research and Innovation, Board of Studies, Academic Advisory Boards, Internal Quality Assurance Cell, Grievance Redressal Cell, etc.

## ACADEMICS

VU offers UG and PG education in varied streams such as Engineering, Management, Art, Design, Architecture, Pharmacy, Law, Journalism and Mass Communication, Humanities, Social Sciences, and beyond. Variety and depth of Foundational, Core, Elective, Ability Enhancement, Domain-specific, Audit, and General Interest Courses offers academic options to students suiting their unique interests.





## FACULTY

At VU academic group of scholars and researchers supports the mission of contemporary transformative education and real-world experience. Faculty also includes professors and professionals with outstanding national / international education backgrounds, experiences, and orientations. These educators, by encouraging, engaging and challenging, positively influence the lives of students.

## RESEARCH & INNOVATION

To help tomorrow take shape, committed, collaborated research and innovation efforts are carried out at VU, to identify and solve problems, enriching people's lives and creating lasting local, national and international impact. Multiple research areas are covered relevant to specific areas of expertise. The research culture underpins principles, values, and high standards.





## MENTORING

Professional as well personal mentoring at VU guides and supports the students to gain social and academic confidence, develop communication, seek practical advice, identify goals and establish a sense of direction. Mentoring help student to unlock their potential, promote their academic success and fuels their growth throughout their education journey.

# CAREER SUPPORT

## Career Progression Pathways

The students are encouraged to consider multiple pathways and select the best one. The support is extended to all the students w.r.t. following pathways:
• Jobs (Private Sector / Government Jobs / Social Enterprises)
• Business (New Venture / Professional Practice / Family Business)
• Further Studies (Within Country / Study Abroad / Research Careers)

## Career Success Factors Model

The Vishwakarma University has evolved a conceptual model regarding career success. The key aspects are as follows;
• Knowledge (Applied & Fundamental Domain Knowledge | Inter-Disciplinary Knowledge | Industry Awareness | Current Affairs)
• Skills (Functional Domain specific Skills | Interpersonal Skills | Self-Management Skills | Use of State-of-the- Art Tools)
• Attitude (Continuous Learning | Positive Approach | Commitment to Work | Professional and Civic Values)

## Placement and Career Progression Assistance Programme (PCPAP)

Vishwakarma University has developed a comprehensive programme for the students to make them career ready and provide them job opportunities. The purpose is to help prepare students for career progression and placement over and above academic inputs by engaging with industry professionals, corporate trainers, and expert faculty.

The training includes Courses, Tests, Quizzes, Assignments, Interactions, Role Plays, Activities, and Projects.
The placement includes on-campus, off-campus, pool campus, and virtual campus placement drives.

## Industry Engagement

Industry Advisory Boards | Industry on Campus | Interact with Industry Leaders | Events and Sponsorships | Institution-Industry Interaction Cell | Incubation Facility | MoUs with Industry | Centres of Excellence

## Top Sectors for Jobs and Internships

Agriculture & Allied | Banking & Financial Services | Consulting, Analytics, Research | Education, Training, E-Learning | Manufacturing, Engineering, Automobile | Food & Beverages | Apparels & Accessories, Consumer Durables & Electronics | Healthcare, Pharmaceutical | IT & ITes | Media, Entertainment, Advertising | Real Estate, Infrastructure, Construction | Hospitality, Tourism | Retail & E-Commerce | Professional Services - Legal, Counselling, Interior & Architecture, Branding & Design

## Global Exposure

### International Collaborations for Student Exchange, Faculty Exchange, Research, or Internships

Korea Institute of Science and Technology, South Korea | State University of New York, Binghamton, USA | National University, USA | The University of Ngaoundere, Cameroon | Wufeng University, Taiwan | Ontario Universities International | Hof University of Applied Sciences, Hof, Germany | IMT Lille Douai, France | Kasetsart University, Thailand | Asian Institute of Technology, Bangkok, Thailand | Chulalongkorn School of Integrated Innovation, Thailand | School of Computing, National University of Singapore, Singapore | Energy Research Institute, NTU, Singapore | Global Sanitation Graduate School, IHE Delft - Netherland

## Career Support Declaration

We, at Vishwakarma University, provide assistance to interested candidates in meeting their career advancement goals with respect to job, entrepreneurship, competitive exams, and further studies. Our endeavor is to provide them wider exposure, greater insights, and better practice to be career ready. Employability enhancement inputs and multiple job opportunities are provided to registered students. However, Vishwakarma University does not guarantee a job.

