SHIVAJI UNIVERSITY KOLHAPUR

Estd-1962

DEPARTMENT OF TECHNOLOGY (Estd-2006), B.TECH (CHEMICAL ENGINEERING) (Estd- 2008)

Vision and Mission of Institute SET (DoT)

VISION

School of Engineering and Technology (Formerly Department of Technology) is committed to develop skilled and employable engineers to accept the societal and national challenges.

MISSION

- To implement quality teaching-learning process to develop competent and committed engineers.
- To empower the graduates with employable skills through skilled based courses in the curriculum
- To prepare the students for realizing the societal problems for committed solutions.

At Institute, Programs offered with Intake Capacity

Sr. No.	Name of Program	Year of Establish.	Intake Capacity
	Under Graduate Programs		
1.	B. Tech. (Chemical Engineering)	2008	60
2.	B. Tech. (Computer Science and Technology)	2008	60
3.	B. Tech. (Electronics & Telecommunications Engineering)	2008	60
4.	B. Tech. (Food Technology)	2008	60
5.	B. Tech. (Civil Engineering)	2012	60
6.	B. Tech. (Mechanical Engineering)	2013	60
	Under Graduate Programs		
1.	M. Tech. (Computer Science and Technology)	2006	18
2.	M. Tech. (Electronics Technology)	2006	18
3.	M. Tech. (Energy Technology)	2006	18
4.	M. Tech. (Environmental Science and Technology)	2006	18
5.	M. Tech. (Food Technology)	2013	18
6.	Post Graduate Diploma in Process Safety Management	2024	40
	Research Centre for PhD in Engineering & Technology Programs		
	Ph. D. (All the specializations in Engineering & Technology)		

Professor: 03

Associate Professors: 08

Assistant Professors: 40

Research Professor: 02

Adjunct Professor: 01

Visiting Faculty: 24

Faculty Members with Ph. D.: 22

Faculty Pursuing Ph.D.: 20

We at a Glance with some Recognitions

University is awarded NAAC A++ (2021)

University is ISO Certified (2022)

Chemical Engineering Program students once bagged 2ND Prize at ISTE National Convention

Chemical Engineering Program students have (successively for three years)bagged the 1st Prize at the DIPEX Project Competition

- First Institute started by the only University in Maharashtra State
- Successfully run on University Managed Mode, proving to be a role model
- 8 weeks In-plant Training is a part of Curriculum
- **An excellent students' Placement record since first batch**
- Rs. 5.5 Crore Investment in development of labs./workshops
- **Rs. 0.75 Crore Worth in Chemical Engineering Labs development**
- MoUs with reputed Universities & institutes (At SUK Level)
- **MoU's with 8 different enterprises with their active involvement**
- **Emphasis on Project Based Learning**
- **High Faculty Retention**

Vision and Mission: B.Tech (Chemical Engineering) Program

VISION

To build a strong community of dedicated graduates with expertise in the field of Chemical Engineering suitable for Industrial needs having a sense of responsibility, ethics and ready to participate in relevant activities of Regional, National and Global interest.

MISSION

To promote a culture to foster the growth of intellectually capable, innovative Chemical Engineers

To encourage and promote excellence in Chemical Engineering education, research and extension activities

To develop problem solving abilities, communication skills as well as team spirit among serving Chemical Engineering Professionals

To inculcate creativity, entrepreneurial ability and awareness for ethical practices among budding chemical engineers

To contribute to the growth and development of 'academia and industry to harness it for welfare of the nation and mankind

Program Educational Objectives (PEOs)

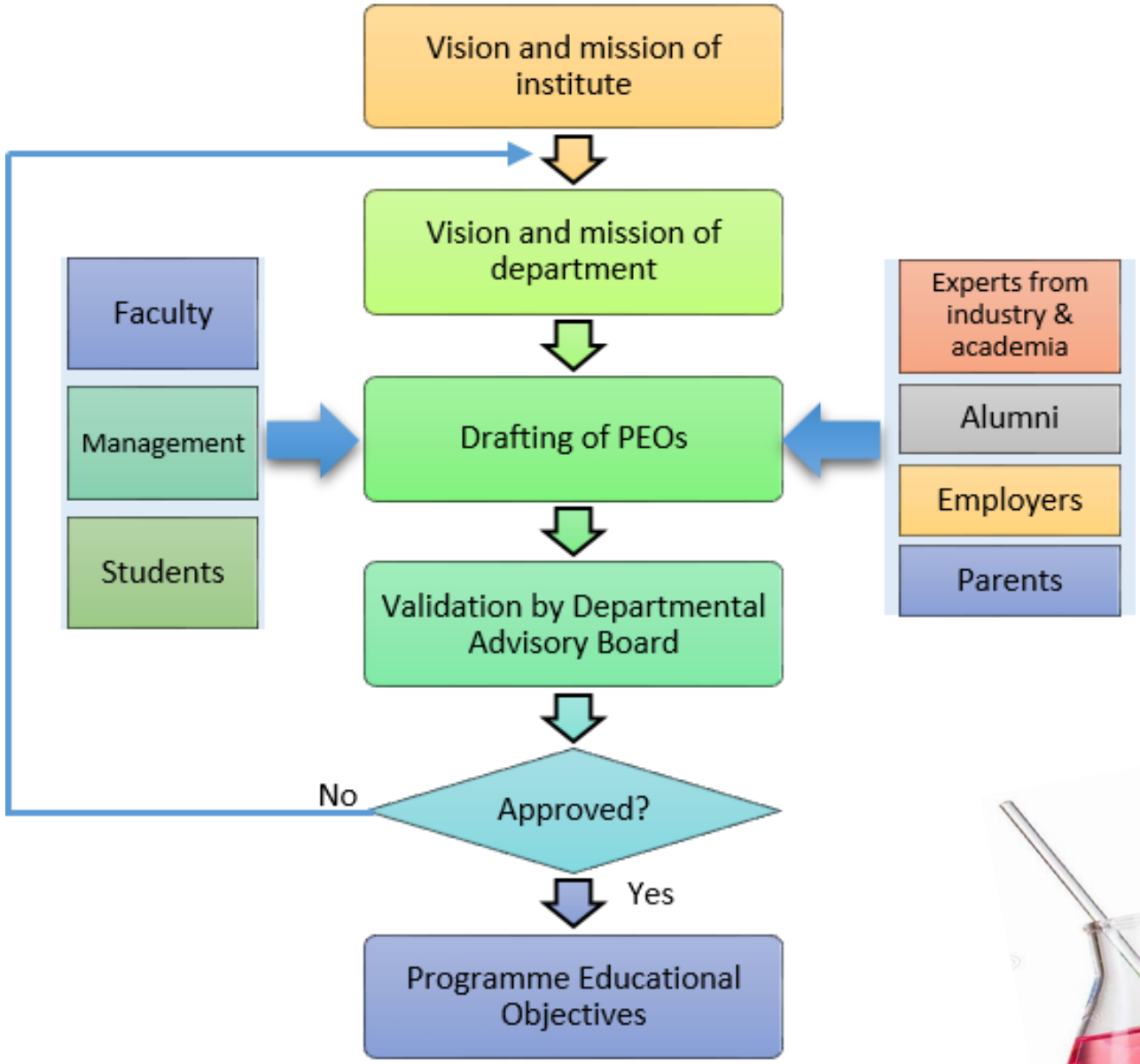
PEO1: To prepare graduates with basic knowledge in chemical engineering and develop our graduates to supervise chemical industry practices.

PEO2: To prepare and develop the graduates with high order knowledge in design and construction of process plants.

PEO3: To prepare engineering graduates with the highest level of technical competence with creativity, innovation and leadership skills.

PEO 4: To prepare dedicated graduates for the creation of solutions to address challenges faced by the state, the nation and society.

PEO 5: To prepare graduates with ethical and environmentally responsible engineering professionals.