# LIFE AT VU

At Vishwakarma University, the pursuit of wisdom is constant which guide the students to carve out successful and meaningful life for themselves and make the world a better place.

BLENDED **DIVERSE**
EMPLOYABILITY
ENRICHING ETHICAL
EXCELLENCE EXPERIENTIAL ENGAGING EXPOSURE
FULFILLING HOLISTIC
INSIGHTFUL TRANSFORMATIVE
PASSION PRACTICE
SAFE ETHICAL
RESEARCH PROFESSIONAL SUSTAINABLE TRANSPARENT
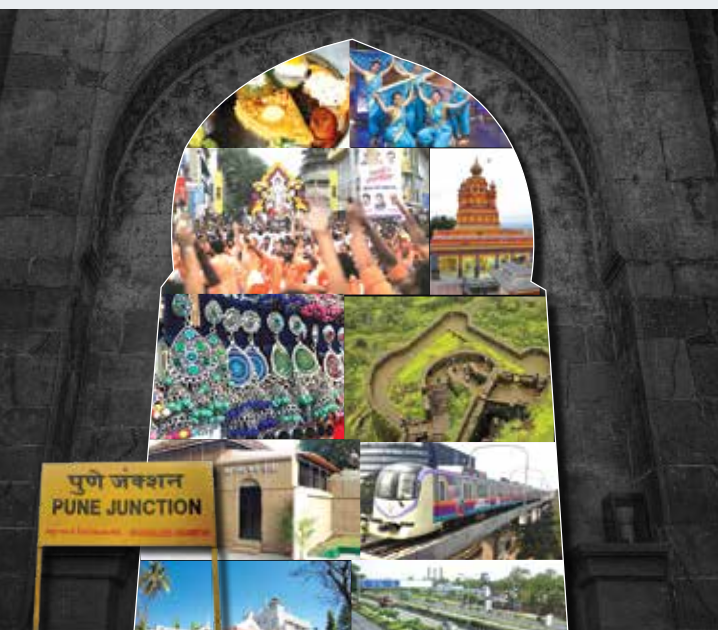INNOVATIVE

## Industry Connect - Centres of Excellence

- Center of Excellence for Design Thinking and Innovation in collaboration with the State University of New York at Binghamton
- Center of Excellence for Water Quality in collaboration with Wilo
- Center of Excellence for Energy and Sustainability
- Center for E-Learning
- Center of Communication for Development
- Center of excellence for Media, Entertainment, Events and Tourism in collaboration with Wizcraft
- Center of Excellence for Biosystems, Biomedical and Drug Delivery Technologies
- Center of Excellence for Emerging Digital Grid and E-Mobility
- Center for Industry 4.0
- VU-IQUBE
- Unity Center of Excellence
- Center of Excellence for Innovation in Built Environment and Research Generation- i-BERG

## Our Associates



## Industry Collaborations



## Life @ pune

Pune, recognized as Oxford of the East, has everything that a prospective student would want when looking for affordable higher education options. The Educational environment in Pune is among the most conducive in the country for the intellectual development of students.

Pune is regarded as one of the safest cities in the country. It has a perfect blend of rich culture, heritage & Modernization. Best educational opportunities along with pleasant weather condition and metropolitan lifestyle make Pune City an attractive career destination for aspiring youngsters.

## Hostel

Separate accommodation and food facility for Boys and Girls on a first come first serve basis. Refer to "Hostel Brochure" to know more.

## Vishwakarma University, Pune

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