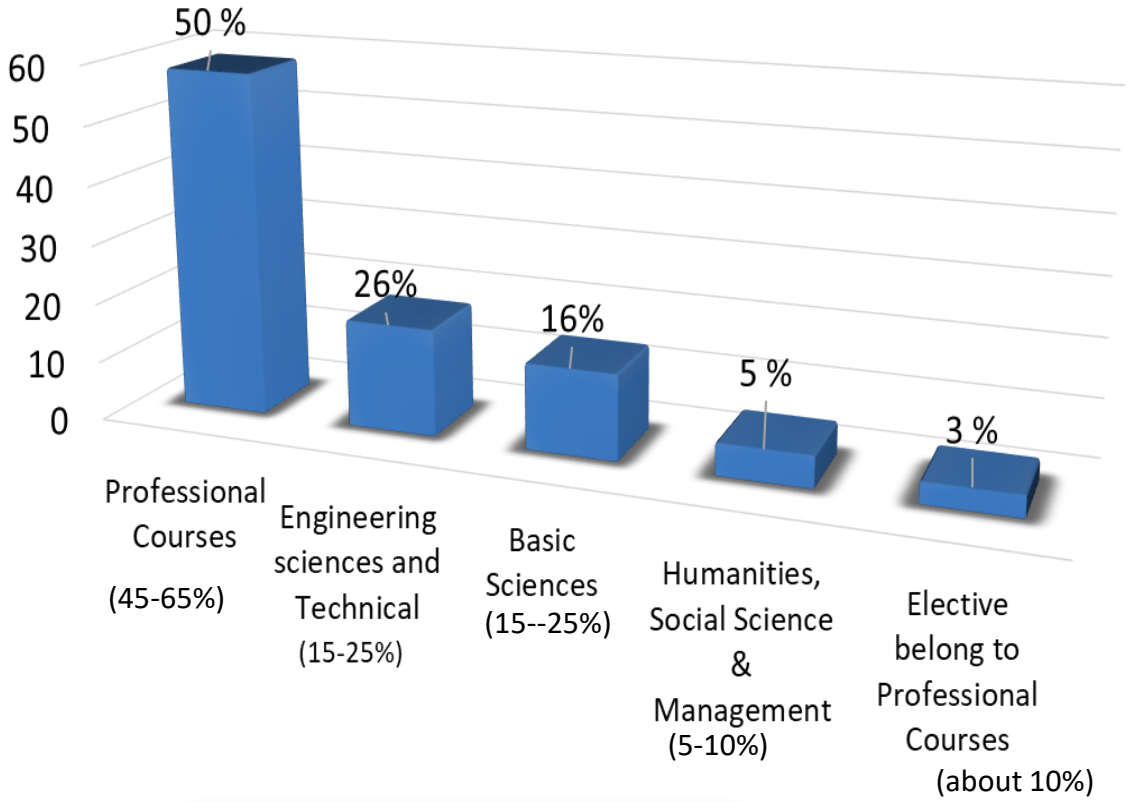
FACULTY INFORMATION

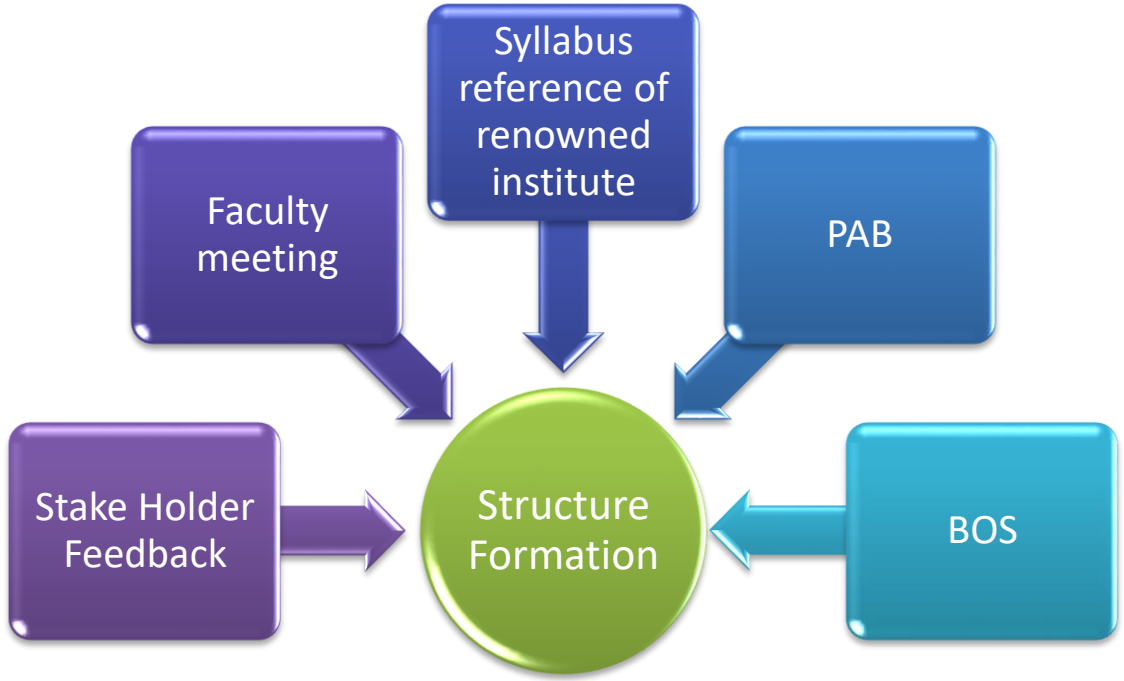
Faculty Strength

Sr. No.	Name of the Faculty	Qualification	Designation
1	**Prof.(Dr.)P. D. Patil**	Ph.D.	Professor
2	**Dr. D.M. Nangare**	Ph.D.	Associate Professor
3	**Dr. S.M. Gaikwad**	Ph.D.	Associate Professor
4	**Dr. A.B. Madavi**	Ph.D.	Assistant Professor
5	**Dr. P. P. Patil**	Ph.D.	Assistant Professor
6	**Mrs. V. S. Mohite**	M.E.(Ph.D. Pursuing)	Assistant Professor
7	**Mrs. S. P. Dehankar**	M.Tech.(Ph.D. Pursuing)	Assistant Professor
8	**Ms. N. S. Pawar**	M.Tech.(Ph.D. Pursuing)	Assistant Professor

TEACHING LEARNING PROCESS

Program Curriculum





Program Advisory Board

Prof. Dr. K.D.Patil, Prof. Dr. V.S.Sathe, Prof.(Dr.) P.D.Patil,
Er. Vishwas G Shinde, Er. Parag V Chepe, Er. Abhijeet B Shinde &
Dr. Daulat M Nangare

Curriculum Revision

Revision No.	Year	Revision No.	Year
1st Revision	2010-11	2nd Revision	2015-16
3rd Revision	2019-20	4rd Revision	2020-21
5th Revision	2023-24	**5th Revision with effect from 2023-24 (In line with NEP2020)**	

Teaching Learning Process

- Orientation Lecture
- Lecture Plan
- Monthly Compliance of Syllabus & Attendance
- Feedback- Student, Parents, Alumni
- SWOT Analysis of 3rd Year Students
- Use of Bloom's Taxonomy
- Mentoring Scheme

Real world examples

- Expert lectures by personnel from industry, academics and research association
- Industry visits on routine basis
- Visit to nearby exhibitions
- Exposure for practicals through industrial samples testing and analysis
- Industrial Tour

Interactive learning

- Group discussions
- Presentation related to course content by student
- Question –answer session.
- Technical quiz
- Seminar

Quality of laboratory experiment

- Experiment manuals
- State of art equipment and machinery
- Continuous evaluation of practicals
- Relating experiments with industrial practices

Innovation

- CD Library
- Recorded Lectures
- Annual Faculty visit to Industry
- Pre-placement test
- Encouragement for excellent attendance
- Use of smart board for conduct of classes

Industry Based Learning

Industry Interaction

- Expert lectures from Industry
- Compulsory Industrial Tour
- MOU's with industries
- Industrial expert in practical examination
- Industrial experts in PAB
- Faculty Training at Industries

(Proposing from this year)

Industry Internship & Implementation

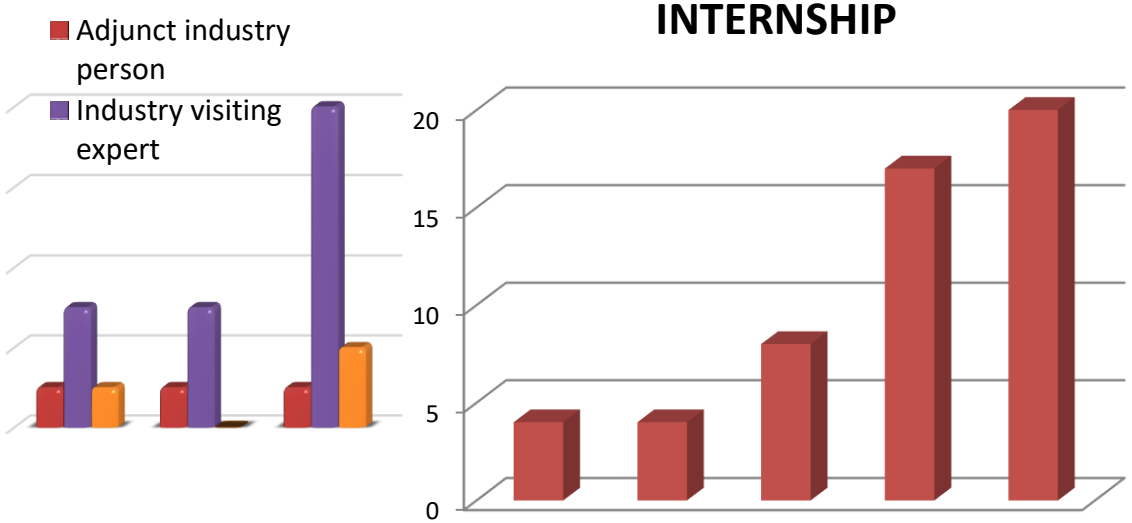
Part of curriculum since inception

4 weeks after 2nd & 3rd year

About 25 industries are providing internship facilities

Correspondence with industries → Allotment of industries → Orientation lecture → 4 weeks in-plant training. → Training report preparation → Evaluation by industry expert

INTERNSHIP



Industry Internship

ZONE / STATE	No. of Companies
MAHARASHTRA	20
GUJARAT	05

Enhancing Teaching-Learning Process

VIDEO LECTURES

moodle

Google Classroom

spoken-tutorial
Powered by
Ministry of Human Resources and Development, Government of India.

NPTEL

FREE ONLINE EDUCATION
swayam
शिक्षित भारत, उन्नत भारत

Academic Calendar:

- ✓ Academic Calendar is prepared in line with University Calendar

Teaching Plan:

- ✓ Teaching Plan
- ✓ Structured Course files are maintained
- ✓ Regular Internal Academic Audit

ICT Tools used in Teaching:

- ✓ MOODLE – Learning Management System (LMS)
- ✓ ICT facilities – 22 Rooms (LCD Projectors, Smart Digital Boards, Internet facility) Laptop/Desktop/Web Cam/Headset
- ✓ Online Teaching: Google Suite, WebEx, Zoom, etc
- ✓ Virtual Labs
- ✓ Spoken Tutorials, NPTEL Videos, YouTube Videos

Student Centric Learning Resources

1. Central Library
2. Department Library
3. SWAYAM-NPTEL Courses
4. Spoken Tutorials
5. Online e-books
6. MOOCS
7. Google Suite
8. Learning Management System – MOODLE
9. ATC, IGTR, Aurangabad

Industry Interaction on Routine Basis

- Seminars
- Workshops
- Training Programs
- Conferences
- Expert Lectures
- Exhibitions
- Arranging visits to industries

Seminar on scope of oil & gas industry

Workshop on green chemistry by IIT Mumbai

Training Programs

Visit to Distillery plant to Rajarambapu Sugar Industry 2021

Workshop on piping & process design

Government Sponsored Projects

Name of Major Government Sponsored Projects	Total Project Cost (Lakhs) INR (At Chem Engg Level)	Total Project Cost (Lakhs) INR (At Institute Level)
UGC-Startup Grant/University RSS/RIS	7.5	6.00
Technical Education Quality Improvement Program (TEQIP)	50	1700
UGC -Minor	1.85	3.7
DST-JSPS	-	5.46
MFPI	-	33.48
BRNS-DAE	-	24.89
DST, New Delhi	-	9.75
MHRD	-	10.00
DST-PURSE	-	16.4

Total Funding(Program Level): 0. 6 Crore

Total Funding(At Institute Level): 17.76 Crores

Sponsored Research

Project Title	Funding Agency	Amount (Rs. In Lakhs)	Duration
Design of low cost adsorbent systems using agro-wastes	TEQIP-II	3,00,000/-	2013 -17
Increasing yield of Active Contents through novel extraction of innovatively cultivated plants	U.G.C	1,85,000/-	2013-15
Treatment of waste water using cavitation phenomena	RSS	2,40,000/-	2019-22
Development of Energy efficient Ethanol-water separation using Hybrid Separation Process	RSS	2,60,000/-	2019-22
Effect of Nanoparticles on Dynamic Foam Stability	RSS	1,55,000/-	2019-22
Reactive Extraction of Carboxylic Acid	RIS	85000/-	2019-22
Technology for Production of High Fructose Syrup using Co-Immobilized Enzymes on Synthesized Nanoparticles	RGSTC	4,40,000/-	2025-27

Alumni Interaction & Contribution

Total Alumni Members	• 600
Annual Meeting	• Morning session of University Convocation day
No. of Alumni Meet in Last 4 Years	• 4 at Institute
Alumni Activities	• Counceling and guidance to students on roll
No of Entrepreneurs alumni	• 12 (2 % of strength)

Alumni Contribution

- Employment Opportunities
- As a Guest Lecturer, examiner, referees / judge for paper presentation
- Support for Industrial tour, visits & project research work

Student and Industry Interactions

Hands-on Training

Training at RCF

Field Visit To Common ETP Plant

Ichalkaranji

Campus Placements

INOX Air Products Private Limited

Training/ Projects & Higher Studies

RASHTRIYA CHEMICALS AND FERTILIZERS LTD (A Government of India Undertaking) Let us grow together

BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI

Savitribai Phule Pune University

VINATI ORGANICS LIMITED

DEEPAK NITRITE

MACLEODS Macleods Pharmaceuticals Limited

University of Mumbai

Parle Agro refreshing India

BioXera Pharma Pvt. Ltd.

Emcure Success through Innovation

Deepak Fertilizers and Petrochemicals Corpn Ltd

LIBOX Chem India Pvt. Ltd.

FACILITIES
At B.Tech Chemical Engineering

Laboratories of Chemical Engineering Program

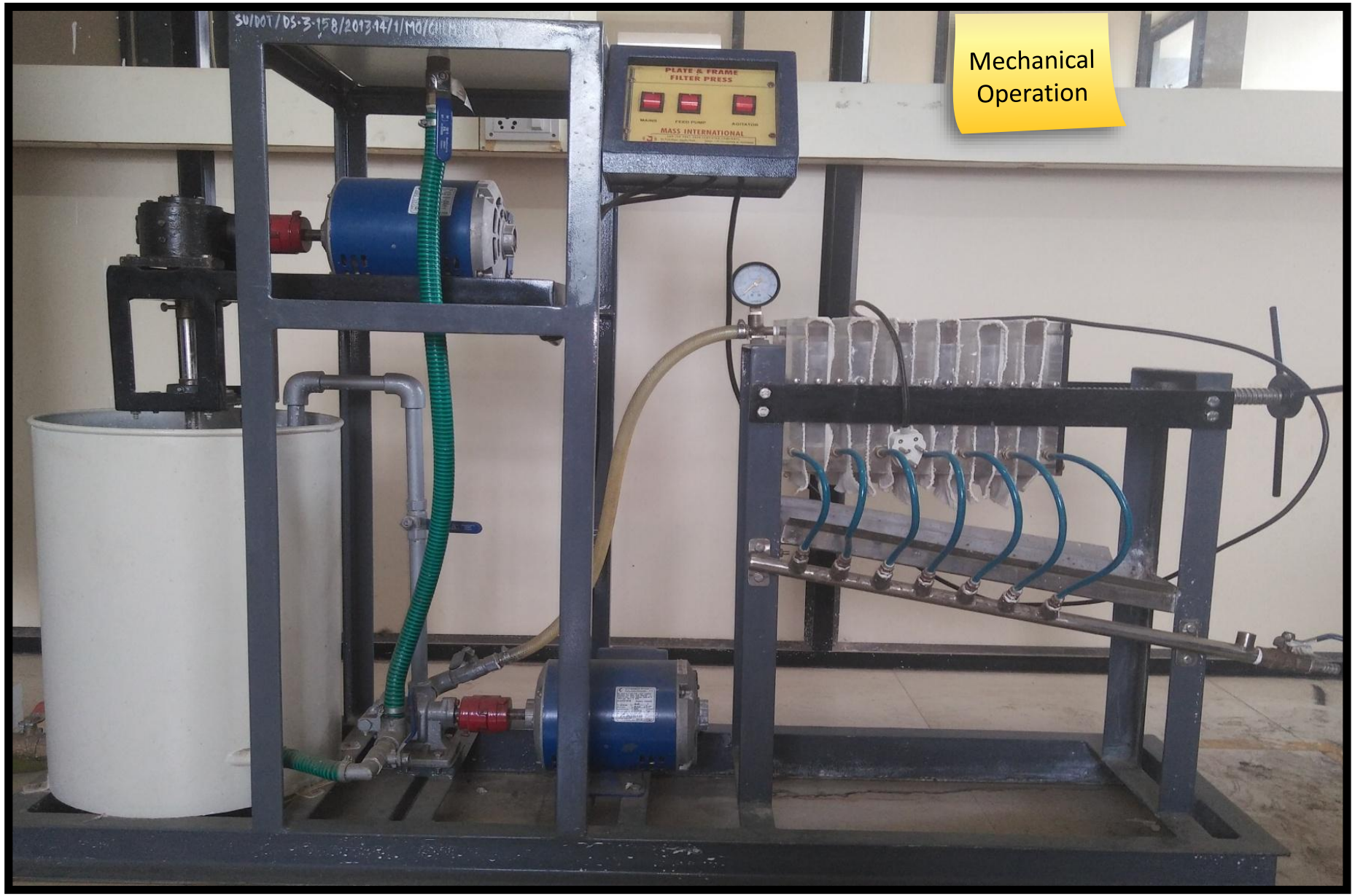
Approximate Investment in development of labs.
75 lakhs

FRACTIONAL AND PACKED BED DISTILLATION

ROTARY DRYER

CALENDRIA EVAPORATOR

FILTER PRESS



Additional Facilities

Research Project Lab

Spray Dryer

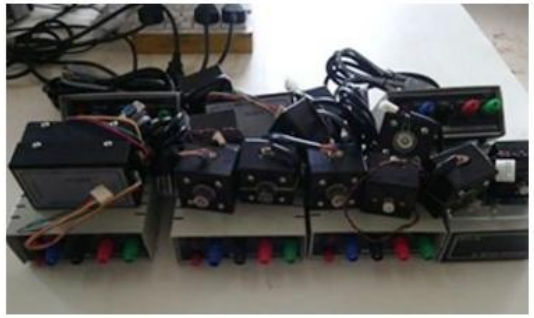
Research Project Lab

Probe Sonicator

Nano Ball Mill

Well Equipped Laboratories at Institute Level

UTM



Embedded System Lab

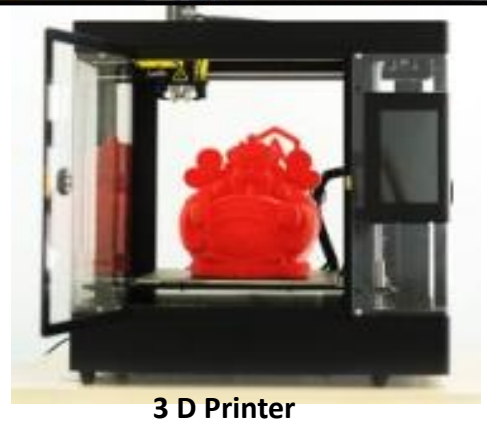
Microcontroller Lab

Micro Processor Lab

GCMS Analyser

LCMS Analyser

CNC Turning Center



3 D Printer

Interaction with Stake Holders

PARENTS MEET

HR MEETING

PROFESSIONAL COMMUNICATION COURSE

ALUMNI MEET

Visit to Distillery plant to Rajarambapu Sugar Industry

ADMISSION AWARENESS

PAB MEETING

Alumni Testimonials

Name- Rajvardhan Atul Patil

Year of Passing- 2018

Institute of higher studies- Technical University of Berlin, Germany

As I was a part of Chemical Technology in the Department of Technology, it was a great journey of 3 years with all the highly motivated professors. The Syllabus from the university was so up to date that I have used all knowledge in professional experience as well as pursuing my masters. The degree program was an unforgettable experience that had a profound impact on my personal and academic growth.

Name- Pranav Ashok Bhosale

Year of Passing- 2018

Institute of higher studies- Technische Universität Berlin

My experience at the Department of Technology was nothing short of transformative. Throughout my time there, I had the opportunity to learn from experienced professors, interact with diverse peers, and engage in various extracurricular activities. As a student at the Department of Technology, I was challenged to think critically, develop analytical skills, and expand my knowledge base. The exposure to different perspectives and ideas broadened my horizons and shaped my understanding of the world.

In addition to academic growth, my university experience allowed me to develop valuable life skills such as time management, teamwork, leadership, and communication. These skills have been essential in the workplace and beyond.

Placement, Higher Studies & Entrepreneurship

Our Valuable Recruiters

- Ingenero Technologies (India) Pvt. Ltd.
- Infosys Limited
- Tata consultancy services limited
- Black and Veatch India Ltd.
- WTE Infra Projects Pvt. Ltd.
- Alkyl Amines Chemical Ltd.
- Inox Air Products Pvt.Ltd.
- Emcure Pharmaceuticals.
- Tata Electronics Pvt Ltd.
- Glenmark Pharmaceuticals Ltd.
- Winways Chemtech, Mumbai
- Laxmi Organics Industries Ltd.,Mahad
- Granules India Ltd. Pune
- Sterling oil exploration and energy production co. Ltd Nigeria (SEEPCO)
- Hindustan Platinum

Services to Community

World Water Day

Swachhata Rally

Swachhata Abhiyan

International day for biological diversity

Vanya Jeev Saptah

Shramdaan Shibir

Workshops & Events Organized by Professional Societies

Piping and Process Design Workshop

HAZOP Workshop

Green Chemistry Workshop

TECHFEST

Basics of Oil and Gas Industry

Best Practices

Best Outgoing Student Award

2021-22

2020-21

2019-20

2016-17

2017-18

2018-19

Activities for Strengthening Program Outcomes

- Industrial Tour
- Extracurricular Activities like NSS, NCC,
- Chemical Engineers Association Student Chapter
- Guest Lecture
- Soft Skill Programs, Students Clubs
- Career Guidance Cell activities

Services to Community

World Water Day

Swachhata Rally

Swachhata Abhiyan

International day for biological diversity

Vanya Jeev Saptah

Shramdaan Shibir

Supporting Infrastructural Facilities

Girls' Hostel

Boys' Hostel

Hostel Mess

Canteen

Central Library / Departmental Library
Sports Facilities/Gymkhana
Boys / Girls Hostels
Canteens
Health Centre
Lifts/Ramps
NSS/Cultural Activities/Yoga
Renewable Energy Sources

Health Centre

Thank You

Contact Details

Prof.(Dr.) Pravinkumar. D. Patil
Program Head, Chemical Engineering Division ,
School of Engineering & Technology (Formerly Department of Technology,
Shivaji University, Kolhapur

Email - pdp_tech@unishivaji.ac.in
Contact no.- 9922924871

TPO email- tpo.tech@unishivaji.ac.in